Welcome to the 2012-2013 Graduate Bulletin

The Graduate Studies Bulletin contains information about all programs of graduate study offered at the University of Nebraska–Lincoln. The dynamic bulletin found here will be changing periodically throughout the year as needed for updating policies, faculty and curriculum.

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0 Policies

1. 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. The University of Nebraska is a public university committed to providing a quality education to a diverse student body. Students are selected on the basis of academic preparation, ability, and the availability of space in the desired academic program.

It is the policy of the University of Nebraska–Lincoln not to discriminate based on gender, age, disability, race, color, religion, marital status, veteran’s status, national or ethnic origin, or sexual orientation. This policy is applicable to all University administered programs including educational programs, financial aid, admission policies and employment policies.

2. 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.

3. Information given falsely or withheld will affect the decision on an application and may make the applicant ineligible for admission and/or enrollment.

4. Persons who have been dismissed from another institution for academic dishonesty or violations of student codes of conduct are not eligible for admission to UNL Graduate Studies.

5. Applicants must have earned a bachelor’s degree or higher from an institution that is regionally accredited, an institution that is accredited by an organization recognized by the Council on Higher Education Accreditation (CHEA), or from an accredited foreign institution that is recognized by Graduate Studies.

6. Acceptance for admission to a program leading to a masters degree, a doctoral degree, an educational specialist degree or a 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.

7. 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.

8. Negative admission decisions are not appealable.

9. Most applicants will apply formally and be admitted to only one graduate degree program at a time. It is possible, however, 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 a dual-degree program).

10. Entry into UNL Graduate Studies is valid for the specific semester indicated on the Certificate of Admission. However, a student may defer 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.)

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 DS–2019 immigration form if they wish to delay their initial enrollment. Students who are admitted but who neither defer nor subsequently enroll must reapply.

11. 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.

Current admission information and access to UNL’s online graduate application is available at: (http://www.unl.edu/gradstudies).

0 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 course work and degrees will be determined by departmental Graduate Committees and by the Office of Graduate Studies. Generally, a four–year first university degree from an academic institution outside the U.S. will be accepted as comparable to the U.S. bachelor’s degree if the degree grants eligibility for graduate study at institutions within the same country.

Application materials from international students must include uploaded 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. These unofficial documents will be used for application review. Official documents are required from all students who are admitted and enroll. 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.

It is recommended that applicants outside the U.S. begin applying approximately one year in advance of the desired first enrollment. The following dates are suggested to have all materials on file: March 1 for first semester (beginning in August); September 1 for second semester (beginning in January); and February 1 for summer (beginning in June).

All international applicants seeking F–1 student visas must apply for degree programs rather than non–degree, post–baccalaureate status.

0 Funding Requirements

Evidence of adequate financial resources for tuition and living expenses is required of all international students seeking F–1 or J–1 visas, including those who received their baccalaureate degrees at UNL. Students should not assume funds or work opportunities will be available at a later date, and should be prepared to have their living and educational expenses increase annually. University–wide fellowships may be sought after one year of graduate study in the U.S. More
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 550 on the paper-based TOEFL; 79 on the Internet-based TOEFL or an International English Language Testing System (IELTS) score of at least 6. Some departments require higher scores for admission.

English Placement Exam (EPE)

As a new international student, you may be required to take the English Placement Exam upon your arrival in Lincoln. Please check your Certificate of Admission from the Office of Graduate Studies to confirm whether you are required to sit for this exam.

Exemptions to EPE Requirement

Exemptions from the EPE requirement may be granted for non-native speakers who have received a bachelor's or more advanced degree from a U.S. university or a university outside the U.S. at which English is the official language of instruction. Also, if a student has an IBT score of 100 or higher with a Writing score of 25 or higher, no further English tests are required.

For new students with TOEFL scores of at least 100 on the IBT but with a Writing score less than 25, or with a score of at least 600 on the PBT, only the timed writing section of the EPE is required. The timed writing section can be completed in one hour.

All other newly admitted non-native speakers of English must sit for the full English Placement Exam.

International Teaching Assistant Institute

New holders of teaching assistantships who are non-native speakers of English must attend the International Teaching Assistant Institute. The summer Institute, a concentrated 90 hour program, is held the last week of July and the first week of August. For more information about the availability of assistantships and the Institute, contact your program's Graduate Committee chair.

Intensive English Program

UNL’s Intensive English Program (IEP) welcomes graduate students who wish to study English intensively prior to enrolling in a graduate program.

For information and applications, contact:
Dr. Mike Harpending
Program in English as a Second Language
Department of English
University of Nebraska–Lincoln
513 East Nebraska Hall
901 N 17th Street
PO Box 880507
Lincoln, NE 68588-0507
(402) 472-1884
(402) 472-4636 Fax
esl2@unl.edu

Admission Categories

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

Degree Objective

Admission to the Graduate College as a degree-seeking student requires application to both Graduate Studies and the Graduate Committee within an academic unit. Applicants to a degree program must send an application and application fee, and must upload complete transcripts from all post-secondary schools attended. Official transcripts are required of all admitted and enrolled students. Applicants must also fulfill any additional requirements the department specifies, such as statement of goals, test scores, portfolios, etc. Specific requirements for each department may be found at (http://www.unl.edu/gradstudies/prospective/majors.shtml).

Non-Degree, Post-Baccalaureate

Non-degree, post-baccalaureate admission to the Graduate College is completed through the Graduate Studies office. Applicants are reviewed for minimum standards upon receipt of an application, application fee and one uploaded transcript showing conferral of a baccalaureate or higher degree. Enrolled students must also provide official transcripts.

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 of a teacher certification, or additional teaching endorsements should contact the College of Education and Human Sciences Student Services Center at (402) 472-5333.

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. Financial aid in the form of student loans is limited to those taking only undergraduate hours as prerequisites for admission to a specific graduate or professional program. The Office of Scholarships and Financial Aid can supply further information about the availability of these loans; 3) This admission is not available to international students on F-1 student visas.

Express Non-degree Post-baccalaureate Admission

An Express Admission allows a student to register for classes without waiting for Graduate Studies to receive transcripts. The admission may be extended beyond one term only upon receipt of an official degree transcript. Applicants requesting an Express Admission must be eligible for non-degree post-baccalaureate admission and have earned a bachelors or higher degree with a cumulative GPA of at least 2.50 on a 4.00 scale.

Non-Degree, Visiting Graduate

Admission is available to applicants who are actively pursuing graduate studies at U.S. institutions other than the University of Nebraska campuses, and requires submission of an application, application fee, and letter of good standing from the home institution. Enrollment is limited to two consecutive terms (semesters and/or full summer enrollment).
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 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 Graduate Faculty, and serve on graduate supervisory and examining committees. Upon completing or withdrawing from an advanced degree program, the original Graduate Faculty status shall be reinstated upon recommendation by at least two-thirds of the Graduate Faculty of the department or area if the person returns to the same department in which they held an appointment originally. A change of appointment to another department requires that the person follow the established procedure for obtaining Graduate Faculty status.

Members of the university community employed on a permanent full–time basis and holding the rank of Assistant Professor or above may be admitted on a non-degree basis to take courses for personal and professional growth by supplying an Application for Graduate Admission and the application fee. All other staff members are eligible for admission to all graduate admission categories and are subject to standard admission requirements.

Admission of UNL Seniors
Refer to Academic Credit Policies.

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 is 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 is required. The new application must be approved by the original graduate committee prior to review by the second graduate committee. However, once the masters 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.

Veterans
All men and women planning to attend the University affected by the educational assistance and vocational rehabilitation laws administered by the Veterans Administration should inquire at the Office of Registration and Records, 107 Canfield Administration Building, before they register to make sure that all necessary steps have been taken. See Veteran Resources (http://www.unl.edu/regrec/veterans/vet_main.shtml)

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Funding

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### Funding Information

#### 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. A student holding a fellowship or a traineeship must be a full-time student during the period of appointment.

Current information about UNL and externally-funded fellowships is available at: [http://www.unl.edu/gradstudies](http://www.unl.edu/gradstudies) To be eligible a student must be admitted to a department or area with a specific graduate degree objective and must be enrolled in graduate academic course work. **Students enrolled in certificate-only programs with no degree objective are ineligible for fellowships.** International students must have completed one year of study at a US institution of higher education to be eligible for any of the fellowships. Employees of the University of Nebraska, other than graduate assistants, are not eligible to receive a fellowship.

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 according to the specific fellowship guidelines for the term of the award. 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.

#### Full Support Fellowship 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. They may not engage in remunerative employment, including a graduate assistantship or traineeship.

#### Partial Support Fellowship Awards

Some fellowships provide partial support; students with these fellowships may hold other fellowships and assistantships.

The fellowship award should not in any way affect the amount of a graduate assistantship salary 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.

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; or c) failure in qualifying examinations, preliminary examinations, comprehensive examinations or failure to make satisfactory progress in a graduate program.

#### Teaching and Research Assistantships

Approximately 1,900 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. During the fall and spring terms, graduate assistants may not work more than 20 hours per week, all jobs considered.

#### 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 Graduate Council recommends that all departments require graduate teaching assistants to participate in workshops for teaching assistants. 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.

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 nonacademic 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.

Individual departments make assistantship appointments. Students interested in being considered for assistantships in their major should indicate that 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. The Institute, a concentrated 90-hour program, is held the last week of July and the first two weeks of August. 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 do not meet this guideline could result in loss of the tuition benefit for such courses. Students holding eligible assistantships are provided basic individual student health insurance coverage with related benefits. Details at http://www.unl.edu/health/insurance/benefits (http://www.unl.edu/health/insurance/benefits). The University subsidizes the student health insurance premium for eligible graduate assistants.

Departments may differentiate graduate teaching assistantship stipends 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.

Eligibility for assistantship benefits must meet all of the following criteria: the appointment is continuous and for four full months within the semester dates, the stipend meets the minimum salary level set by the University, 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 meeting the minimum qualification for summer tuition, the student is not charged tuition for the first 6 hours during the summer sessions. If such a stipend met the next level of qualification, the student is not charged tuition for the first 12 hours during the summer sessions. (Specific dollar amounts are available each year from the Office of Graduate Studies.)

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 set by the University for the relative summer session.

Correspondence courses do not qualify for tuition remission benefits and are billed directly to the student. Use of tuition remission for courses that do not directly contribute to degree completion may lead to loss of the tuition benefit for those courses.

Policy Statement for Hiring Graduate Assistants

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 the department. Individual departments may establish a required minimum course load for funded students. Consideration should be given to the table under the “Certification of Benefits” section of this bulletin. Departments must 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 departmental chair/head, graduate 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. Recipients of graduate assistantships may qualify for additional funding through competitive fellowship awards. No additional service or work requirement is associated with fellowship awards.

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.

Criteria used to determine stipend levels should be available to students through the department or graduate committee chair.

Eligibility for assistantship benefits must meet all of the following criteria: the appointment is continuous and for four full months within the semester dates, the stipend meets the minimum salary level set by the University, and the assistantship or combination of assistantships in one or more departments totals at least 13.33 hours per week employment.

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.

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. Federal Perkins Loans and Federal Work-Study are awarded on a first-come, first-serve basis to domestic 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 OSFA for exceptions).
- If you are transferring to UNL or if you attended another postsecondary school as an undergraduate, submit a financial aid transcript to OSFA from all schools attended. A financial aid transcript is required even if you did not receive financial aid.
- Submit all documentation requested by OSFA as required for verification.

For additional information, contact:
Office of Scholarships and Financial Aid
University of Nebraska–Lincoln
17 Canfield Administration Building
PO Box 880411
Lincoln, NE 68588–0411
(402) 472–2030
www.unl.edu/scholfa

Retrieved from "http://bulletin.unl.edu/graduate/Funding"
Auditing a Course

Auditing gives a currently enrolled student (or currently admitted student) the privilege of attending class, but credit is not earned and a grade is not assigned when auditing a class. All persons wishing to audit a course must be admitted and eligible to enroll in classes for the term in which they audit. Courses involving extensive laboratory work are generally not open to auditors.

Students who wish to audit a class must first register for the class. Pick up a Permit to Audit Card at Registration and Records, 107 Canfield Administration Building. Obtain the instructor’s permission to audit the course by having him or her sign the Permit to Audit Card. Turn in the signed Permit to Audit Card at Registration and Records, 107 Canfield Administration Building, no later than the last day to add a class for the term.

Audited classes carry no credit and do not count toward full-time status. All audit cards for a term must be returned to Registration and Records, 107 Canfield Administration Building, no later than the last day to add a class. Audit cards turned in after the deadline will not be honored and the student will be subject to a grade. The fee for auditing a course is the same as the regular resident or non-resident tuition for the term, and both UPFF and other course fees apply to the class. To have an audit recorded on your academic record with an AU designation, request that your instructor submit a Change of Student Record Form to Registration and Records, 107 Canfield Administration Building, indicating the course was an audit and that you did attend.

Tuition and Fees

Tuition and fee rates are subject to change at the direction of the Board of Regents. For the current tuition and fees charges in effect, visit the UNL Student Accounts homepage at http://stuaccts.unl.edu.

Refunds

Students who elect to withdraw from the University within the first four weeks of a semester, or within the first two weeks of a summer session, may be entitled to a fractional refund of tuition. The conditions of eligibility for refunds are subject to change. The current conditions are set forth in each issue of the Schedule of Classes.

Residency Status for Tuition Purposes

Regulations pertaining to resident status for tuition purposes are established by the Board of Regents. Initial determination of resident status is made at the time of admission and is noted on the Certificate of Admission. If a non–resident student wishes to change status, it is necessary to file an application with the Office of Graduate Studies, 1100 Seaton Hall. Full information on the requirements for resident status and the application forms are available at the Office of Graduate Studies and can also be downloaded from http://admissions.unl.edu/applications/Residencyapp.pdf.

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(s) are required to be enrolled as a full-time student as defined in the Graduate Studies Bulletin. Students with external or departmental fellowships must follow the specific granting agency requirements.

Graduate students holding a traineeship are required to be enrolled full-time or be full-time certified during the tenure of their traineeship. Other remunerative employment must follow the granting agency requirements.

A student who holds a graduate assistantship may not work more than half time, or 20 hours per week, all jobs considered, including assistantship(s) and paid internships. Internships are considered work in a training environment related to the student’s educational career for which they receive pay. Therefore, an assistantship and an internship may not be held by a student simultaneously if the total hours between the two equal more than 20 hours per week. This applies to fall and spring terms only.

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 semester, 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>Academic Year Semester</th>
<th>8-week Summer Session</th>
<th>5-week Summer Session</th>
<th>3-week Summer Pre-Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15</td>
<td>9</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>8–16</td>
<td>12</td>
<td>8</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>17–20</td>
<td>10</td>
<td>6</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Full-time</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>1</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.

Summer Registration

Graduate assistants are not required to register for courses during the summer term. Graduate assistants employed in the summer but who are not registered for courses during the summer term are subject to FICA and Medicare taxes; fees for recreation center usage; limited access to libraries and health center fees.
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 a thesis-option masters degree program (i.e., Option I) 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). Form available at [http://www.unl.edu/gradstudies/current](http://www.unl.edu/gradstudies/current).

In order to be eligible to utilize the full-time certification, the student must have been registered at least half time (i.e., at least 4 credits) in the fall and spring terms prior to the initiation of the full-time certification status. Masters students may utilize the full-time certification not longer than 12 months; doctoral candidates may utilize the full-time certification not longer than 24 months.

Full/Part-time Status and Registration

**Registration Requirements for Full/Part-time Status**

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Full-time (F)</th>
<th>3/4-time (T)</th>
<th>1/2-time (H)</th>
<th>Less than 1/2-time (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>6 cr hrs</td>
<td>4-5 cr hrs</td>
<td>3 cr hrs</td>
<td>1-2 cr hrs</td>
</tr>
</tbody>
</table>

Financial Aid and Registration

**Registration Requirements for Financial Aid**

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Full-time (F)</th>
<th>3/4-time (T)</th>
<th>1/2-time (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer</td>
<td>8 or more cr hrs</td>
<td>4-5 cr hrs</td>
<td></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.

Retrieved from "[http://bulletin.unl.edu/graduate/Registration](http://bulletin.unl.edu/graduate/Registration)"

Graduate Degrees Offered

The University of Nebraska–Lincoln offers 38 programs leading to doctoral degrees, 76 leading to masters degrees, and one leading to the educational specialist degree. A complete and up-to-date listing is available online at: [http://www.unl.edu/gradstudies/prospective/programs](http://www.unl.edu/gradstudies/prospective/programs).

Contents

- 1 Graduate Areas of Specialization
- 2 Masters Degree with Double Major
- 3 Second Masters Degree
- 4 Dual Degree Programs
- 5 Individualized Joint Graduate Programs

Graduate Areas of Specialization

Areas of specialization are available in 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 indicated 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), exclusive of thesis 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 masters 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 examining 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
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 master's 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 additional masters degrees. The subsequent masters degree(s) may be in the same discipline as the previously earned degree(s), or in a different discipline. However, no graduate credits will be accepted as transfer credit toward a subsequent masters program if the course work has been applied toward a previously completed graduate degree at any accredited institution, including UNL. Graduate course work not previously applied toward a degree may be considered for transfer to a subsequent masters if the graduate credits were earned within 10 years of completing the masters degree at UNL.

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; community and regional planning; journalism and mass communications; 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); MArch/MEng with construction emphasis; civil engineering (MS) and community and regional planning (MCRP); and Legal Studies (MLS) and Psychology (PhD). 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.

Individualized Joint Graduate Programs

With approval of the Dean of Graduate Studies, individualized joint masters or doctoral programs may be proposed. The individualized joint program must be proposed by the participating graduate faculty members, and must be approved by all relevant departmental/area Graduate Committees prior to seeking approval from the Dean. Interested faculty members should contact the Office of Graduate Studies for more information.

Students who choose to pursue an individualized joint PhD program may earn a maximum of one masters degree in the context of their joint PhD program. That is, credit hours counted toward the joint PhD may not be applied to more than one masters degree. The doctoral supervisory committee determines whether a student may pursue a masters degree “along the way” to the joint PhD.

Masters Degree Requirements

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  - 1.1 Options for the Masters Degree (#Options for the Masters Degree)
  - 1.2 Option I. (#Option_I.)
  - 1.3 Option II. (#Option_II.)
  - 1.4 Option III. (#Option_III.)
  - 1.5 Residency and Time Requirements (#Residency and Time Requirements)
  - 1.6 Memorandum of Courses (#Memorandum of Courses)
  - 1.7 Admission to Candidacy (#Admission to Candidacy)
  - 1.8 Masters Thesis (#Masters_Thesis)
    - 1.8.1 Examinations (#Examinations)
    - 1.8.2 Procedure Summary for the Masters Degree (#Procedure Summary for the Masters Degree)

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 masters degree student may change his/her declared Option at any time during the program of study with written approval from the adviser, the Chair of the Graduate Committee in the student’s major and the Dean for Graduate Studies. The only exception to this policy is that students may not change from Option I to any other Option if certification of full time status has been utilized.

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, refer to http://www.unl.edu/gradstudies/prospective/programs (http://www.unl.edu/gradstudies/prospective/programs).

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.
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 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 her/his 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) and 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 for Human Research Protections (OHRP). The IRB New Project Submission form must be completed on-line at http://nugrant.unl.edu (http://nugrant.unl.edu); the Application to Use Animals is available at http://research.unl.edu/orr/qa.shtml (http://research.unl.edu/orr/qa.shtml). Note that the IRB and IACUC will not review projects already in progress; approval must be secured prior to the initiation of the research. Evidence of IRB/IACUC approval 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 the guidelines set forth in the Guidebook for the Preparation and Submission of an Electronic Thesis found on the Graduate Studies website at http://www.unl.edu/gradstudies/current/degrees#masters (http://www.unl.edu/gradstudies/current/degrees#masters). An electronic copy of the thesis and abstract must be presented for preliminary review to the Masters Degree Specialist in the Office of Graduate Studies at least two weeks (one week in the summer sessions) before the date for the Candidate’s oral examination. A Candidate is not eligible for the oral examination until the thesis is completed and approved by the major adviser. After the thesis has been successfully defended, it needs to be electronically submitted to the Masters Degree Specialist for a final review prior to being uploaded to digital commons. Option I is not open for the master of professional accountancy degree.

Option II.
The masters degree under Option II is offered in certain departments upon the advice and the approval of the major adviser, the Graduate Committee, and the Dean of Graduate Studies. This option encourages a wider range of courses than is permissible under Option I. 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 major must total at least 15 hours and the minors at least 9 hours each. Although most departments stipulate that all course work towards 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 II is not open for the master of professional accountancy degree.

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 the major.

Option III is not open for the master of education degree or to students seeking the masters of science degree in either agronomy or horticulture.

Students pursuing the master of professional accountancy degree must earn at least 20 semester hour credit in courses open exclusively to graduate students. At least 15 semester hours of these graduate-only courses must be in Accounting.

Residency and Time Requirements
A candidate for an Option I masters degree must complete 10–12 semester hours of the required credit in regularly scheduled campus courses, excluding credit in thesis research; candidates for Option II or III masters degrees must complete at least 18 hours in regularly scheduled campus courses. At least one-half of the work for a masters degree must be in the department or area constituting the student’s major.

The work required for a masters degree must be completed within ten consecutive years. Course work exceeding ten years will not apply toward the partial fulfillment of the degree requirements for masters degrees at the University of Nebraska–Lincoln.

Memorandum of Courses
The Memorandum of Courses must be filed before the student has received grades (letter grades, no reports or incompletes) in more than one-half of the prescribed program. It must also be approved by the student’s adviser, the departmental or area Graduate Committee, the Graduate Committee in the student’s minor, and by the Dean of Graduate Studies. A student may NOT file a Memorandum of Courses and graduate in the same semester or summer session. See Master’s Degree Forms and Deadlines on the Graduate Studies website http://www.unl.edu/gradstudies/current/degrees#masters (http://www.unl.edu/gradstudies/current/degrees#masters).

Admission to Candidacy
A student is admitted to Candidacy for the masters degree when admission deficiencies have been removed and when the ability to perform satisfactorily in graduate studies has been demonstrated, by filing a Memorandum of Courses in the Office of Graduate Studies.

Masters Thesis
The masters thesis and abstract in preliminary form must be approved by the adviser prior to applying for the final oral examination or for its waiver (at least four weeks prior to the examination). An electronic copy of the thesis and abstract in preliminary form must be submitted to Masters Degree Specialist in the Office of Graduate Studies for approval at least two weeks (one week in summer) prior to the final oral examination. This copy will be reviewed by the masters degree specialist and the student notified of any changes to be made. Please refer to The Guidebook for the Preparation and Submission of an Electronic Thesis on the Graduate Studies website for the exact format to be followed http://www.unl.edu/gradstudies/current/degrees#masters.
## Requirements for the Degree of Doctor of Philosophy Degree

1. **Academic Residency Requirements**
   1.1 Academic Residency Requirements
1.2 Appointment of Supervisory Committee
1.3 Changes to the Supervisory Committee
1.4 Courtesy Members of Doctoral Supervisory Committees
1.5 Program of Studies
1.6 Language and Research Tool Requirement
1.7 Comprehensive Examination and Admission to Candidacy
1.8 Final Examination
1.9 Dissertation
1.10 Reading Committee
1.11 Depositing the Dissertation
1.12 Summary of Procedure for the Doctor of Philosophy Degree

## Requirements for the Degree of Doctor of Musical Arts

2. **Academic Residency Requirements**
   2.1 Academic Residency Requirements
2.2 Appointment of Supervisory Committee
2.3 Changes to the Supervisory Committee
2.4 Courtesy Members of Doctoral Supervisory Committees
2.5 Program of Studies
2.6 Language and Research Tool Requirement
2.7 Comprehensive Examination and Admission to Candidacy
2.8 Final Examination
2.9 Dissertation
2.10 Reading Committee
2.11 Depositing the Dissertation
2.12 Summary of Procedure for the Doctor of Musical Arts Degree

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1. Following the successful completion of the oral examination, the student should submit another electronic copy to the Masters Degree Specialist for final approval. Once the student receives notification of final approval, the thesis shall be uploaded to Digital Commons. Upon a successful upload, the student will receive an email notification which will need to be printed out. The student will then bring the printed notification, one copy of the title page, two copies of the abstract and their signed Final Examination Report Form to the Masters Degree Specialist in the Office of Graduate Studies. 1100 Seaton Hall. The title page and one of the abstracts will be stamped for approval and returned to the student for depositing in 318 Love Library. The Final Examination Report Form will be signed by the personnel in the Library and the student will proceed to the Cashier in Canfield Administration Building to pay the archiving fee. The cashier will sign off on the Final Examination Report Form and the student will then bring the form back to the Office of Graduate Studies.

The student should consult her/his major adviser about the number of additional copies of the thesis which should be prepared, and also about the binding of these copies. One copy must be filed in the departmental office of the major and ordinarily one copy is furnished to the major adviser who directed the study.

2. **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 specified 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 minor department(s) provided all grades in the minor department are at least a B or pass.

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). If the degree is being earned under Option I without a final oral examination, the thesis must be approved in writing by a Graduate Faculty member 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. 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 UNL Dean of Graduate Studies.

In the event that members of an oral examining committee are not unanimous regarding passing a Candidate, the student is to be approved for the degree if only one examiner dissents. However, in each case, the dissenting member of the committee will be expected to file a letter of explanation in the Office of Graduate Studies.

If a student fails to pass the final 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.

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3. **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. See Master’s Degree Forms and Deadlines on the Graduate Studies website [http://www.unl.edu/gradstudies/current/degrees#masters](http://www.unl.edu/gradstudies/current/degrees#masters).

1. Admission to UNL Graduate Studies
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
3. Removal of admission deficiencies
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 of major department 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 is in progress, and any outstanding incompletes have 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. Confirmation of upload of their abstract to Digital Commons, one copy of the title page, two copies of the abstract and the signed Final Examination Report Form to Graduate Studies to be stamped. Title page and one abstract will be delivered to the Dean of University Libraries, and archiving fee is paid to the Cashier’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.

Retrieved from [http://bulletin.unl.edu/graduate/Masters_Degree_Requirements](http://bulletin.unl.edu/graduate/Masters_Degree_Requirements)

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   3.3 Qualifying Procedure (#Qualifying_Procedure)
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4 Requirements for Educational Specialist Degree (#Requirements_for_Educational_Specialist_Degree)
   4.1 Hours of Credit (#Hours_of_Credit_2)
   4.2 Qualifying Procedure (#Qualifying_Procedure_2)
   4.3 Supervisory Committee (#Supervisory_Committee)
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5 Requirements for Certificate of Specialization in Educational Administration and Supervision
   (#Requirements_for_Certificate_of_Specialization_in_Educational_Administration_and_Supervision)

Requirements for the Doctor of Philosophy Degree

Academic Residency Requirements
The Office of Graduate Studies has established an academic residency requirement for the purpose of ensuring that the doctoral program should be reasonably compact, continuous, and cohesive; and that a substantial portion be in fact done at and under close supervision by the University. The academic 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 bachelors degree, the academic 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 beginning a doctoral program in the University of Nebraska system with a masters degree, the academic residency requirement for the PhD is 27 hours of graduate course work 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, refer to “University Staff Exemption.”

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. UWL offers a limited number of fellowships to students who have met the residency requirements. The fellowships are renewable for a maximum of three years, with no more than nine months of study being used in any one year. The Office of Graduate Studies must be notified immediately and a change of status will be submitted to the Dean of Graduate Studies.

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 masters 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 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.

Students who have earned a previous doctoral degree at any institution, including the University of Nebraska, may seek additional doctoral degrees. The subsequent doctoral degree(s) may be in the same discipline as the previously earned degree(s), or in a different discipline. However, no graduate credits will be accepted as transfer credit toward a subsequent doctoral program if the course work has been applied toward a previously completed doctoral degree at any institution, including UWL. Course work applied toward a previously earned masters degree may be considered for transfer to a subsequent doctorate at the discretion of the Supervisory Committee.

Appointment of Supervisory Committee
In order to assure that students are under careful advisement and mentoring throughout their careers, a Supervisory Committee is established before a doctoral student has accumulated 45 credit hours including any transfer hours but excluding research or language tools. Upon recommendation of the departmental or area Graduate Committee in the student’s major, the Dean of Graduate Studies appoints, for each student, a supervisory committee of at least four Graduate Faculty. All professors on the supervisory 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 member 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. The representative of the minor department on the committee may serve as the outside representative. 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.

See Doctoral Degree Forms and Deadlines on the Graduate Studies website: [http://www.unl.edu/gradstudies/current/degrees#doctoral](http://www.unl.edu/gradstudies/current/degrees#doctoral)

Changes to the Supervisory 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. Graduate Faculty who have retired and been appointed to emeritus status may co–chair the supervisory committees of doctoral students with a resident Graduate Faculty member.

b. Retired faculty members not appointed as emeritus, relinquish their Graduate Faculty status and must be replaced on doctoral supervisory committees.

c. If the student has already achieved Candidacy, the former chair who has left the employ of the University (not through retirement) 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 member.

d. If the student has not yet achieved Candidacy, a new chair of the supervisory committee who is a resident Graduate Faculty member 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. Faculty who have been appointed to emeritus status may continue as committee members. In certain circumstances where a special and needed continuing expertise is involved and the faculty member is willing to continue serving, he/she may continue as a member of the supervisory committee, with the approval of the Supervisory Committee Chair and the concurrence of the UNL Dean of Graduate Studies.

### Courtesy Members of Doctoral Supervisory Committees

(Policy change approved by UNL Graduate Council, 2–12–2009)

The UNL graduate faculty welcome associations with faculty members from other institutions who might contribute unique expertise to our doctoral programs. These external experts, who must hold a doctoral degree appropriate to the discipline and have academic accomplishments comparable to the criteria for UNL Graduate Faculty, are eligible for appointment as “courtesy” members of doctoral supervisory committees. Courtesy faculty are appointed as voting members of the supervisory committee and must be willing to participate in the student’s doctoral program in a manner consistent with this role. The courtesy member may serve as one of the two appointed readers; but may not serve as committee chair, co–chair, or outside representative.

1. A courtesy association is not granted as a blanket status and must be approved separately for each supervisory committee upon which the individual is nominated to serve.

2. Only one courtesy member may serve on each supervisory committee, and the committee must include a minimum of four members of the University of Nebraska Graduate Faculty.

3. Appointment of a courtesy member is accomplished by the submission of the “Courtesy Committee Member” form signed by the supervisory committee chair and graduate committee chair. A current CV from the courtesy member should be submitted with this form (the CV may be e-mailed to ebachman1@unl.edu).

See Doctoral Degree Forms and Deadlines on the Graduate Studies website: [http://www.unl.edu/gradstudies/current/degrees#doctoral](http://www.unl.edu/gradstudies/current/degrees#doctoral)

### Program of Studies

Within the semester 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. The student’s program of study must conform with one of the following plans:

1. The student chooses a major from the list of approved doctoral programs. 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:
   - supporting courses in the same or in related departments, or
   - a minor field of study outside of the major department. The minor must include at least 15 semester hours with 6 hours 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 requirements 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.

See Doctoral Degree Forms and Deadlines on the Graduate Studies website: [http://www.unl.edu/gradstudies/current/degrees#doctoral](http://www.unl.edu/gradstudies/current/degrees#doctoral)

### Language and Research Tool Requirement

There is no uniform language or research tool 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 his/her 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.

When the student has passed the comprehensive examination, satisfied language and research tool requirements of her/his approved program, and removed any provisional admission requirements, 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(s). 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 program of study.

**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.

For the Application for Admission to Candidacy form, see doctoral deadlines and forms at [http://www.unl.edu/gradstudies/current/degrees#doctoral](http://www.unl.edu/gradstudies/current/degrees#doctoral)
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 given by the supervisory committee after the candidate’s studies have been completed and the dissertation accepted. The committee also 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 oral examination for the PhD will not be scheduled unless a majority of the supervisory committee, including the chair, 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 consent of the Graduate Dean. The committee reports the results of the final oral examination to the Office of Graduate Studies.

In the event that members of an oral examining committee are not unanimous regarding passing a candidate, the student is to be approved for the degree if only one examiner dissents. However, in each case, the dissenting member of the committee will be expected to file a letter of explanation in the Office of Graduate Studies.

If a student fails to pass the final oral examination for an advanced degree, his/her 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.

See Doctoral Degree Forms and Deadlines on the Graduate Studies website: http://www.unl.edu/gradstudies/current/degrees#doctoral (http://www.unl.edu/gradstudies/current/degrees#doctoral)

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 the 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 on the Office of Graduate Studies Web site. For specific formatting guidelines, the Guidebook should be consulted.

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 for Human Research Protections (OHRP). The IRB New Protocol Submission form must be completed on-line at http://nugrant.unl.edu (http://nugrant.unl.edu)– the Application to Use Animals is available at http://research.unl.edu/orr/qa.shtml (http://research.unl.edu/orr/qa.shtml). Note that the IRB and IACUC will not review projects already in progress; approval must be secured prior to the initiation of the research. Evidence of IRB/IACUC approval must be submitted at the time the final version of the thesis or dissertation is filed.

Reading Committee
The dissertation and abstract are reviewed by a reading committee of two members 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 rough draft of the title page and abstract must be presented to the doctoral program specialist in the Office of Graduate Studies for preliminary review at least three weeks before the final oral examination.

Depositing the Dissertation
Following the successful completion of the oral examination, the student should consult the instructions received at the time of filing the Application for Final Oral Exam before submission of required items in the Office of Graduate Studies, 1100 Seaton Hall.

Only abstracts/dissertations that meet all published requirements can be approved and stamped for depositing in 318 Love Library. Before the degree is granted, each candidate pays a processing fee, and if desired, an additional fee to cover the cost of registering a copyright.

Summary of Procedure for the Doctor of Philosophy Degree
This summary of procedure should be studied carefully in connection with the Graduate College calendar. See Doctoral Degree Forms and Deadlines on the Graduate Studies website http://www.unl.edu/gradstudies/current/degrees#doctoral (http://www.unl.edu/gradstudies/current/degrees#doctoral)

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. Submission to the Office of Graduate Studies of a Program of Studies form 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. The time limit on granting the doctoral degree is eight years from the time of filing a student’s program of study in the Office of Graduate Studies.
4. 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.
5. Admission to Candidacy for the PhD degree by filing an application 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).
6. Filing of an application for the degree at the Office of Registration 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.
7. Presentation of the dissertation and the abstract to the members of the reading committee in sufficient time for review and approval, which must be obtained at least three weeks before the final examination.
8. At least three weeks prior to the date of the oral examination, presentation to the Office of Graduate Studies of the application for final oral examination and a copy of the title page and abstract for preliminary review.
9. Passing of the required final oral examination.
10. Deposit of the required documents as detailed in the instructions received at the time of filing the application for Final Oral Exam with the Dean of University Libraries after approval by the doctoral programs specialist in the Office of Graduate Studies. Delivery of the report on the completion of the Doctoral Degree form, signed by members of the supervisory committee, the Dean of University Libraries, and the Comptroller, to the Office of Graduate Studies. In addition, one bound copy of the dissertation is to be deposited with the student’s major department.
Studies website should not be viewed as a substitute for the doctorate nor as work completed toward it. See Educational Specialist Degree Forms and Deadlines on the Graduate 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 Requirements for Educational Specialist Degree Refer to Summary of Procedure for Doctor of Education Degree the adviser.

advanced work; and 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 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 Qualifying Procedure normally be at least 6 hours of credit. The minimum amount of graduate credit for the EdD is 96 hours, including both dissertation or field investigation and language or research tools, which will developed, scholarly study of educational theory coupled with skills of analysis which permit direct application of that theory.

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.

The program of studies must total 96 hours with a minimum of six research course hours included.

Academic Residency Requirements

The academic residency requirements for the EdD are the same as those for the PhD.

Hours of Credit

The minimum amount of graduate credit 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.

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; and 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 adviser.

Summary of Procedure for Doctor of Education Degree

Refer to Summary of Procedure for the Doctor of Philosophy Degree for the procedure to be followed for the doctor of education degree. It should be carefully studied in connection with the UNL Graduate Studies calendar. This information also covers the preparation of the dissertation or field investigation.

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. See Educational Specialist Degree Forms and Deadlines on the Graduate Studies website http://www.unl.edu/gradstudies/current/degrees#eds
Requirements for 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.

All students seeking the certificate of 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 the chair of the Department’s Graduate Committee.

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, at least 21 must be earned at the University of Nebraska-Lincoln. At least 15 semester hours of approved graduate credit must remain to be completed at the time the program is filed with the Office of Graduate Studies. The certificate 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 two other requirements: 1) 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 2) successful completion of a comprehensive written examination, which must be taken within the ten calendar months prior to graduation. A portfolio may be produced in lieu of fulfilling requirements 1 and 2.

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Requirements for Graduate Certificates

Certificates are available in a variety of disciplines and interdisciplinary areas. For more information, refer to Graduate Studies Web site.

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Academic Credit/Academic Progress Policies

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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 be permitted 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 using the Grad Credit for Undergrads link http://research.unl.edu/gradstudies/credit/ http://research.unl.edu/gradstudies/credit/ . Holding graduate credit keeps a senior registered as a member of an undergraduate college and allows one to continue any undergraduate scholarship or financial aid awarded. Courses taken before one graduates do not always transfer as graduate credit to other institutions nor can there be a guarantee from the Office of Graduate Studies that these courses would apply toward a particular graduate program.

If someone on another University system campus wishes to take graduate level classes at UNL, an intercampus form should be used, and any arrangement to hold for graduate credit would have to be made at the student’s home campus. UNL will not be able to certify graduate credit except for those students graduating at UNL. Students from schools outside of the University of Nebraska system will have to wait to receive graduate credit until they can qualify as graduate students. UNL seniors who are within 9 hours of graduation may apply and be granted admission to UNL Graduate Studies. This admission and continued enrollment would be contingent upon receipt of the baccalaureate within the calendar year and would make one ineligible to continue any undergraduate scholarship or financial aid, but would allow one to apply for any financial support, fellowships, or assistantships open to graduate students.

Seniors in the University Honors Program are encouraged to consider taking 400/800–level courses at the 800 level with the concurrence of their adviser and permission of the instructor and Dean of Graduate Studies.

Transer 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. Similarly, no graduate credits will be accepted as transfer credit toward a subsequent doctoral program if the course work has been applied toward a previously completed doctoral degree at an institution, including UNL. 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 (excluding thesis) of the minimum number of graduate credits required for any subdoctoral graduate degree must be completed at the University of Nebraska. No graduate credits will be accepted as transfer credits unless earned at an institution fully accredited to offer graduate work in the field of the student’s major; nor should the student expect any graduate credits to be transferred. If a student has transferred work, the cognizant graduate committee evaluates the quality and suitability and determines that they are equal to or superior to offerings available at the University of Nebraska–Lincoln. 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 insure 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

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/withdrawn), 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.

Students taking undergraduate classes for deficiencies generally have a grade requirement set by the department. However, if no specific standard has been set, the graduate student is required to meet the same standard an undergraduate would be held to. That is, if the class is taken Pass/No pass, pass is the equivalent of a C or better.

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
Probation and Termination and Appeals

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Probation, Termination and Appeals

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.

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 Schedule of Classes) without the permission of the instructor and the Office of Graduate Studies.

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 of the way 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. The Dean of Graduate Studies, with the course instructor prior to approval. 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.

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

Correction of Registration Errors

A graduate student who has registered in error (for example, enrollment in the undergraduate level of a 400/800 course) should correct the error through the normal drop and add process during the term in which the error occurred. In the event the error is not recognized until a grade is posted, the student may appeal for correction of registration within sixty days of the posting of the grade report in the Records Office. Changes to a student registration record will not be made more than sixty days after grades are posted in the Records Office.

Withdrawal

If a student wishes to drop all courses being taken in the term, this is considered a withdrawal. Withdrawals may be accomplished through the eNRoll system or by filing a Cancellation/Withdrawal form with the Registration Office, 107 Canfield Administration Building. Students may withdraw from classes, regardless of circumstance, from the first day of classes through the 3/4-point of the term. Withdrawals that occur after the second week (or 2/16th) of the term but before the 3/4-point 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 Dean of Graduate Studies will consult with the course instructor prior to approval. 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.

If the student is on an assistantship, the student should contact the department Graduate Chair to discuss the ramifications of the withdrawal before actually withdrawing from the course work.

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

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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. Except in cases of dismissal because of violations of the Student Code of Conduct, upon termination from a graduate degree program and/or dismissal from the Graduate College, students may apply for admission to another degree program or admission as a non-degree seeking student only with the approval of the Dean for Graduate Studies. No student on probation may receive a graduate degree.

Probation or termination recommendations may be made by the student’s adviser (masters students), the Supervisory Committee (doctoral students), and must be approved by the Graduate Committee overseeing the student’s major. The Graduate Committee overseeing the student’s major must communicate the probation or termination recommendation in writing to the campus Dean for Graduate Studies. A copy of the recommendation must be sent to the student.

For all graduate students at UNL, probation or termination recommendations may be made under the following conditions: a) violations of the “Student Code of Conduct” listed in this bulletin, b) failure to satisfy “Scholastic Grade Requirements” also listed in this bulletin, c) failure in qualifying examinations, 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, ethical 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 or provisional admission. 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

(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 adviser.
2. If denied, the appeal may be submitted to the departmental or interdepartmental area Graduate Committee administratively responsible for the student’s graduate program.
3. If denied, an appeal may be made to the Graduate Council for the campus administratively responsible for the student’s graduate program. Normally, this will be the final appeals body (for exceptions, see paragraph E).

B. Graduate students holding admission with a doctoral objective in the Graduate College and for whom a doctoral supervisory committee has been appointed should appeal as follows:

1. Initially, the appeal should be submitted to the student’s adviser.
2. If denied, the appeal may be submitted to the student’s supervisory committee.
3. If denied, the appeal may be submitted to the departmental or interdepartmental area Graduate Committee administratively responsible for the student’s graduate program.
4. If denied, an appeal may be made to the Graduate Council for the campus administratively responsible for the student’s graduate program. Normally, this will be the final appeals body (for exceptions, see paragraph E).

C. When a student’s graduate program consists of 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 adviser, 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 examination within 30 days after its 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. A decision by the Executive Graduate Council not to accept jurisdiction of an appeal shall be final and is not subject to further appeal.

E. 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
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.

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 assistantship 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.
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. Materials are used by permission.

The University of Nebraska Medical Center Guidelines for Good Practice in Graduate Education, which was approved by their Graduate Council on July 18, 1996, 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. 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. Retrieved from the University of Nebraska-Lincoln Graduate Council. University Resources

### University Resources

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Graduate Student Association

The Graduate Student Association (GSA) exists to serve and represent graduate students—a unique and important population of students at the University of Nebraska-Lincoln. GSA promotes the intellectual community of graduate education; sponsors opportunities for professional development; creates opportunities for social interaction among graduate students; and advocates for issues relevant to graduate students and graduate education. The GSA, as a recognized student organization, works in cooperation with the Office of Graduate Studies and University administration to create a quality educational and professional experience for graduate students.

Online and Distance Education

Technology has changed the face of education forever. At the University of Nebraska-Lincoln we've embraced the future by connecting world-class faculty and teachers with students from around the world.

We offer:

- Online high school courses and programs
- Online undergraduate courses and degree completion options
- Online and hybrid graduate courses, certificates, master's and doctoral programs

[http://online.unl.edu/](http://online.unl.edu/)

International Students

International students comprise a significant portion of our applicants and our graduate student body. Our international applicants come from a wide variety of linguistic and educational backgrounds and are affected by U.S. immigration regulations. For information on visa and immigration regulations, contact the staff in the International Students and Scholars Office.

The University of Nebraska–Lincoln has many international initiatives, available resources, and services for prospective and current students and scholars. Through International Engagement, faculty, students, staff, and alumni can learn more about Education Abroad opportunities, explore academic programs with an international focus, connect with the Confucius Institute, the American Exchange Center, and international alumni, and support UNL's international engagement efforts.

[http://international.unl.edu](http://international.unl.edu)

Student Services

University Housing

University Housing provides options which reflect the diversity of the student body, including residence hall rooms for single students and apartments for families. In addition to the numerous living arrangements offered by University Housing, students can find many affordable apartments close to campus.

[http://housing.unl.edu/](http://housing.unl.edu/)

University Police

Campus safety and security are coordinated by University Police Services. Officers patrol both Lincoln campuses 24 hours a day and work closely with the Lincoln Police Department and county, state and federal authorities on law enforcement matters.

[http://police.unl.edu/](http://police.unl.edu/)

OASIS

The Office of Academic Support and Intercultural Services (OASIS) supports all UNL students, with emphasis on supporting students of color. Its student staff and program coordinators are familiar with the special needs of students of color on a predominantly white campus.

[http://www.unl.edu/oasis/](http://www.unl.edu/oasis/)

The Office of Trio Programs offers a comprehensive series of unique support services for students whose ethnic background is African American, Hispanic/Latino, Native American, or Asian American, as well as qualified students who are low-income or first-generation.
University Health Center
The University Health Center provides quality, convenient and affordable health care to students at UNL. Clinical services include primary medical care, access to specialist evaluations, counseling and psychological services, dental care, physical therapy and nutritional counseling. Students also have access to pharmacy, laboratory and radiology services plus a wide range of health education programs.

Nebraska Unions
The Nebraska Union, Nebraska East Union, and Culture Center are full-service community centers designed for use by everyone at the University---students, faculty, staff, alumni and visitors.

Student Involvement
Student Involvement serves as headquarters for student activities at UNL. Student Involvement coordinates services for student organizations, maintains an activities calendar and a resource library, and sponsors several UNL programs.

Student Technology Training
This division of information services offers free software workshops to UNL students as part of their Student Technology Fee. For more information please visit the web site.

Career Services Center
Career Services helps students clarify and achieve career goals. The Center provides individual career counseling, a Career Resource Library, job listings, an online resume system, and several career-related programs and events.

Services for Students with Disabilities
NU 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 office provides test accommodations, note takers, taped textbooks, interpreters, C Print services, brailled materials, assistance with accessible classroom identification, and other needed accommodations.

University Bookstores
The University Bookstores are owned by the University and operated by the Follett Higher Education Group. Both bookstores carry textbooks and school supplies, gift items, sundries, University memorabilia, and Club Red clothing. Both also provide optional free textbook reservation and can save students money through the used textbook program.

Campus Recreation
Campus Recreation provides students, faculty and staff with a variety of recreational facilities and programs, including weight training and conditioning equipment, multipurpose sport courts, swimming pool, indoor climbing wall, running track, indoor turf field, massage therapy center, and more.

ASUN Student Government
The Association of Students of the University of Nebraska (ASUN) functions as the primary representative body for UNL students, and much of its work is conducted by committees and commissions open to any interested UNL students. ASUN also sponsors a Student Legal Services Center, a prepaid legal advising, counseling, and limited litigation service funded by student fees.

Daily Nebraskan
The Daily Nebraskan, a prominent student voice in campus life, is staffed by students in advertising, editing and reporting positions. Any student is eligible to apply for openings on its staff, the makeup of which changes each semester.

Resources and Facilities

Athletic Department
As a member of the Big 12 Conference, UNL fields and hosts many of the finest NCAA teams, and the Athletic Department maintains sports facilities which rank among the best in the nation.

The Lied Center for Performing Arts
serves students and the wider community by bringing the world’s finest arts and entertainment to its stage. It’s 2,278-seat hall was designed for the staging of major musical, theatrical and dance events, and meet the needs of regional, national and international touring companies.
Kimball Recital Hall
provides acoustically-sound performance space for students and faculty.

The Temple Building
houses all theatre classes as well as the administrative offices and performance spaces of the Department of Theatre Arts.

The Bob Devaney Sports Center
with its 13,500-seat arena, is a multi-sport complex for the Nebraska Cornhuskers. It also hosts performances by national recording stars.

Information Services
Information Services offers a broad range of computing and telecommunications services designed to meet the information technology needs of the diverse University of Nebraska–Lincoln community. Services and facilities include public computer labs, laser printing and scanning, free electronic mail accounts, consulting and a computer shop for sales and repairs. The Instructional Technology Group and the New Media Center provide support to instructors seeking to integrate digital media technologies into their teaching methods.

Libraries
The University’s library system and services are extensive, including 2.5 million volumes and thousands of active periodicals and serials. Supplementing traditional services, the Innovative Research Information System (IRIS) offers the Library’s electronic catalog, general and specialized journal indexes, full-text electronic journals, and access to Internet resources.

Museums and Galleries

Sheldon Memorial Art Gallery and Sculpture Garden
One of the nation’s most respected university art museums, with a permanent collection of over 12,000 objects.

Eisentrager-Howard Gallery
Contemporary artwork by local, national, and international artists.

Great Plains Art Collection
Over a thousand sculptures, paintings, drawings, prints and photographs.

University of Nebraska State Museum
World famous for its mounted skeletons of elephants and their close fossil relatives surrounded by exhibits on Nebraska paleontology, cultural diversity and biological diversity.

Robert Hillestad Textiles Gallery
From art to apparel, from the Occident to the Orient, from past to present, and from emerging artists to the acclaimed.

International Quilt Study Center
Dedicated to the collection, preservation, exhibition, study and to promoting discovery of quiltmaking traditions, the Center holds the world’s largest collection of quilts numbering more than 2300 from over 24 countries.

Lentz Center for Asian Culture
Enriching knowledge and understanding of Asia through exhibitions, lectures, and musical events.

Nebraska State Historical Society
Interpretive museum exhibits illustrating Nebraska’s past.

University of Nebraska-Lincoln Television
University of Nebraska-Lincoln Television, station KUON-TV, 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.

Office of Research
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. Please visit the Web site of the
Academic Colleges

- College of Agricultural Sciences and Natural Resources (/graduate/College_of_Agricultural_Sciences_and_Natural_Resources)
- College of Architecture (/graduate/College_of_Architecture)
- College of Arts and Sciences (/graduate/College_of_Arts_and_Sciences)
- College of Business Administration (/graduate/College_of_Business_Administration)
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- Hixson–Lied College of Fine and Performing Arts (/graduate/Hixson–Lied_College_of_Fine_and_Performing_Arts)
- College of Journalism and Mass Communications (/graduate/College_of_Journalism_and_Mass_Communications)
- College of Law (/graduate/College_of_Law)

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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 and numerous departments and centers.

The College of Agricultural Sciences and Natural Resources offers academic programs challenging undergraduate and graduate students to explore and discover through new technologies, ways to conquer the complex changes in agriculture, life sciences, 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 tradition 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 and 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 and advising to undergraduate and graduate students.

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 as 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 resources 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.

The College of Agricultural Sciences and Natural Resources (CASNR) offers the following distance education courses and degree programs: master of applied science, master of applied science with focus in community development, master of business administration with a specialization in agribusiness, and master of science in entomology. A graduate certificate in food safety and defense is also available.

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; Biological Systems Engineering; Entomology; Food Science and Technology; Statistics; Veterinary and Biomedical Sciences; the School of Natural Resources; and in numerous programs and areas of specialization such as Plant Pathology.

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College of Architecture

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- 6 Hyde Program of Visiting Professionals. (#Hyde Program of Visiting Professionals.)
- 7 Hyde Chair of Excellence. (#Hyde Chair of Excellence.)

About the College

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 a 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 600 students are enrolled in classes, learning with a faculty of 30 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 planning, landscape architecture, and interior design 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, planners, landscape architects and interior designers 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. 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 (NCIP). The NCIP is a community recognition 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 co-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, American Society of Landscape Architects and International Institute Interior Designer Association 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. This 91,000-square-foot complex provides students 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. The facility includes graphics and printer terminals, as well as a number of microcomputers. Several makes of microcomputers are linked to digitizers, graphics tablets, and plotters for use in computer-aided design work, as well as production of maps and charts. Extensive software is available for student and faculty use. The terminals are linked into the University Computing Resource Center for expanded mainframe capabilities. Micromodes are used to link the College of Architecture computer systems to external sources of data and computing programs. The College also has several computer-aided design systems, as well as a digital design laboratory featuring Computer Numeric Control (CNC), a laser cutter and 3D printing. 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 communicate (through 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 memorial program was established in 1979 in grateful recognition of Mr. A. Leicester Hyde, AIA, 1902–1976. He graduated from the University of Nebraska in architectural engineering in 1925 and Columbia University in 1928. From 1960 to 1972 he was president and chairman of the board of Midwest Life Nebraska. 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 within 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. Leicester Hyde. Recipients have included Joseph Esherick, Peter Cook, Christine Hawley, Wolf Pries, Ralph Rapson, Tobias Faber, David Lewis, Tsukasa Yamashita, Ken DeMay, Larry Young, Tom Wang, Charles Redmon, Terry Rankine, David Gosling, Michael Sorkin, Philip Thiel, Anthony Ames, Jeffrey Day, Diene Lewis, Jullien Border, Martin Hougue, Johan Granberg, Paul Preissner, and Doug Jackson. Retrieved from "http://bulletin.unl.edu/graduate/College_of_Architecture (http://bulletin.unl.edu/graduate/College_of_Architecture)"

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College of Arts and Sciences

The College of Arts and Sciences offers graduate degrees in natural and physical sciences, social sciences, and the humanities. Every department has a Chair of the Graduate Committee (Graduate Adviser) 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 members of the Graduate Committee. 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/or interdisciplinary areas, including: catalysis, materials chemistry, nanoscience, structural biology, molecular recognition, surface science, materials, polymers, solid state, organometallics, mechanism-based enzyme inhibition, natural products synthesis, biophysical, bioanalytical, environmental science, clinical chemistry, mass spectrometry, and molecular biology. A 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. The computer science MS and PhD programs provide an optional bioinformatics specialization. A cooperative PhD program is also offered with the Department of Mathematics.

The Department of Geosciences offers the MS and PhD degrees in many sub-disciplines of the earth and atmospheric sciences, but with emphasis in meteorology/climatology, hydrological science, sedimentary geology, Quaternary geology, paleoclimatology, geochemistry, geomorphology, structural geology, micropaleontology and vertebrate paleontology. The department houses the ANDRILL (Antarctic Drilling) management office and actively cooperates with the State Museum and the School of Natural Resources, the latter of which includes the State Geological Survey and the UNL Water Center.

The Department of Mathematics offers the MA, MS, MAT, and PhD, and has nationally recognized faculty in algebra, analysis, coding theory, discrete mathematics, differential equations, applied mathematics, and mathematical biology. 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 offers the MS and PhD degrees in physics, with strong programs in atomic, molecular, optical, and plasma physics (experiment and theory), in condensed matter/materials physics (experiment and theory, emphasis on nanoscale materials), and in high energy physics (experiment). Among unique facilities, the department hosts several central facilities of the Nebraska Center for Materials and Nanoscience, the new Diocles Extreme Light Laboratory, and is allied with the Research Computing Facility which jointly operates the most powerful computer in the state for physics simulations and data analysis (the CMS Tier-2 Facility). Students in atomic, molecular, optical and plasma physics work in strong-field physics, quantum optics, laser-plasma physics and relativistic optics, optical vortices, quantum information, photoionization processes, and polarized electron phenomena, with some research being carried out at the Advanced Light Source. Students in condensed matter/materials physics fabricate and study novel nanoscale materials and structures, including surface phase transitions, electronic and magnetic structures, "smart" materials, materials for information storage, and multiferroics, using state-of-the-art in-house apparatus and at national facilities such as the Advanced Photon Source and the Center for Advanced Micro Devices. Students in experimental high–energy physics carry out their research on fundamental particles and interactions at Fermilab (Dzero experiment), at CERN’s Large Hadron Collider (CMS experiment), with opportunities in particle astrophysics (Pierre Auger Observatory) and non–accelerator physics (Deep Underground Science and Engineering Laboratory).

The Department of Statistics offers the MS and PhD degrees in statistics. The department has dedicated itself to “turning data into knowledge to solve real world problems.” It has a long history of collaboration with other disciplines throughout the university, developing statistical theory and methods that advance statistics while also enabling progress in allied fields as well. Graduate students are intimately involved in these collaborations, allowing them to receive practical experience in addition to theoretical training. Students can tailor their program to their interests and position themselves to take advantage of statistics' many and varied career opportunities. The department values excellence in teaching, with nationally recognized faculty in design of experiments, survey statistics, generalized mixed linear and nonlinear models, categorical data, decision analysis, spatial statistics, and statistical genomics. Sports statistics and bioinformatics are emerging sub-disciplines.
Social Sciences

The Department of Anthropology offers the MA in anthropology, which 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 development anthropology, and behavioral, ecological and evolutionary approaches to human behavior.

The Department of Communication Studies offers the MA and PhD degrees in four areas of concentration: instructional communication, interpersonal and family communication, organizational communication, and rhetoric and culture. The department also offers an interdisciplinary MA specialization in marketing, communication studies and advertising.

The department’s graduate degree programs are designed to provide an advanced understanding of the scholarly traditions in communication studies; to train students in both social–scientific and humanistic research approaches in order to create proficiency in historical/critical, quantitative, and interpretive/qualitative methods; to develop competent investigators capable of producing communication scholarship of the highest quality; and to foster the creation of teacher–scholars and practitioner–researchers who respect the discipline’s pluralism and follow the highest standards of ethical conduct.

The Department of Geography offers the MA and PhD degrees which emphasize environmental geography, geographic information analysis (GIS, remote sensing, cartography), historical–cultural geography, regional geography, person–environment behavior and relations, and a doctoral specialization in community and regional planning. The Department sponsors internships, and offers teaching and research assistantships.

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

The Department of Psychology offers PhD work in biopsychology, clinical psychology, cognitive psychology, developmental psychology, law–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, health, mental health, substance use, and social inequality (race, class and gender).

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. While currently admitted students may complete their programs, the department is not accepting new applications at this time.

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 History prepares students for careers in research and teaching 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 Modern Languages and Literatures offers the MA and PhD degrees in French, German, and Spanish. Programs consist of 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.

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College of Business Administration

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About the College

The College of Business Administration is developing the next generation of ethical global business leaders and stands on Four Pillars of Excellence: Ethics, Leadership, Entrepreneurship and International Experience.

The College of Business Administration developed from a single course in political economy required of every student at the University of Nebraska in 1869. The College of Business Administration is now the second largest college on the University of Nebraska–Lincoln campus with approximately 3,300 undergraduate and graduate students attending classes with 64 full–time faculty members. The five departments offer masters and doctoral degree specializations in accounting, economics, finance, management and marketing as well as nine undergraduate majors.

The College of Business Administration building offers state–of–the–art technology in every classroom. Computer labs are fully equipped and designed for interactive, multifunctional uses. A complete wireless system and walk–up e–mail stations are available for students, faculty and staff.

The College retains close ties with professional and business leaders. Executives from all around the world come into the classrooms to speak to students and student organizations. Companies visit the college regularly to meet with faculty, attend job fairs, and forge closer ties with the College. Many student organizations are closely affiliated with professional and business organizations in the community.

All tenured faculty members are terminally degreed. Many are the national and international leading experts in their fields of study, producing widely used textbooks and cited research. Many are editors of leading academic journals. Our faculty is often selected to advise businesses and governments on critical issues.

History of the College

Students have been taking business courses at the University of Nebraska–Lincoln for more than a century. The School of Commerce was created in 1913. In 1916, the School of Commerce, with sixteen other universities including Harvard, Northwestern, and the University of Texas, was a charter member of the Association to
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, and its innovative centers and institutes:

- The Bureau of Business Research
- The Nebraska Council on Economic Education and the National Center for Research in Economic Education
- Global Leadership Institute
- Raikes School of Computer Science and Management
- The Nebraska Center for Entrepreneurship

### Degree Programs and Objectives

The mission of the College of Business Administration is to foster intellectual curiosity, business insight and effective leadership 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 to excel as researchers, teachers and professionals. The MBA program equips future business leaders with the qualitative and quantitative skills required to succeed in the business world of today and tomorrow.

Masters students within the College are preparing for professional careers in accounting, economics, finance, management, marketing, or a combination of these. Local, state, national and international organizations seek out 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 have the opportunity to teach undergraduate classes.

The MBA program is offered on campus in a traditional classroom setting. For students unable to come to campus the program is offered online with the same curriculum and professors. MBA specializations may be available to interested students. Please see an MBA advisor to discuss available specialization options. Dual degrees are offered in partnership with the College of Law and the College of Architecture.

Faculty members advance their disciplines as they conduct 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 over 500 peer reviewed journal articles and produced over 1,300 other intellectual contributions such as book chapters and conference presentations.

The College fulfills its public service objective through its faculty and its Bureau for Business Research, Center for Entrepreneurship, Center for Economic Education, and the Nebraska Council on Economic Education. Through these entities we serve the citizens of Nebraska, the nation, and international business communities.

### Accreditation

Baccalaureate, masters, and doctoral degree programs in business are fully accredited by The Association to Advance Collegiate Schools of Business (AACSB). The School of Accountancy is separately accredited by AACSB.

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### College of Education and Human Sciences

The College of Education and Human Sciences (CEHS) is dedicated to enhancing individuals, families, schools and communities and strengthening the relationships among them. The seven CEHS departments include Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design.

In addition, CEHS is home to a variety of research and outreach centers and institutes, including the Barkley Memorial Center Speech–Language and Hearing Clinic; the Buros Center for Testing; the Counseling and School Psychology Clinic; the Center for At–Risk Children Services; the Center for Instructional Innovation; the Family Resource Center; the Great Plains Institute for Reading and Writing; the International Quilt Studies Center; the National Center for Information Technology in Education; the Nebraska Career Information System; the Nebraska Evaluation and Research Center; the Nebraska Human Resources Institute; the Nebraska Research Alliance on Children, Youth, Families and Schools; the Robert Hillestad Textile Gallery; and the Ruth Staples Child Development Laboratory.

CEHS offers four masters degrees in nine majors, the education specialist degree in three majors, two doctoral degrees in 16 specializations under three majors, and one professional degree. CEHS also offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

### Masters and Specialist Programs

CEHS offers four masters degrees in nine majors and the education specialist degree in three majors. For information on masters and specialist degree programs, consult the relevant department’s listing in this bulletin.

### Doctoral Programs

CEHS offers the AuD, a professional degree, and two doctoral degrees, both the EdD and the PhD, under three majors: Educational Studies, Human Sciences, and Psychological Studies in Education. In addition, CEHS participates in two additional doctoral majors, the inter–institutional educational administration doctoral major and the inter–departmental nutrition doctoral major.

The Educational Studies major includes six specializations. Instructional Technology; Internet–based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education and Audiology and Hearing Science (AuD) are sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co–hosts, with Architecture, Architecture Education.

The Human Sciences major includes six specializations. Communication disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies and Gerontology are sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Merchandising, and Fashion Design is based in the Department of Textiles, Merchandising and Fashion Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.

The Psychological Studies In Education major includes four specializations, all hosted by the Department of Educational Psychology: Cognition, Learning and
The Department of Art and Art History is an accredited institutional member of the National Association of Schools of Art and Design and the Hixson-Lied College of Fine and Performing Arts.

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 develop exceptionally strong graduate programs geared toward societies increasingly complex social and technical problems.

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 located in the College of Engineering.

The Hixson-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 Johnny Carson School of Theatre and Film, and the Mary Riepma Ross Media Arts Center. 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 Hixson–Lied College of Fine and Performing Arts offers graduate degrees in each of the three departments. The Department of Art and Art History is an 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 department also offers an MA in Art History which requires a minimum of 36 hours of advanced study. The structure and sequence of the major allows individual flexibility.

The School of Music is an accredited institutional member of the National Association of Schools of Music and offers the MM, DMA and PhD degrees. Majors at the masters level include composition, conducting, jazz studies, music education, music history, music theory and performance. The DMA degree is offered in performance, conducting, composition and jazz studies. The PhD degree is offered in music with an emphasis in music education. An audition is required for admission.

The Johnny Carson School of Theatre and Film 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.

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College of Journalism and Mass Communications

Since it began in 1975, demand for the program leading to the degree of Master of Arts in journalism and mass communications has increased at a steady pace. Initially the graduate faculty expected to have 12 to 15 students, but that estimate proved to be far too conservative. Now more than 90 students are actively pursuing the degree, many of whom are taking courses while continuing to work professionally. Most have approximately eight years of professional experience and usually are in their late 20s or early 30s.

This steady growth parallels what is usually referred to as an "information revolution." Mass communications has been an area of rapid expansion and change during the past 30 years. Increased affluence, leisure, and education for most of this country's population have resulted in increasingly demanding, increasingly sophisticated audiences who want to be entertained and informed through mass media. Rapidly developing technologies have provided a variety of means.

Journalists have been challenged to interpret a fast-changing world—to help audiences understand and shape their environments.

In light of all this, the graduate faculty in journalism is committed to offering a quality program combining professional practice in the media with study of professional responsibilities, mass audiences, and their significance. Enrollment in courses in other disciplines is encouraged to further prepare the student to translate more effectively to mass audiences complexities of a rapidly changing society. Building on the foundation of a student's professional undergraduate education in journalism, this broad understanding of the profession is to be developed through study in the liberal arts and sciences, in communication theory, in professional courses, and by development of competency in research as consumer, interpreter, and initiator.

The curriculum is consistent with this integration of substantial professional and academic credentials. Flexibility within the three areas of the program (news-editorial, advertising, and broadcasting) is provided to encourage differing student goals. The prediction is that a shortage of qualified journalists will continue and the demand for persons with graduate degrees will continue to escalate in the mass media industry, in business, and in academia.

Over the years, doctoral students from communication studies, marketing, sociology, as well as education and human sciences, have taken journalism courses as a supporting minor.

The Master of Arts in journalism and mass communications program was first nationally accredited in 1979 when it became the second such program in the country to receive that designation. The following year it received commendation from the North Central Accrediting Council visiting team for the UNL campus.

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College of Law

The College of Law at the University of Nebraska–Lincoln 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 1891. 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 Roscoe 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 exploring the frontiers of their specialties, 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 skill. 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 appellate courtroom, offices for student activities, an extensive library and student lounges.

The Sherman S. Welpton Jr. Courtroom 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. 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 50 percent of the total student body and minority students about 15 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 federal administrative agencies, 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. 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 WESTLAW computerized research systems. Law students have access to personal computers and printers in the computer laboratory.

The Schmid Law Library and the University Libraries share an online catalog named IRIS. IRIS contains bibliographic records for most catalogued materials located in the libraries. Library users can look up this information using computer terminals instead of using the traditional card catalog.

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.

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 historically have not been well-represented in the legal profession. The College also hosts a summer Pre-Law Institute for promising undergraduates who, if they choose law, would diversify the profession.

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.

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**Prereqs:**
[STAT 463](http://bulletin.unl.edu/courses/STAT/463) with a grade of "C" or better.

Data sets processed and analyzed using statistical software.

Introduction to forecasting in actuarial science. Simple and multiple regression, instrumental variables, time series methods, and applications of methods in forecasting actuarial variables. Interest rates, inflation rates, and claim frequencies.

**ACTS 440/840**

**Financial Mathematics**

**Prereqs:**
[MATH 208](http://bulletin.unl.edu/courses/MATH/208)/208H with a grade of "Pass" or "C" or better, or parallel.

This course is a prerequisite for: [FINA 412](http://bulletin.unl.edu/courses/FINA/412), [FINA 467](http://bulletin.unl.edu/courses/FINA/467), [ACTS 470](http://bulletin.unl.edu/courses/ACTS/470).

Application of financial mathematics to problems involving valuation of financial transactions: equivalent measures of interest; rate of return on a fund; discounting or accumulating a sequence of payments with interest; and yield rates, length of investment, amounts of investment contributions or amounts of investment returns for various types of financial transactions; loans and bonds. Introduction to the mathematics of modern financial analysis. Calculations involving yield curves, spot rates, forward rates, duration, convexity, and immunization and short sales; introduction to financial derivatives (forwards, options, futures, swaps) and their use in risk management; and introduction to the concept of no-arbitrage as a fundamental concept in financial mathematics.

**ACTS 442/842**

**Principles of Pension Valuation**

**Prereqs:**
[ACTS 471](http://bulletin.unl.edu/courses/ACTS/471)/871 with a grade of "C" or better.

Actuarial cost methods. Determination of normal costs and accrued liability. Effect on 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.

**ACTS 450/850**

**Stochastic Processes for Actuaries**

**Prereqs:**
[STAT 463](http://bulletin.unl.edu/courses/STAT/463) with a grade of "C" or better.

Introduction to stochastic processes and their applications in actuarial science. Discrete-time and continuous-time processes; Markov chains; the Poisson process; compound Poisson processes; non-homogeneous Poisson processes; arithmetic and geometric Brownian motions. Applications of these processes in computation of resident fees for continuing care retirement communities. Pricing of financial instruments.
**Life Contingencies I**  
470/870  

**Prereqs:**  
ACTS 440 and STAT 462, each with a grade of "C" or better.  

This course is a prerequisite for ACTS 471.  

*First course of a two–course sequence that includes ACTS 471.*  

Theory and applications of contingency mathematics in the areas of life and health insurance, annuities, and pensions. Probabilistic models.

**Life Contingencies II**  
471/871  

**Prereqs:**  
ACTS 470 and STAT 462, each with a grade of "C" or better.  

This course is a prerequisite for ACTS 442, ACTS 475.  

*Second course of a two–course sequence that includes ACTS 470.*  

Life insurance reserve for models based on a single life. Introduction to multiple life models for pensions and life insurance and to multiple decrement models.

**Introduction to Risk Theory**  
473/873  

**Prereqs:**  
STAT 462 with a grade of "C" or better.  

Applications of compound distributions in modeling of insurance loss. Continuous-time compound Poisson surplus processes, computation of ruin probabilities, the distributions of the deficit at the time of ruin, and the maximal aggregate loss. The effect of reinsurance on the probability of ruin.

**Actuarial Applications in Practice**  
475/875  

**Prereqs:**  
ACTS 471/871; FINA 307/307H or 338.  

Principles and practices of pricing and/or funding and valuation for life, health, property and liability insurance, and annuities and pension plans. Commercially available actuarial modeling software.
For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/ActuarialScience]

Program Director: Warren Luckner, Society of Actuaries, M.A.
Graduate Chair: Colin M. Ramsay, Ph.D.

Departments Cooperating: Economics, Finance, 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 official GMAT score. Applicants must have a minimum of 575.
2. Submit proof of any Society of Actuaries exams passed.
3. 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).
4. Must submit three letters of reference from persons who are familiar with their academic ability. The person who writes the letter must use the Actuarial Science Graduate Reference Report form. Each applicant must also complete and return the Actuarial Science Graduate Admissions Checklist.
5. Applicants whose first language is not English must submit a Test of English as a Foreign Language (TOEFL). Applicants should attain a minimum score of 80 IBT.

To be admitted with full graduate standing for work in actuarial science at the University of Nebraska–Lincoln, a student must satisfy the following: (i) the student must pass Exams P and FM of the society of Actuaries; and (ii) the student’s undergraduate preparation must have included at least three semesters of calculus, one semester of principles of macro-economics, one semester of principles of linear algebra, one semester of introductory computer programming, one semester of introductory mathematical probability, and one semester of introductory mathematical statistics.

To be admitted with provisional standing, a student’s undergraduate preparation must, in the judgment of the Committee, constitute reasonable preparation for actuarial study at the University of Nebraska–Lincoln and is based on how much of the requirements for full graduate standing the student has completed.

Masters Degree Program.

The masters degree program must be completed without a thesis (Option II) and all requirements under this option must be met. Option I (with a thesis) usually is not open for this degree. The non-thesis route (Option II) is required because students will find the additional course work more valuable to them than the thesis, especially with regards to the Society of Actuaries exams. A total of 36 hours is required. The MS degree program is expected to take two years (24 months) for students admitted with deficiencies. For those admitted without deficiencies it normally takes 21 months.

In place of the usual major and minor requirements, the masters program must include ACTS 840, 870, 871, 873 and Finance 812 or 813, 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 counterparts).

Minors are available in insurance, economics (non-insurance), statistics, or finance. However, the recommended minor is finance. These minors are subject to the approval of the Actuarial Science Graduate Committee. Minors require 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 major 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 completion of the end of their second semester. 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: Economics (ECON) 815, 816, 819, 837 and 854; Mathematics (MATH) 800, 813, 814, 820, 821 and 822; Statistics (STAT) 880 and 881; Computer Science & Engineering (CSCE) 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 (in 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 ACTS 840, 870, 871, and 873. Students wishing to take this minor should contact the chair or adviser of their major area, and the Graduate Adviser of the Actuarial
Agricultural Economics

Subject Areas

- Agricultural Economics (ABUS) (#ABUS)
- Agricultural Economics (AECN) (#AECN)

Courses for ABUS (ABUS)

Marketing and Globalization

Credit Hours: 3-6
Max credits per degree: 6
Campus: Classroom

Prereqs:
GRBA *813 or equivalent

Globalization and resulting changes in the business environment. Access to new consumers, new supplies. The effect on consumer choices. Readings from scholarly and popular press, videos, and a "real world" application. Marketing strategies developed for Nebraska firms and organizations such as value-added food marketers.

Courses for AECN (AECN)

Advanced Farm Management and Linear Programming

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
AECN 201

The role of budgeting and linear programming in analyzing farm organization problems, theory of linear programming, linear program design, and analysis of linear programmed solutions to farm organization problems. Includes goal programming, multiple objective programming, risk programming, and financial modeling.

Agricultural Finance

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
AECN 201 or 4 hrs accounting.

Principles and concepts of financial management of farm and agribusiness firms developed. Various strategies for acquiring and using capital resources by the individual firm explored. Institutions providing the sources of agricultural credit are individually studied.
Environmental Law
Crosslisted as NREE 456

Prereqs:
Junior standing. AECN/NREE 357 recommended.

Offered odd numbered years. Available through Extended Education and Outreach.

Administrative law, risk assessment, environmental impact review, Clean Air Act, Clean Water Act, non-point pollution control, wetlands regulations, pesticide and toxic substance regulation, solid and hazardous waste regulation, drinking water protection, land use regulation, energy policy, and international environmental law.

Water Law
Crosslisted as NREE 457, WATS 457

Prereqs:
AECN/NREE 357.

Course offered even numbered years. Offered through Extended Education and Outreach.

Environmental impact review; public trust doctrine; endangered species; land use controls; wetlands regulation; surface and ground water rights; Indian and federal water rights; impact of water quality regulations on water allocation.

Resource and Environmental Economics II
Crosslisted as NREE 465, WATS 465

Prereqs:
MATH 104 and one course in statistics.

Credit in AECN 865 will not count toward any advanced degree programs in ECON or AECN.

Application of resource economics concepts and empirical tools to resource management problems. Public policy issues involving environmental quality, land and water management.

Agricultural Law
Crosslisted as LAW 704G

Legal problems and issues of unique importance to lawyers serving the agricultural sector. The Farm Credit System, the Farmers' Home Administration, and farm financing problems under the Uniform Commercial Code; commodity futures markets; agricultural cooperatives; farmland preservation and rural land use controls; foreign investment in American agriculture; farm labor legislation; farm programs and the economic regulation of agriculture; pesticides; and food additives.

Analytical Methods in Economics and Business
Crosslisted as ECON 815

Prereqs:
MATH 104 or 106

Credit in AECN 815 will not count toward any advanced degree programs in ECON or AECN.

**AECN 818 Taxation—Farm and Ranch**

Crosslisted as POLS 818

Prereqs: [ACCT 812](http://bulletin.unl.edu/courses/ACCT/812) or [LAW 637G](http://bulletin.unl.edu/courses/LAW/637G).

Selection of substantial income tax problems affecting farms and ranches.

**AECN 832 Economics of Agricultural Production**

Prereqs: [AECN 201](http://bulletin.unl.edu/courses/AECN/201), [ECON 373](http://bulletin.unl.edu/courses/ECON/373), [MATH 104](http://bulletin.unl.edu/courses/MATH/104).

Static economic analysis of multi-variant agriculture response functions. Resource and enterprise choice, cost functions, resource evaluation, and size and scale economies.

**AECN 840 Applied Welfare Economics and Public Policy**

Prereqs: AECN/ECON 873

Principles of welfare economics applied to policy issues in agriculture and natural resources. Review of measures of household welfare, willingness to pay, and notions of Pareto optimality, aggregate welfare and market failure. Practical methods of comparative statics analysis of the effect of public policies on consumer and firm behavior, and on market equilibrium. Theory of externalities and welfare implications of market versus non-market allocation of public goods examined. Applications include evaluation of such policies as taxes, price supports, quotas, pollution controls, environmental damage liability, and intellectual property rights.

**AECN 841 Environmental Law**

Crosslisted as LAW 641G

Legal problems encountered as a result of the impairment of the quality of the environment. Control of air, water, land, noise, and radiation pollution, and the roles of federal, interstate, state, and local agencies in affording protection. Includes private actions, class actions, and regulatory actions to protect both private and public interests.

**AECN 868 Advanced Resource and Environmental Economics**

Prereqs: [AECN/ECON 873, AECN 865](http://bulletin.unl.edu/courses/AECN/865), [ECON 817](http://bulletin.unl.edu/courses/ECON/817).

Credit Hours: 1-4

Course Delivery: Classroom
### Microeconomic Models and Applications
**Crosslisted as ECON 873**

**Prereqs:**
- ECON 211
- 212
- 215

This course is intended for MA Option II students and others who do not plan to proceed to PhD studies. Analysis of microeconomic decision-making by individuals and firms with emphasis on consumer demand, production, cost and profit, market structure and the economics of games, uncertainty, and information.

**Credit Hours:** 3

**Course Delivery:** Classroom

### Water Law, Planning and Policy
**Crosslisted as LAW 776G**

Judicial, legislative, and administrative problems in water resource development, allocation, and control.

**Credit Hours:** 1-4

**Course Delivery:** Classroom

### Ecological Economics
**Crosslisted as NRES 883**

A synthesis across the notion of “utility” as represented in traditional environmental and natural resource economics, “ecology” in ecological economics, and “community” in behavioral economics. Ideas from thermodynamics with a focus on renewable resources. Development, organization, and enhancement of eco-business, eco-industry, eco-government and eco-communities.

**Credit Hours:** 3

**Course Delivery:** Classroom

### Law and Economics
**Crosslisted as LAW 693G**

Economic principles to problems of legal interpretation and policy. Gives economic background for substantive courses in such areas as antitrust, regulated industries, and environmental law and also demonstrates the power of economic analysis when applied to problems in such diverse areas as contracts, property, torts, criminal law, family law, corporations, taxation, securities, procedure, and constitutional law.

**Credit Hours:** 1-4

**Course Delivery:** Classroom

### Special Topics in Agricultural Economics

**Prereqs:**
- 12 hrs agricultural economics or closely related areas and permission

**Credit Hours:** 1-6

**Max credits per degree:** 6
Focused agricultural economics topics through research, narrowly targeted literature review, or extension of course work.

### Masters Thesis

**AECN 899**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Campus:**

**Course Delivery:** Classroom

**Credit Hours:** 6-10

**Link:** [http://bulletin.unl.edu/courses/AECN/899](http://bulletin.unl.edu/courses/AECN/899)

### Directed Study of Advanced Topics in Agricultural Economics

**AECN 901**

This course is a prerequisite for:
- AECN 902 [http://bulletin.unl.edu/courses/AECN/902]
- AECN 902A [http://bulletin.unl.edu/courses/AECN/902A]
- AECN 902B [http://bulletin.unl.edu/courses/AECN/902B]
- AECN 902D [http://bulletin.unl.edu/courses/AECN/902D]
- AECN 902E [http://bulletin.unl.edu/courses/AECN/902E]
- AECN 902J [http://bulletin.unl.edu/courses/AECN/902J]

Significant literature in selected fields of agricultural and resource economics to provide a broad background for conducting research in these fields.

A. Production Economics (3 cr) Prereq: ECON 973 [http://bulletin.unl.edu/courses/ECON/973] and 974 [http://bulletin.unl.edu/courses/ECON/974], or permission.

B. Agricultural Industrial Organization (3 cr) Prereq: AECN *812.

D. International Agricultural Trade (3 cr) Prereq: ECON 821 [http://bulletin.unl.edu/courses/ECON/821], or permission.

E. Agricultural Development (3 cr) Prereq: ECON 973 [http://bulletin.unl.edu/courses/ECON/973] and 974 [http://bulletin.unl.edu/courses/ECON/974], or permission.


**Credit Hours:** 3

**Max credits per degree:** 15

**Course Format:** Lecture 3

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/AECN/901](http://bulletin.unl.edu/courses/AECN/901)

### Production Economics

**AECN 901A**

**Prereqs:**
ECON 973 [http://bulletin.unl.edu/courses/ECON/973] and 974 [http://bulletin.unl.edu/courses/ECON/974], or permission

This course is a prerequisite for: AECN 902A [http://bulletin.unl.edu/courses/AECN/902A]

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/AECN/901A](http://bulletin.unl.edu/courses/AECN/901A)

### Agricultural Industrial Organization

**AECN 901B**

**Prereqs:**
AECN *812

This course is a prerequisite for: AECN 902B [http://bulletin.unl.edu/courses/AECN/902B]

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/AECN/901B](http://bulletin.unl.edu/courses/AECN/901B)

### International Agricultural Trade

**AECN 901D**

**Prereqs:**
ECON 821 [http://bulletin.unl.edu/courses/ECON/821], or permission

This course is a prerequisite for: AECN 902E [http://bulletin.unl.edu/courses/AECN/902E]

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/AECN/901D](http://bulletin.unl.edu/courses/AECN/901D)
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### Agricultural Development

**Course Code:** AECN 902E  
**Prereqs:**  
[AECN 901D](http://bulletin.unl.edu/courses/AECN/901D)  

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3  
**Max credits per degree:** 15  
**Course Format:** Lecture  
**Course Delivery:** Classroom

### Natural Resource Economics

**Course Code:** AECN 902J  
**Prereqs:**  
[AECN 901E](http://bulletin.unl.edu/courses/AECN/901E)  

**Description:** Investigation of a research issue in a field of agricultural economics. Identification of an issue, discovery and interpretation of relevant research, rigorous development of an additional contribution to the resolution of the issue.

**Credit Hours:** 3  
**Max credits per degree:** 15  
**Course Format:** Lecture  
**Course Delivery:** Classroom

### Seminar in International Trade and Finance

**Course Code:** AECN 921  
**Crosslisted as:** ECON 921  

**Description:** Crosslisted as ECON 921

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

### Doctoral Dissertation

**Course Code:** AECN 999  
**Prereqs:**  
Admission to doctoral degree program and permission of supervisory committee chair

**Description:**  
Open to students with an interest in international relations. Topic varies

**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom

### Pro-seminar in International Relations I

**Course Code:** POLS 466/866  
**Crosslisted as:** HIST 479/879, SOCI 466/866, ANTH 479/879, GEOG 448/848, ECON 466/866, AECN 467  
**Prereqs:** Senior standing and permission.

**Description:**  
Open to students with an interest in international relations.

**Credit Hours:** 3  
**Max credits per degree:** 3  
**Course Delivery:** Classroom  
**Groups:** International Relations
For a brief description of the program, application requirements and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AgriculturalEconomics).

**Department Head:** Larry Van Tassell, Ph.D.

**Graduate Chair:** Richard K. Perrin, Ph.D.

The department offers programs leading to the master of science and doctoral degrees in agricultural economics.

Admission decisions for the M.S. and Ph.D. 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 (optional). 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.

The GRE (General) is strongly suggested for financial assistance and for admission in most circumstances. 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 (paper-based exam) or 213 (computer-based exam), or a minimum score of 6 on the International English Language Testing System (IELTS).

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

Applicants for the doctor of philosophy normally will have a master of science degree in agricultural economics or a related field, but outstanding students may be admitted to the Ph.D. program without first completing a masters degree. All PhD applicants 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 advanced econometrics, one year of advanced microeconomic theory, and one semester of advanced macroeconomic theory. In addition, they must complete two AECN 901 courses and two AECN 902 courses.

### Master of Science Degree Minor.

Successful completion of at least 9 credit hours of courses selected in consultation with a representative of the department of agricultural economics and the student’s adviser. No more than a total of 3 credit hours may be in AECN 896. No comprehensive exam will be required if all courses are completed with a grade of B or better.

### Doctor of Philosophy Degree Minor.

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

### Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AgriculturalEconomics).

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## Agronomy

### Courses for AGRO (AGRO)

- **Crop Genetic Engineering**
  - **AGRO 411/811**
    - **Credit Hours:** 1
    - **Course Delivery:** Classroom
    - **Description:** Basic steps required to produce genetically engineered crops. Genetic engineering procedures used to develop current crops and innovations that will lead to future products. Genetic engineering process and predicting how changes in different steps of the process influence the final crop. Application of genetic engineering technology to plan the development of new genetically engineered crops.

- **Crop and Weed Genetics**
  - **AGRO 412/812**
    - **Credit Hours:** 1
    - **Course Delivery:** Classroom
    - **Description:** Application of classical and molecular genetic principles to the explanation of variation observed in plant families and populations. Interpretation of
Information gathered from whole plant trait observation and from molecular analysis. Relationships between crops and weeds. Examples from genetic studies on both crop and weed species are the basis of course.

**Invasive Plants**

Crosslisted as HORT 426/826, NRES 426/826

**Prereqs:**
AGRO/HORT/SOIL 153; BIOS 109.


**Credit Hours:** 3
**Course Format:** Lecture 2, Lab 2
**Course Delivery:** Classroom

**Agroecology**

Crosslisted as HORT 435/835, NRES 435/835

**Prereqs:**
For AGRO/HORT/NRES 435: Senior standing or permission. For AGRO/NRES 835: 12 hrs biological or agricultural sciences or permission.

Capstone course. Team projects for developing communication skills and leadership skills.

Integration of principles of ecology, plant and animal sciences, crop protection, and rural landscape planning and management for sustainable agriculture. Includes natural and cultivated ecosystems, population and community ecology, herbicide terminology and classification, plant-herbicide and soil-herbicide interactions, equipment calibration and dosage calculations.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

**Agroecosystems Analysis**

Crosslisted as HORT 436/836

**Prereqs:**
Senior standing.

Cost of travel required. Summer travel course with multi-state faculty. Farm visits to Iowa, Minnesota and Nebraska.

Identification of grain quality characteristics desired by livestock feeders, human food processors and industrial users, and methods used to measure these characteristics.

**Credit Hours:** 3
**Course Delivery:** Classroom

**Animal, Food and Industrial Uses of Grain**

Crosslisted as HORT 437/837

**Prereqs:**
CHEM 105 or 109, and one of the following: AGRO 204 or ASCI 250.

Identification and comparison of grain quality characteristics desired by livestock feeders, human food processors and industrial users, and methods used to measure these characteristics.

**Credit Hours:** 2
**Course Format:** Lecture 3
**Course Delivery:** Classroom
Producing Grain for Animal, Food and Industrial Uses

Prereqs: CHEM 109 and one of the following: AGRO 204 or ASCI 250.
AGRO 315 and 437 recommended.

Genetic development, production practices, and grain handling and storage procedures to deliver quality grain to livestock feeders, human food processors and industrial uses.

Organic Farming and Food Systems
Crosslisted as HORT 439/839

Prereqs: For 439, 12 credits of agricultural or biological science, economics, or natural resources. For 839, enrolled in M.S. or Ph.D. program.

History of organic farming and horticultural systems, organic certification, nutrient and pest management in organic systems, planning organic enterprises including production and marketing, resilience of organic systems in ecological, economic, and social terms; future issues and potentials of organic food systems.

Great Plains Ecosystem
Crosslisted as RNGE 440, NRES 440/840

Prereqs: Junior standing. BIOS 101 and 101L, or equivalent, recommended.

Characteristics of Great Plains ecosystems, interrelationships of ecological factors and processes, and their application in the management of grasslands. Interactions of fire, vegetation, grazing animals and wildlife.

Perennial Plant Function, Growth, and Development
Crosslisted as HORT 441/841, RNGE 441

Prereqs: AGRO 325 or equivalent.

Principles of crop physiology and developmental morphology in relation to function, growth, development, and survival of perennial forage, range, and turf plants. The relationship of physiology and morphological development on plant use and management.

Wildland Plants
Crosslisted as RNGE 442, NRES 442/842

Prereqs: Junior standing. BIOS 101 and 101L, or equivalent, recommended.

Wildland plants that are important to grassland and shrub land ecosystem.
management and production. Distribution, utilization, classification, identification (including identification by vegetative parts), uses by Native Americans, and recognition of grasses, forbs, shrubs, exotic and wetland plants.

**Vegetation Analysis**

Crosslisted as RNGE 444, NRES 444/844

Prereqs:
- Junior standing. BIOS 101 [Link](http://bulletin.unl.edu/courses/BIOS/101) and 101L [Link](http://bulletin.unl.edu/courses/BIOS/101L), or equivalent, recommended.

Criteria by which grassland are analyzed. Vegetation sampling techniques, measurement and evaluation of grasslands, and measurement of important environmental factors. Evaluations of habitat improvement practices, wildlife value, recreational value, and watershed value.

**Livestock Management on Range and Pasture**

Crosslisted as ASCI 451/851, RNGE 445

Prereqs:
- ASCI 250 [Link](http://bulletin.unl.edu/courses/ASCI/250) and AGRO 240 [Link](http://bulletin.unl.edu/courses/AGRO/240) or 340 [Link](http://bulletin.unl.edu/courses/AGRO/340), AECN 201 [Link](http://bulletin.unl.edu/courses/AECN/201) recommended.

Capstone course. All students required to participate in a one-week field trip in central or western Nebraska prior to beginning of fall semester. Therefore, students must notify instructor at time of early registration (Dates are given in class schedule.)

Analyzing the plant and animal resources and economic aspects of pasturage. Management of pasture and range for continued high production emphasized.

**Soil Chemistry and Mineralogy**

Crosslisted as SOIL 455, NRES 455/855

Prereqs:
- AGRO/HORT/SOIL 153 [Link](http://bulletin.unl.edu/courses/SOIL/153) or GEOL 101 [Link](http://bulletin.unl.edu/courses/GEOL/101); CHEM 109 [Link](http://bulletin.unl.edu/courses/CHEM/109) and 110 [Link](http://bulletin.unl.edu/courses/CHEM/110); CHEM 221 [Link](http://bulletin.unl.edu/courses/CHEM/221) or 251 [Link](http://bulletin.unl.edu/courses/CHEM/251) or BIOC 221 [Link](http://bulletin.unl.edu/courses/BIOC/221); or equivalent.

Chemical and mineralogical properties of soil components. Inorganic colloidal fraction. Structures of soil minerals as a means of understanding properties, such as ion exchange and equilibria; release and supply of nutrient and toxic materials; and soil acidity and alkalinity.

**Soil Chemical Measurements**

Crosslisted as SOIL 457, NRES 457/857

Prereqs:
- AGRO/SOIL 153 [Link](http://bulletin.unl.edu/courses/SOIL/153), CHEM 116 [Link](http://bulletin.unl.edu/courses/CHEM/116) or 221 [Link](http://bulletin.unl.edu/courses/CHEM/221); or equivalent or permission.

Permission required to register for 2 cr. Students registered for 3 cr will...
design, carry out, and report on an independent study project conducted during the term. Offered even-numbered calendar years. Lab 4–6.

Theory and practice of soil chemical analyses commonly encountered in research and industrial settings. Wet analyses of inorganic fraction of soil and operation of instrumentation necessary to quantify results of those analyses.

**Soil Microbiology**

Crosslisted as BIOS 447/847, SOIL 460, NRES 460/860

**Prereqs:**
One semester microbiology; one semester biochemistry or organic chemistry.

Soil from a microbe's perspective—growth, activity and survival strategies; principles governing methods to study microorganisms and biochemical processes in soil; mechanisms controlling organic matter cycling and stabilization with reference to C, N, S, and P; microbial interactions with plants and animals; and agronomic and environmental applications of soil microorganisms.

**Water Quality Strategy**

Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875

**Prereqs:**
Senior standing or permission.

Capstone course.

Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.

**Urbanization of Rural Landscapes**

Crosslisted as HORT 489/889, CRPL 489/889

**Prereqs:**
Senior standing, graduate standing, or permission.

Development converts rural landscapes into housing, roads, malls, parks, and commercial uses. This process fragments landscapes and changes ecosystem functions, drives up land prices, and pushes agriculture into more marginal areas. This multi-disciplinary, experiential course guides students in learning about the urbanization process, the impacts on landscapes, people, and the community, and the choices that are available to informed citizens.

**Independent Study**

Crosslisted as RNGE 496, SOIL 496

**Credit Hours:** 1–6

**Max credits per degree:** 6

**Course Delivery:** Classroom

**Plant-Water Relations**

Crosslisted as BIOS 817, NRES 807

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted As</th>
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<th>Credit Hours</th>
<th>Course Format</th>
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<tr>
<td>AGRO 810</td>
<td>Plant Molecular Biology</td>
<td>BIOS 810, BIOC 810, HORT 810</td>
<td>AGRO 325 (<a href="http://bulletin.unl.edu/courses/AGRO/325">http://bulletin.unl.edu/courses/AGRO/325</a>) or equivalent; MATH 106 (<a href="http://bulletin.unl.edu/courses/MATH/106">http://bulletin.unl.edu/courses/MATH/106</a>) recommended</td>
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<tr>
<td>AGRO 815A</td>
<td>Self-pollinated Crop Breeding</td>
<td>ENTO 815A</td>
<td>AGRO 315 (<a href="http://bulletin.unl.edu/courses/AGRO/315">http://bulletin.unl.edu/courses/AGRO/315</a>) or BIOS 206 (<a href="http://bulletin.unl.edu/courses/BIOS/206">http://bulletin.unl.edu/courses/BIOS/206</a>); BIOC 831 (<a href="http://bulletin.unl.edu/courses/BIOC/831">http://bulletin.unl.edu/courses/BIOC/831</a>) or permission</td>
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<tr>
<td>AGRO 815B</td>
<td>Germplasm and Genes</td>
<td>ENTO 815B</td>
<td>AGRO 315 (<a href="http://bulletin.unl.edu/courses/AGRO/315">http://bulletin.unl.edu/courses/AGRO/315</a>)</td>
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<tr>
<td>AGRO 815D</td>
<td>Cross-pollinated Crop Breeding</td>
<td>ENTO 815D</td>
<td>AGRO 315 (<a href="http://bulletin.unl.edu/courses/AGRO/315">http://bulletin.unl.edu/courses/AGRO/315</a>)</td>
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<tr>
<td>AGRO 816A</td>
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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 of the plant. Stomata 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 several plant–environment systems.

Molecular genetic basis of biological function in higher plants. Genome organization, gene structure and function, regulation of gene expression, recombinant DNA, and genetic engineering principles. Material taken primarily from current literature.

Self-pollinated plant breeding theory and methods. Pedigree, bulk, single seed descent, back-crossing methods and inbreeding theory.

Obtaining germplasm and genes from cultivated plants, wild relatives of cultivated plants, and the biosphere. Origination of crops, mutation genetics, biotechnology as a source of genes, chromosomal engineering and plant reproduction.

Cross-pollinated breeding theory and methods. Genes in populations, recurrent selection methods, creating populations, hybrid production practices, and population improvement theory.
816A

Classical concepts of heterosis; genetic hypotheses for hybrid vigor; quantitative genetics of heterosis; new tools to study hybrid vigor, structure and function; organization of germplasm into heterotic groups; prediction of heterosis and hybrid performance; mechanisms for making hybrid seed; and breeding methods/concepts for developing hybrids in plants.

816B

Haploids and Doubled Haploids in Plant Breeding

Prereqs:
AGRO 815A, B, and D or equivalent course work or permission.

Variations in chromosome number, biology and technology of haploids/doubled haploids in higher plants, microspore embryogenesis, wide hybridizations, in vivo mazie parthenogenesis--type, and radiation systems. Use of haploids in genetics research, DH systems in self-pollinated, cross-pollinated, and hybrid crop breeding.

816E

Genotype by Environment Interaction

Prereqs:
AGRO 815A, B, and D, STAT 801, 802 or equivalent course work or permission.

Types and causes of phenotype instability due to impacts of environmental factors. Topics include adaptation, impacts of G x E on selection and testing, selection of evaluation environments. Statistical concepts to describe/model ineractions, breeding for reliability across unpredictable environments, precision phenotyping, selection for specific stresses, use of QTL's for abiotic and biotic stress stability.

816J

Current Issues in Plant Breeding

Prereqs:
AGRO 815A, B and D, or equivalent course work, or permission.

Consideration of current issues and new technologies affecting plant breeders and crop improvement. Topics may include patenting of germplasm, use of exotic germplasm, impact of international treaties, genome--wide selection, new breeding techniques and integration of technologies into breeding systems and related topics. Student input concerning potential topics is invited.

818

Agricultural Biochemistry

Crosslisted as BIOC 818

Prereqs:
Undergraduate major in life sciences or related area, and a course in biochemistry

A Web-based course. Biochemical underpinnings of agricultural production and processing systems. Agricultural biotechnology; bioenergetics; kinetics
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Description</th>
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</thead>
</table>
| AGRO 821    | **Learning Biotechnology**                | Crosslisted as HORT 821                                                  | Investigate biotechnology and its application in solving problems and connect biotechnology to basic science concepts in biology and chemistry. Integrate individually-designed biotechnology lessons into learning standards. | ![Link](http://bulletin.unl.edu/courses/AGRO/821)                                                                                     | Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Web        |
| AGRO 822    | **Integrated Weed Management**            | Crosslisted as HORT 822                                                  | Principles and application of (IWM). Noxious and invasive weed species. Crops and weed control. Plant population shifts. Use of herbicides and the biologically effective dose. Critical period of weed control and weed threshold. Herbicide tolerant crops. | ![Link](http://bulletin.unl.edu/courses/AGRO/822)                                                                                     | Credit Hours: 1  
Course Format: Lecture 1  
Campus:  
Course Delivery: Classroom   |
| AGRO 823    | **Herbicide Action in Plants**            | Crosslisted as HORT 823                                                  | The mode of action and plant response to all the major herbicide families. Why herbicides with different modes of action can result in similar plant symptoms. Issues of crop safety and weed control. Role of integrating herbicide resistant crops and weed control in cropping systems. | ![Link](http://bulletin.unl.edu/courses/AGRO/823)                                                                                     | Credit Hours: 1  
Course Format: Lab  
Campus:  
Course Delivery: Classroom   |
| AGRO 825    | **Turfgrass Science and Culture**         | Crosslisted as HORT 825                                                  | Offered fall semester of odd-numbered calendar years. Methods and principles of establishment and maintenance of turfgrasses. Climate adaptation; methods of identification and propagation; equipment; fertility and watering practices; insects; diseases; and weed control. | ![Link](http://bulletin.unl.edu/courses/AGRO/825)                                                                                     | Credit Hours: 3  
Course Format: Lab 2, Lecture 2  
Campus:  
Course Delivery: Classroom   |
| AGRO 830    | **Phytopathology Principles**             | Crosslisted as HORT 825                                                  | A series of mini-courses. Access to the World Wide Web and E-mail are required. Principles and concepts of plant pathology, including relation of plant disease to crop production, environment, man, current, historical and emerging diseases of corn, soybeans, small grain, turf and sorghum, dry bean and alfalfa. Specific disease cycles, epidemiology and plant health | ![Link](http://bulletin.unl.edu/courses/AGRO/830)                                                                                     | Credit Hours: 1  
Max credits per degree: 8  
Course Format: Lecture  
Course Delivery: Classroom   |
**Corn Diseases**

**Prereqs:**
AGRO 830 or an introductory plant pathology course.

A series of mini–courses. Access to the World Wide Web and E-mail are required. Principles and concepts of plant pathology, including relation of plant disease to crop production, environment, man, current, historical and emerging diseases of corn, soybeans, small grain, turf and sorghum, dry bean and alfalfa. Specific disease cycles, epidemiology and plant health management strategies.

**Credit Hours:** 1
**Max credits per degree:** 8
**Course Format:** Lecture
**Course Delivery:** Classroom

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**Soybean Diseases**

**Prereqs:**
AGRO 830 or an introductory plant pathology course.

A series of mini–courses. Access to the World Wide Web and E-mail are required. Principles and concepts of plant pathology, including relation of plant disease to crop production, environment, man, current, historical and emerging diseases of corn, soybeans, small grain, turf and sorghum, dry bean and alfalfa. Specific disease cycles, epidemiology and plant health management strategies.

**Credit Hours:** 1
**Max credits per degree:** 8
**Course Format:** Lecture
**Course Delivery:** Classroom

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**Spatial Variability in Soils**

**Prereqs:**
AGRO/SOIL 366 and STAT 801.

Offered spring semester of even–numbered years.

Basic concepts of soil variability, its underlying causes. The impact spatial variability has on soil management, primarily for crop production. Geographic and geo–statistical concepts. Use of spatial information for more profitable crop production.

**Credit Hours:** 2
**Campus:** Lecture 2
**Course Delivery:** Classroom

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**Learning Plant Science**

Crosslisted as HORT 832

The biology of plants grown for food, fiber, fuel and fun. Connect applied plant science to basic science concepts in biology and chemistry. Integrate individually–designed plant science lessons into learning standards.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Web

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**Ecology of Invasive Species**

Ecollogcal principles and their application to invasive species. Discussion of population level characteristics and community and ecosystem level effects of a wide variety of taxa including invasive microbial, fungal, plant, invertebrate, and vertebrate examples. Current global consequences and governmental policies/programs designed to limit the spread of invasives.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:**
**Course Delivery:** Classroom
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Course Format</th>
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<tr>
<td>AGRO 899</td>
<td>Masters Thesis</td>
<td></td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6–10</td>
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<tr>
<td>AGRO 906</td>
<td>Crop Growth and Yield Modeling</td>
<td>Crosslisted as NRES 906</td>
<td>NRES 808 (<a href="http://bulletin.unl.edu/courses/NRES/808">http://bulletin.unl.edu/courses/NRES/808</a>) or equivalent or permission</td>
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<tr>
<td>AGRO 907</td>
<td>Agricultural Climatology</td>
<td>Crosslisted as METR 907, HORT 907, NRES 907</td>
<td>NRES 808 (<a href="http://bulletin.unl.edu/courses/NRES/808">http://bulletin.unl.edu/courses/NRES/808</a>); STAT 801 (<a href="http://bulletin.unl.edu/courses/STAT/801">http://bulletin.unl.edu/courses/STAT/801</a>) or equivalent</td>
<td>3</td>
<td>Lab 2, Lecture 2</td>
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<tr>
<td>AGRO 908</td>
<td>Solar Radiation Interactions at the Earth's Surface</td>
<td>Crosslisted as METR 908, HORT 908, NRES 908</td>
<td>MATH 208 (<a href="http://bulletin.unl.edu/courses/MATH/208">http://bulletin.unl.edu/courses/MATH/208</a>); NRES 808 (<a href="http://bulletin.unl.edu/courses/NRES/808">http://bulletin.unl.edu/courses/NRES/808</a>) or equivalent or permission</td>
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<tr>
<td>AGRO 909</td>
<td>Crop Responses to Environment</td>
<td>Crosslisted as HORT 909, NRES 909</td>
<td>MATH 208 (<a href="http://bulletin.unl.edu/courses/MATH/208">http://bulletin.unl.edu/courses/MATH/208</a>), NRES 808 (<a href="http://bulletin.unl.edu/courses/NRES/808">http://bulletin.unl.edu/courses/NRES/808</a>), or equivalent or permission</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<td>Credits</td>
<td>Format</td>
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<tr>
<td>AGRO 919</td>
<td>Plant Genetics</td>
<td>Prereqs: AGRO 315</td>
<td>2</td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Crosslisted as HORT 919</td>
<td>Discussions of genetic mechanisms and behavior, with emphasis on plants. Topics include allelism, nonallelic gene interactions, linkage and recombination, inheritance involving the cytoplasm, incompatibility, and mutation.</td>
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<tr>
<td>AGRO 931</td>
<td>Population Genetics</td>
<td>Prereqs: AGRO 315 and STAT 801</td>
<td>3</td>
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<tr>
<td></td>
<td>Crosslisted as ASCI 931, HORT 931</td>
<td>This course is a prerequisite for AGRO 932</td>
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<td></td>
<td>Structures of populations, forces affecting gene frequency and frequency of genotypes, continuous variation, population values and means, genotypic and environmental variances and covariances.</td>
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<tr>
<td>AGRO 932</td>
<td>Biometrical Genetics and Plant Breeding</td>
<td>Prereqs: AGRO 931</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as STAT 932</td>
<td>STAT 802 recommended. Offered odd-numbered calendar years.</td>
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<td></td>
<td>Theoretical concepts involved in planning breeding programs for the improvement of measurable morphological, physiological, and biochemical traits that are under polygenic control in crop plants of various types.</td>
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<td>AGRO 940</td>
<td>Forage Evaluation</td>
<td>Prereqs: Permission</td>
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<tr>
<td></td>
<td>Crosslisted as ASCI 924</td>
<td>Offered even-numbered calendar years. Analytic procedures and research methods used in evaluating biochemical components and nutritive value of forages. An evaluation of the impact of forage quality on forage breeding and animal performance.</td>
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<tr>
<td>AGRO 958</td>
<td>Theoretical Aspects of Physical Chemistry of Soils</td>
<td>Prereqs: MATH 208, AGRO 855, CHEM 871 or 882</td>
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<td></td>
<td>Crosslisted as ASCI 924</td>
<td>Offered even-numbered calendar years. Topics in physical chemistry which have a special significance in the field of soil chemistry. Includes problems and outside readings in this area of soil chemistry.</td>
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### Advanced Soil Physics

**Crosslisted as NRES 961**

**Prereqs:**
- MATH 208
- PHYS 212, or equivalent; or permission

Offered odd-numbered calendar years. Physics of soils and porous media, with emphasis on the physics and mathematics of the movement of water, air, and heat through soils.

### Genetics of Host–Parasite Interaction

**Crosslisted as BIOS 963, HORT 963**

**Prereqs:**
- BIOS 206 or 820

Recommended BIOS 312; BIOS *864A or *864B; and BIOC 837. Offered even-numbered calendar years.

### Soil Fertility

**Crosslisted as NRES 966**

**Prereqs:**
- MATH 106
- AGRO 855 and 857
- STAT 801

Conditions and transformations involved in the transfer of a mineral nutrient ion from the soil into the plant. Evaluation of nutrient supply to plants.

### Soil Genesis and Classification

**Crosslisted as GEOG 967, NRES 977**

**Prereqs:**
- AGRO 153
- AGRO 877
- GEOG 867; and permission

Procedures used to classify soils, concepts behind the systems in use, and the genesis of the soils in the major categories of each system.

### Seminar Presentation and Evaluation

**Crosslisted as HORT 991**

AGRO 991 is required for all MS students. Various topics in horticulture, agronomy or related subjects. Emphasis on techniques.

### General Seminar

**Crosslisted as HORT 950, NRES 950**
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<tr>
<td>AGRO 992</td>
<td></td>
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<td>1</td>
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<tr>
<td>AGRO 993</td>
<td>Seminar, Research Program Proposal</td>
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<td>AGRO 996</td>
<td>Research in Crops</td>
<td>2-5</td>
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<tr>
<td>AGRO 996A</td>
<td>Research in Soils</td>
<td>2-5</td>
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<tr>
<td>AGRO 999</td>
<td>Doctoral Dissertation</td>
<td>1-24</td>
<td>55</td>
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<tr>
<td>ANTH 429A/829A</td>
<td>Food Security: A Global Perspective</td>
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**Prereqs:**
- Expected of all horticulture graduate students and all agronomy PhD students; optional for agronomy MS students. Presentation of thesis or non-thesis topics in agronomy, horticulture or related subjects. For course description, see AGRO 992 (http://bulletin.unl.edu/courses/AGRO/992).
- Required of PhD students; optional for MS students. Presentation of proposed research and methods. Presented within the student’s research discipline and completed before the student has completed 18 graduate course hours.
- Must have 12 hrs agronomy or closely related sciences and permission.
- Must have 12 hrs AGRO or closely related sciences, and permission.
- Admission to doctoral degree program and permission of supervisory committee chair.
- Junior standing.
- Overview of the technical and sociocultural dimensions of global food insecurity.
**Forage Quality**
Crosslisted as AGRO 846

Prereqs:
AGRO/RNGE 240 (http://bulletin.unl.edu/courses/RNGE/240) and ASCI 320 (http://bulletin.unl.edu/courses/ASCI/320), or equivalents; 3 cr hrs of introductory statistics; and permission

The chemical characteristics of forage components. The interactions with ruminant physiology and digestion that influence forage feeding value. The laboratory procedures used to evaluate forages for grazing livestock.

**Plant Biochemistry**
Crosslisted as BIOS 434/834, CHEM 434/834, AGRO 434/834

Prereqs:
BIOC/BIOS/CHEM 431 (http://bulletin.unl.edu/courses/CHEM/431)/831 (http://bulletin.unl.edu/courses/CHEM/831).

Offered every other year beginning spring 2007.

Biochemical metabolism unique to plants. Relationships of topics previously acquired in general biochemistry to biochemical processes unique to plants. Biochemical mechanisms behind physiological processes discussed in plant or crop physiology.

**Applications of Remote Sensing in Agriculture and Natural Resources**
Crosslisted as GEOL 419/819, AGRO 419/819, NRES 420/820

Prereqs:
GEOG/NRES 418 (http://bulletin.unl.edu/courses/NRES/418).

Introduction to the practical uses of remote electromagnetic sensing in dealing with agricultural and water-resources issues.

**Solute Movement in Soils**
Crosslisted as CIVE 955, AGRO 955, AGEN 955

Prereqs:
MATH 208 (http://bulletin.unl.edu/courses/MATH/208); AGRO 861 (http://bulletin.unl.edu/courses/AGRO/861) or GEOL 888 (http://bulletin.unl.edu/courses/GEOL/888) or MSYM 852 (http://bulletin.unl.edu/courses/MSYM/852) or CIVE 858 (http://bulletin.unl.edu/courses/CIVE/858).

Knowledge of a programming language. MATH 821 (http://bulletin.unl.edu/courses/MATH/821) recommended. Offered even-numbered calendar years.

Examination of the theory and experimental evidence available to characterize the movement of chemicals in soil. Both saturated and unsaturated flow conditions examined. Initial presentation of basic theoretical concepts. Remainder of class a discussion of the literature.

**Plant Nutrition and Nutrient Management**
Crosslisted as AGRO 424/824

Prereqs:
AGRO 325 (http://bulletin.unl.edu/courses/AGRO/325) or basic course in plant physiology. A course in organic chemistry or biochemistry recommended.
Macro and micro nutrient elements and their function in the growth and development of plants. Role of single elements. Interaction and/or balances between elements and nutrient deficiency and/or toxicity symptoms as they affect the physiology of the whole plant. Relationship between crop nutrition and production and/or environmental considerations (e.g. yield, drought, temperature, pests).

**Business Management for Agricultural Enterprises**

Crosslisted as ENTR 488/888, EAEP 488/888, AGRO 488/888

Research a specific agricultural enterprise. Develop and present a business plan using materials from the primary area of interest.

**Turfgrass and Landscape Weed Management**

Crosslisted as TLMT 813, AGRO 813

Fundamental terminology associated with turfgrass and landscape weed management. Weed identification and the cultural practices and herbicide strategies to limit weed invasion and persistence.

**Master of Applied Science Project**

Crosslisted as AGRI 897, AGRO 897, NRES 897

Prereqs:

Admission to Master of Applied Science degree program

Project activity for the Master of Applied Science degree.

Design, develop and complete a project that requires synthesis of the course topics covered in the primary area of emphasis.

**Plant Ecophysiology: Theory and Practice**

Crosslisted as HORT 406/806, AGRO 406/806

Prereqs:

Junior standing; 4 hrs ecology; and 4 hrs botany or plant physiology.

Offered fall semester of even-numbered calendar years.

Principles of plant physiology which underlie the relationship between plants and their physical, chemical and biotic environments. An introduction to the ecological niche, limiting factors and adaptation. An overview of the seed germination and ecology, plant and soil water relations, nutrients, plant energy budgets, photosynthesis, carbon balance and plant-animal interactions. An introduction to various field equipment used in ecophysiological studies.

**Microclimate: The Biological Environment**

Crosslisted as GEOG 408/808, METR 408/808, HORT 408/808, AGRO 408/808, WATS 408

Prereqs:

Junior standing, MATH 106 or equivalent, 5 hrs physics, major in any of the physical or biological
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. Control 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.

**NRES 452/852 Climate and Society**  
Crosslisted as GEOG 450/850, METR 450/850, AGRO 450/850  

**Prereqs:**  
METR 200 or 351  

Offered spring semester of even-numbered calendar years.

Impact of climate and extreme climatic events on society and societal responses to those events. Global in scope and interdisciplinary.

**NRES 458/858 Soil Physical Determinations**  
Crosslisted as AGRO 458/858, SOIL 458  

**Prereqs:**  
SOIL/AGRO/GEOL/WATS 361, PHYS 141, PHYS 141, MATH 102, MATH 103.  

Survey of measurement techniques and principles used in characterizing the physical properties of soils. Includes analysis of experimental design and sources of experimental error. Techniques include: particle size analysis, soil water content, pore size analysis, field sampling techniques, soil strength, and saturated hydraulic conductivity.

**NRES 461/861 Soil Physics**  
Crosslisted as GEOL 461/861, AGRO 461/861, SOIL 461, WATS 461  

**Prereqs:**  
AGRO/SOIL 153, PHYS 141, MATH 102, or MATH 103.  

Recommended: Parallel AGRO/NRES/SOIL 458.


**NRES 469/869 Bio-Atmospheric Instrumentation**  
Crosslisted as GEOG 469/869, METR 469/869, HORT 407/807, AGRO 469/869, MSYM 469/869  

**Prereqs:**  
Junior standing; MATH 106, 4 hrs physics; physical or
biological science major.

Offered fall semester of odd-numbered calendar years.

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 are discussed and evaluated.

**Great Plains Field Pedology**

Crosslisted as GEOG 467/867, AGRO 477, SOIL 477

Prereqs: AGRO/SOIL 153

This course is a prerequisite for GEOL 465.

Spatial relationship of soil properties on various parts of landscape typical of the Plains, causal factors, and predictions of such relationships on other landscapes. Grouping these properties into classes, naming the classes, and the taxonomy that results from this grouping. Application of a taxonomy to a real situation through making a field soil survey in a region representative of the Plains border, predicting land use response of various mapped units as it affects the ecosystem, and evaluating the effectiveness of the taxonomic system used in the region surveyed.

**Water Resources Seminar**

Crosslisted as GEOG 484/884, GEOL 484/884, AGRO 484/884, WATS 484

Prereqs: Junior or above standing, or permission.

Seminar on current water resources research and issues in Nebraska and the region.

**Xenobiotics in the Environment**

Crosslisted as ENTO 920, HORT 920, AGRO 920

Prereqs: Recommend one course each in organic chemistry, soil science, biochemistry, plant physiology, microbiology and ecology

ENTO 920 is offered in odd-numbered calendar years.

Fate and ecotoxicological impacts of biologically foreign compounds in soil-water-plant environments; uptake, mechanisms of toxicity and metabolism in plants and other biota. Herbicides and other pesticides.

**Turfgrass Disease Management**

Crosslisted as HORT 414/814, PLPT 414/814, AGRO 414/814

Prereqs: BIOS/PLPT 369 or one semester of introductory plant pathology.

Pathogens, epidemiology, and control of diseases specific to turfgrass.

**Turfgrass Systems Management**

Crosslisted as HORT 427/827, AGRO 427/827
Prereqs:
TLMT 227 (http://bulletin.unl.edu/courses/TLMT/227) and TLMT 327 (http://bulletin.unl.edu/courses/TLMT/327).

Critical evaluation of turfgrass settings to create economical and environmentally friendly management systems for professionally managed turf areas.

**Modified Rootzones**

480/880
Crosslisted as HORT 480/880, AGRO 480/880

Offered as a five-week course.

Modified rootzones and their applications in the turfgrass and landscape management industry. Correct applications and construction techniques.

880
Crosslisted as HORT 880, AGRO 880

Modified rootzones and their applications in the turfgrass and landscape management industry. Correct applications and construction techniques.

### Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AgronomyAndHorticulture).

**Interim Department Head:** Roch Gaussoin, Ph.D.

**Graduate Committee:** Professors Lagrimini (chair), Arkebauer, Baenziger, Drijber, Ferguson, Holding, Waters

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 and must submit to the Department a completed application form including the transcripts of course work, and three letters of recommendation supporting the application from persons qualified to evaluate the applicant’s potential for graduate college. Foreign applicants must, in addition, provide evidence of adequate financial resources for self-support during the term of graduate study and must submit English proficiency with minimum scores as outlined by the Graduate College. Applicants are required to send a letter to the chair of the Agronomy Graduate Committee describing their background (vita preferred), experience, and personal and academic goals in pursuing graduate study. A Graduate Record Examination (GRE) is 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.

**Specializations:**

Agricultural Meteorology; Applied Ecology; Crop Physiology and Production; Environmental Studies; Great Plains Studies; Plant Breeding and Genetics; Plant Pathology; Range and Forage Science; Soil and Water Sciences; and Weed Science.

**Faculty**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AgronomyAndHorticulture).

Retrieved from "http://bulletin.unl.edu/graduate/Agronomy (http://bulletin.unl.edu/graduate/Agronomy"

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### Animal Science

#### Courses for ASCI (ASCI)

**Livestock Management on Range and Pasture**

445/845
Crosslisted as ASCI 451/851, RNGE 445

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**Credits:**

**Course:**

**Course Format:**

**Course Delivery:**

**ACE Outcomes:**

**Prereqs:**

TLMT 227 and TLMT 327.

**Course Format:**

**Course Delivery:**

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### Population Genetics

**AGRO 931**

Crosslisted as ASCI 931, HORT 931

**Prereqs:**
- ASCI 250 and AGRO 240 or AGRO 340 or AECN 201

**Course Description:**
Analyzing the plant and animal resources and economic aspects of pasturage. Management of pasture and range for continued high production emphasized.

**Course Delivery:**
Classroom

**ACE Outcomes:**
- 10

**Capstone course. All students required to participate in a one-week field trip in central or western Nebraska prior to beginning of fall semester. Therefore, students must notify instructor at time of early registration (Dates are given in class schedule.)**

**Structure of populations, forces affecting gene frequency and frequency of genotypes, continuous variation, population values and means, genotypic and environmental variances and covariances.**

### Forage Evaluation

**AGRO 940**

Crosslisted as ASCI 924

**Prereqs:**
- Permission

**Course Description:**
Offered even-numbered calendar years. Analytic procedures and research methods used in evaluating biochemical components and nutritive value of forages. An evaluation of the impact of forage quality on forage breeding and animal performance.

**Course Delivery:**
Classroom

### Processed Meats

**ASCI 410/810**

**Prereqs:**
- ASCI 210 or equivalent.

**Course Description:**
Modern meat processing industry and its use of science and technology. The fabrication, processing, preservation, sanitation, food safety, ethnic evolution, and utilization of manufactured and processed meat. Actual laboratory preparation of processed meats and by-products of the meat packing industry.

**Course Delivery:**
Classroom, Web

### Meat Investigations

**ASCI 419/819**

**Prereqs:**
- ASCI 210 or permission.

**Course Description:**
Conduct independent research and study meat industry problems in...
### Advanced Feeding and Feed Formulation

**Prereqs:**
- [ASCI 320](http://bulletin.unl.edu/courses/ASCI/320) or equivalent.

Feeding practices for domestic animals. Applied animal nutrition and feed formulation.

**Credit Hours:** 3  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom, Web

### New Techniques in Reproductive Biology

**Prereqs:**
- [ASCI 341](http://bulletin.unl.edu/courses/ASCI/341) or equivalent.

Mammalian early embryonic development. Basic aspects of embryology and development biology. Modern technologies in animal reproductive biology, in vitro maturation and fertilization, embryo transfer, cloning, assisted reproductive technologies, transgenic animals, and embryonic stem cells.

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 2  
**Course Delivery:** Classroom

### Endocrinology

**Prereqs:**
- 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.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

### Animal Science Graduate Seminar

**Prereqs:** Permission

Orientation in the animal science graduate program involving introduction to departmental research program, philosophy, and policies. Discussion of elements of an effective seminar; experience and critique in oral presentation of research data.

**Credit Hours:** 1  
**Max credits per degree:** 2  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom

### Meat Technology

**Prereqs:**
- [ASCI 410](http://bulletin.unl.edu/courses/ASCI/410) or permission

Meat processing and fabrication technology. Practical application of tenderization, restructuring, freezing, dehydration, flavor modification, composition control and quality control technology to manufactured and processed meat products.

**Credit Hours:** 4  
**Course Format:** Lab 6, Lecture 2  
**Campus:**  
**Course Delivery:** Classroom
Feedlot Nutrition and Management

**Course Format:** Lecture 3

**Campus:** Classroom

**Credit Hours:** 3

**Prereqs:**
- CHEM 831

Offered odd-numbered calendar years. Nutritional requirements of and complete ration formulation for feedlot cattle. Management practices needed for successful feedlot operation.

Advanced Animal Nutrition

**Course Format:** Lecture 3

**Campus:** Classroom

**Credit Hours:** 3

**Prereqs:**
- ASCI 320

This course is a prerequisite for:
- ASCI 925
- ASCI 926
- ASCI 928
- ASCI 929

An advanced course dealing with the nutrition of domestic animals. In-depth coverage of nutrients, nutrient metabolism and nutrient requirements. Biochemical and physiological functions of nutrients in life processes.

Forage Quality

**Crosslisted as:** AGRO 846

**Course Format:** Independent Study

**Campus:** Classroom

**Credit Hours:** 3

**Prereqs:**
- AGRO/RNGE 240
- ASCI 320, or equivalents; 3 cr hrs of introductory statistics; and permission

The chemical characteristics of forage components. The interactions with ruminant physiology and digestion that influence forage feeding value. The laboratory procedures used to evaluate forages for grazing livestock.

Advanced Animal Breeding

**Course Format:** Lecture 2, Recitation 1

**Campus:** Classroom

**Credit Hours:** 3

**Prereqs:**
- ASCI 330


Interdisciplinary Concepts in Beef Production

**Crosslisted as:** VBMS 847

**Course Format:** Classroom

**Credit Hours:** 3

**Max credits per degree:** 6

**Prereqs:**
- Degree in veterinary medicine or animal science, or allied agricultural degree, or permission

Classroom attendance is required during each of the modules. Between modules distance education technologies (laptop computer, Internet access, a computer operating system with a word processor, spreadsheet, and presentation software, email, etc.) are used and required for discussion and assignments. The contributions and interactions of the major academic disciplines upon the production, performance, health, profitability, and sustainability of beef cow and cattle feeding operations.
### Interdisciplinary Concepts in Beef Production I

**847A**

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereq:** VBMS *847A

**LINK** [http://bulletin.unl.edu/courses/ASCI/847A](http://bulletin.unl.edu/courses/ASCI/847A)

### Interdisciplinary Concepts in Beef Production II

**847B**

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
- VBMS *847A

**LINK** [http://bulletin.unl.edu/courses/ASCI/847B](http://bulletin.unl.edu/courses/ASCI/847B)

### Independent Study in Animal Science

**896**

- **Credit Hours:** 1–5
- **Max credits per degree:** 12
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
- 12 hrs animal science or closely related areas and permission

Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member.

**LINK** [http://bulletin.unl.edu/courses/ASCI/896](http://bulletin.unl.edu/courses/ASCI/896)

### Masters Thesis

**899**

- **Credit Hours:** 6–10
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
- Admission to masters degree program and permission of major adviser

**LINK** [http://bulletin.unl.edu/courses/ASCI/899](http://bulletin.unl.edu/courses/ASCI/899)

### Animal Industry Seminar

**905**

- **Credit Hours:** 1
- **Max credits per degree:** 4
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
- Permission

Current problems in the field of animal industry.

**LINK** [http://bulletin.unl.edu/courses/ASCI/905](http://bulletin.unl.edu/courses/ASCI/905)

### Advanced Meat Science

**917**

- **Credit Hours:** 3
- **Course Format:** Lab 1, Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
- **CHEM 831** [http://bulletin.unl.edu/courses/CHEM/831](http://bulletin.unl.edu/courses/CHEM/831) and **FDST 848** [http://bulletin.unl.edu/courses/FDST/848](http://bulletin.unl.edu/courses/FDST/848) or permission

Molecular events occurring during the conversion of muscle to meat. Molecular and cellular properties of meat responsible for the functional and palatability properties of meat products.

**LINK** [http://bulletin.unl.edu/courses/ASCI/917](http://bulletin.unl.edu/courses/ASCI/917)
Growth and Development of Meat Animals

**Prereqs:**
Strong background in biological sciences

ASCI/VBMS *845 and *846 recommended. BIOC, BIOS, and CHEM 831 (http://bulletin.unl.edu/courses/CHEM/831) and 832 (http://bulletin.unl.edu/courses/CHEM/832) advised. Growth and development of livestock animals with emphasis on the prenatal and postnatal differentiation and development of skeletal muscle, bone, and adipose tissue; organ growth discussed. Recent literature as well as classical concepts of animal growth discussed along with the genetic, hormonal, and nutritional factors that affect growth.

Interdepartmental Nutrition Seminar
Crosslisted as NUTR 921

**Prereqs:**
Permission

Presentation and discussion of current literature and research in the field of nutrition.

Energy Metabolism
Crosslisted as NUTR 925

**Prereqs:**
ASCI 821 (http://bulletin.unl.edu/courses/ASCI/821), BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831), or NUTR 455 (http://bulletin.unl.edu/courses/NUTR/455) or 950 (http://bulletin.unl.edu/courses/NUTR/950); or permission

Offered odd-numbered calendar years. Critically evaluate how research in bioenergetics has contributed to scientific discoveries in the fields of nutrition, biochemistry, and physiology. Methodologies for determination of human and animal energy expenditure and body composition. Specifically, direct calorimetry, indirect calorimetry and comparative slaughter techniques. Emphasis on components of organ and tissue energy expenditures. Background information important in other nutrition courses.

Carbohydrate and Lipid Nutrition
Crosslisted as NUTR 926

**Prereqs:**
BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831), ASCI 821 (http://bulletin.unl.edu/courses/ASCI/821) or NUTR 455 (http://bulletin.unl.edu/courses/NUTR/455) or 950 (http://bulletin.unl.edu/courses/NUTR/950)

Offered even-numbered calendar years. Nutrition and metabolism of carbohydrates and lipids by animals and humans. Emphasis on fundamental principles and current concepts.

Protein and Amino Acid Nutrition
Crosslisted as NUTR 927

**Prereqs:**
ASCI 421 (http://bulletin.unl.edu/courses/ASCI/421) or ASCI 821 (http://bulletin.unl.edu/courses/ASCI/821) or NUTR 455 (http://bulletin.unl.edu/courses/NUTR/455) or 950
Offered even-numbered calendar years. Nutrition and metabolism of proteins and amino acids by animals and humans. Fundamental principles and current concepts.

**Mineral Nutrition**
Crosslisted as NUTR 928

Prereqs:
ASCI 821 (http://bulletin.unl.edu/courses/ASCI/821) or NUTR 455 (http://bulletin.unl.edu/courses/NUTR/455) or 950 (http://bulletin.unl.edu/courses/NUTR/950) and BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831); or permission

Offered even-numbered calendar years. Nutrition and metabolism of mineral elements by animals and humans. Information and current concepts on the metabolism of minerals and requirements for growth, finishing, maintenance, lactation, and reproduction. Interrelationships among minerals and other nutrients discussed and observed in the laboratory.

**Mineral Nutrition Laboratory**
Crosslisted as NUTR 928L

Prereqs:
Parallel ASCI/NUTR 928 (http://bulletin.unl.edu/courses/NUTR/928)

Laboratory experiments that complement material covered in ASCI 928 (http://bulletin.unl.edu/courses/ASCI/928).

**Vitamin Nutrition**
Crosslisted as NUTR 929

Prereqs:
BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831), ASCI 821 (http://bulletin.unl.edu/courses/ASCI/821) or NUTR 455 (http://bulletin.unl.edu/courses/NUTR/455) or 950 (http://bulletin.unl.edu/courses/NUTR/950)

Offered odd-numbered calendar years. History, chemistry, assay procedures, food content, metabolism, biochemical functions, deficiencies, pharmacological doses, toxicities, and factors influencing vitamin status in animals, including humans.

**Quantitative Animal Genetics I**

Prereqs:
ASCI 931 (http://bulletin.unl.edu/courses/ASCI/931) or equivalent

Offered even-numbered calendar years. Use of biometrical and population genetics and related physiology, nutrition, pathology, meats, and economics, to develop intrapopulation breeding methods capable of increasing the net bio–economic efficiency of animal production.

**Quantitative Animal Genetics II**

Prereqs:
ASCI 931 (http://bulletin.unl.edu/courses/ASCI/931) or equivalent

Offered even-numbered calendar years.
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<td>VMED 645</td>
<td>Animal Physiology I</td>
<td><a href="http://bulletin.unl.edu/courses/VMED/645">Crosslisted as BIOS 813, ASCI 845, VBMS 845</a></td>
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<td>Lab 3, Lecture 3</td>
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Animal Physiology II
Crosslisted as BIOS 814, ASCI 846, VBMS 846

**Prereqs:**
For ASCI/VBMS *846/BIOS *814: An undergraduate course in biochemistry or biology or physiology. For VMED 646: First year standing in and admission to VMED.

This course is a prerequisite for: VMED 646

ASCIVBMS *846/BIOS *814/VMED 646 is designed for students in animal or biological sciences or veterinary medicine.

Mammalian physiology and cellular mechanisms. Physiology of the digestive, cardiovascular, respiratory, and renal systems.

**Description**
For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AnimalScience).

**Department Head:** Larry Berger, Ph.D.

**Graduate Committee:** Professor Miller (chair); Professor Jones; Associate Professors Kononoff, Burkey, Wood; Assistant Professors Ciobanu, Luebbe; Adjunct Professor Kuehn

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. Option II and III are available to students in animal science 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 must submit a letter of intent regarding educational and career goals. Scores from the general test of the Graduate Record Examination are required. Admission with full standing requires a 3.0 grade average (4 pt. scale). For international students, the TOEFL is the only test of English proficiency accepted by the department.

All Students must enroll in ASCI 806 during their first year of graduate study at UNL.

**Specializations available at the masters level:**
Meat Science and Muscle Biology; Physiology

**Specializations available at the doctoral level:**
Meat Science and Muscle Biology; Physiology

**Faculty**
For faculty list, research interests and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AnimalScience).

Retrieved from "[http://bulletin.unl.edu/graduate/Animal_Science](http://bulletin.unl.edu/graduate/Animal_Science)"

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**Anthropology**

**Courses for ANTH (ANTH)**

**Cross-Cultural Mentoring I**
Crosslisted as WMNS 408/808

**Credit Hours:** 3
**Course Format:** Field

For faculty list, research interests and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AnimalScience).

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<td>Requires weekly meetings with mentee. Continuation of ANTH/WMNS 408</td>
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**Description:**

**Cross-Cultural Mentoring II**

Work with a refugee and/or immigrant and/or minority K-12 student or adult to assist them with the culture transition process, the educational process, problem-solving techniques, and community resources.

**Women and Men: An Anthropological Perspective**

Cross-cultural meaning and impact of gender definition, with emphasis on women. Gender as a correlate of biology, language, economic systems, social and political structures, and belief systems.

**Social Structure**

Social structure, kin, and local groups.

**Topics in Cultural Anthropology**

Advanced study of selected topics in cultural anthropology.

**History of Anthropological Theory**

Origins and developments of anthropological theory, method, and thought.
### History of Growth of the Discipline and Schools of Thought from The Enlightenment through The Contemporary Period.

#### ANTH 418/818 Ethnology and Museums

**Prereqs:**
- 12 hrs anthropology.

An approach to the museum as it relates to the growth of anthropology in general and ethnological studies in particular. Emphasis on the study of non-Western technology and its role in the modern museum.

#### ANTH 419/819 Art and Anthropology of Native North Americans

Survey of Native American art, its prehistoric origins, historical development and recent artistic activity in the principal regions of North America. The context of art in traditional culture and the cultural milieu in which change took place. Artistic media considered are: ceramics, textiles, sculpture, basketry, bead and quill work, Powwows and fairs as important venues for presentation of contemporary Native American art.

#### ANTH 420/820 Ethnic Identity and Ethnic Conflict

Concept of ethnicity and ethnic groups. Reviews how ethnic groups emerge and ethnic relations affect the modern nation state. Several ethnic conflicts reviewed and examined, accompanied by discussion of the dynamics of each of these situations. How ethnic identity is formed, adjusted and recreated.

#### ANTH 422/822 Medical Anthropology

Culture as it affects health care, disease transmission and prevention and health education.

#### ANTH 429A/829A Food Security: A Global Perspective

Crosslisted as HORT 429A/829A, AGRO 429A/829A, NRES 429A/829A

**Prereqs:**
- Junior standing

Overview of the technical and sociocultural dimensions of global food insecurity.

#### ANTH Nutritional Anthropology
Anthropological approaches to the study of nutrition. Background to nutrition science; bio-cultural aspects of obesity, fertility, lactose intolerance, and infant feeding practices; biological differences in nutritional requirements, fertility, and mortality; interpretation of nutritional deficiencies in skeletal remains; reconstructing prehistoric diets from archaeological evidence; and evaluation of relationships between dietary patterns and dental remains in fossil record.

Prereqs: ANTH 242 or equivalent.

Development of Historical Archaeology and current research in the field.

Current concepts and theories used in archaeology to interpret the archaeological record.


Introduction to the history of archaeological research, taxonomic issues, cultural sequences, and current research topics within the Great Plains area of North America.

Prereqs: ANTH 232.

Introduction to Heritage Management Archaeology

Prereqs: ANTH 232.
Course Delivery: Classroom
Groups: Archaeology

**The Ancient Maya**  
Crosslisted as LAMS 436

Introduction to the prehistory of the Maya region and its periphery. Features of the Ancient Maya political, economic, religious, gender and material structures. Main substantive, theoretical and political debates in Mesoamerican scholarship. Interdisciplinary research and the types of methods used to create knowledge about Maya civilization.

Course Delivery: Classroom
Groups: Archaeology

**Borders and Frontiers**

Social and spatial processes of borders and frontiers though historical and contemporary articulations between local, national, and global orders. Commonalities of frontier and border experiences worldwide. Frontiers in the North American and global experience, border formation and maintenance case studies, contemporary issues of globalization, indigenous peoples, conflict and/or cooperation, natural resources, and ethnic identity.

Course Delivery: Classroom
Groups: Cultural Anthropology

**Topics in Old World Prehistory**  
Crosslisted as CLAS 438/838

Prereqs: ANTH 242 or equivalent.

Topics drawn from the wide breadth of Old World prehistory. Archaeological data relevant to selected theoretical or topical problems.

Course Delivery: Classroom
Groups: Archaeology

**Archaeology of Preindustrial Civilizations**

Prereqs: 12 hrs ANTH.

Development and organizational variability of past preindustrial civilizations. State formation and their evaluation through use of the archaeological record. General archaeological and anthropological problems posed by complex societies. Data bases from preindustrial civilizations: Mesopotamia; Africa; Egypt; India; China; Japan; Polynesia; Mexico; and Peru.

Course Delivery: Classroom
Groups: Archaeology

**Human Variation**

Biological variation of modern humans worldwide through time and space. Standard measurements of phenotypic, e.g., elementary anthropometry. Biological adaptation to environment using recent theoretical perspectives.

Course Delivery: Classroom
ACE Outcomes: 9, 10
Groups: Biological Anthropology
Human Growth and Development
Crosslisted as BIOS 448/848

Prereqs:
ANTH 242 and 242L, or BIOS 101 and 101L.

Biological diversity from an evolutionary perspective. The history of the study of human physical growth and biological principles of growth. Genetic, epigenetic and hormonal effects on human and other mammal growth patterns, and environmental factors that influence growth. Effects of nutrition, disease, socio-economic status, pollution, etc. Unique features of human growth in its various stages. How anthropologists interpret variation in growth patterns among human populations and the possible adaptive significance of this variation.

Contemporary Issues of Indigenous Peoples in North America
Crosslisted as ETHN 451

Prereqs:
ANTH 351 or 352.

Political, economic, and social issues concerning indigenous peoples in North America.

Ethnographic Field School

Prereqs:
Permission of instructor.

Advanced comparative study of the contemporary populations in a selected area of North America (occasionally outside of the USA) that may combine the traditional survey of ethnographic literature with personal observation, participation, and experiential learning activities in rural, urban, or traditional settings. The ethnographic focus (e.g., Native Americans, recent immigrants to the USA, historic practices) changes depending on research opportunities.

Belief Systems in Anthropological Perspective

Prereqs:
12 hrs anthropology.

Cross-cultural examination of the structure, form, and functions of belief systems. Emphasis on the interrelationship between the ideological subsystem of a culture and its social, political, and economic organization. Primitive and contemporary societies.

Ecological Anthropology
Crosslisted as NRES 873

Human adaptive systems and their ecological contexts. The dynamic inter-
relationships between subsistence, technology, social behavior, human
demography, and ecological variability.

### Applied and Development Anthropology

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<th>Course Code</th>
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<td>Prereqs</td>
<td>ANTH 212 <a href="http://bulletin.unl.edu/courses/ANTH/212">Link</a></td>
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<tr>
<td>Efforts by anthropologists and other trained specialists to influence the process of development and socioeconomic change in the modern world.</td>
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### Primitive Technology

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<th>Course Code</th>
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<tr>
<td>Prereqs</td>
<td>9 hrs ANTH.</td>
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<td>Survey of the major technologies and industrial complexes of the prehistoric and primitive worlds. Through examination of artifacts, gain familiarity with the ways preindustrial people have manipulated the environment. Develop skills necessary to analyze technology within its cultural setting.</td>
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### Human Rights, Environment, and Development

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<th>Course Code</th>
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<tr>
<td>Prereqs</td>
<td>ANTH 212 <a href="http://bulletin.unl.edu/courses/ANTH/212">Link</a></td>
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<tr>
<td>Human rights from an anthropological perspective. International human rights, development, and the environment; Western and non-Western perspectives on human rights; individual rights and collective (group) rights; social, economic, and cultural rights; women's rights; gay rights; indigenous peoples and minority groups' rights; and planetary (environmental) rights. Rights to food, culture, development, and a healthy ecosystem.</td>
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### Hunters–Gatherers

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<tr>
<td>Prereqs</td>
<td>9 hrs ANTH including ANTH 212 <a href="http://bulletin.unl.edu/courses/ANTH/212">Link</a>.</td>
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<tr>
<td>Survey of hunter-gatherer society and its ecological and social adaptations. Hunters–gatherers and their important role in human history and evolution.</td>
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### Pro-seminar in Latin American Studies

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<th>Course Code</th>
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<td>Crosslisted as HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878</td>
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<td>Prereqs</td>
<td>Junior standing and permission.</td>
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Prereqs:

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<tr>
<td>Credit Hours:</td>
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<td>Lecture 3</td>
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<td>Course Delivery:</td>
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<td>Groups:</td>
<td>Cultural Anthropology</td>
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Topical seminar required for all Latin American Studies majors.

An interdisciplinary analysis of topical issues in Latin American Studies.

Max credits per degree: 6

Course Delivery: Classroom

Groups:
- Integrative Courses
- Research and Reading

ANTH Landscape Archaeology

481/881

Survey of theory, method, and practice in describing and interpreting archaeological landscapes.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

ANTH Research Methods in Anthropology

482/882

Prereqs:
- Permission.

Is strongly recommended to graduate students in all subfields before starting thesis work.

Introduces advanced students to practical and theoretical issues involved in designing and undertaking anthropological research. The logic and organization of research emphasized.

Credit Hours: 3
Course Delivery: Classroom

Groups:
- Integrative Courses
- Research and Reading

ANTH Advanced Field Methods

483/883

Prereqs:
- Permission.

Preparation for fieldwork through study of the philosophical and practical problems of anthropological field research. When appropriate, small-scale fieldwork exercises are planned, executed, and analyzed.

Credit Hours: 3
Course Delivery: Classroom

Groups:
- Laboratory and Field Training

ANTH Quantitative Methods in Anthropology

484/884

Prereqs:
- 9 hrs ANTH; STAT 218 (http://bulletin.unl.edu/courses/STAT/218) or equivalent.

Collection, management, and analysis of quantitative anthropological data. Methods of exploratory and confirmatory data analysis. Computer-assisted analysis.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Groups:
- Laboratory and Field Training

ANTH Pro-seminar in Anthropology

485/885

Prereqs:
- Permission.

Credit Hours: 1-3
Course Delivery: Classroom

Groups:
- Integrative
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<td>ANTH 486/886</td>
<td>Community-Based Research and Evaluation</td>
<td>ANTH 212</td>
<td>Qualitative ethnographic field and research projects. The observation, documentation, data analysis, and theory behind selected research designs. Community-based organizations, agencies, and development advocacy projects.</td>
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<tr>
<td>ANTH 487/887</td>
<td>Analysis of Archaeological Materials</td>
<td>ANTH 232</td>
<td>Survey of vocabulary, techniques, and ideas needed to research major materials found in archaeological sites. A. Ceramics (3 cr) B. Lithics (3 cr) D. Archaeofauna (3 cr) E. Historic Material Culture (3 cr)</td>
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<tr>
<td>ANTH 488/888</td>
<td>Contentious Issues in Anthropology</td>
<td>9 hrs of anthropology beyond ANTH 110</td>
<td>Recent controversial issues through the integration of biological, cultural, and archaeological branches of anthropology.</td>
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<tr>
<td>ANTH 490/890</td>
<td>Advanced Field Work</td>
<td>ANTH 290</td>
<td>Further practical experience in field research.</td>
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<tr>
<td>ANTH 491/891</td>
<td>Advanced Laboratory Work</td>
<td>Permission.</td>
<td>Only 3 credit hours of ANTH 491</td>
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LINK (http://bulletin.unl.edu/courses/ANTH/486) Community-Based Research and Evaluation

LINK (http://bulletin.unl.edu/courses/ANTH/487) Analysis of Archaeological Materials

LINK (http://bulletin.unl.edu/courses/ANTH/488) Contentious Issues in Anthropology

LINK (http://bulletin.unl.edu/courses/ANTH/490) Advanced Field Work

LINK (http://bulletin.unl.edu/courses/ANTH/491) Advanced Laboratory Work
### Internship in Anthropology (ANTH 495/895)

**Prereqs:** Sophomore standing.

A structured professional experience outside the traditional academic setting designed to allow students to learn and use anthropological skills and knowledge and to develop professional networks. 496-896. Special Readings in Anthropology (1–6 cr)

**Credit Hours:** 1–6

**Max credits per semester:** 6

**Course Format:** Field

**Course Delivery:** Classroom

**Groups:** Integrative Courses, Research and Reading

### Special Readings in Anthropology (ANTH 496/896)

**Credit Hours:** N/A

**Course Delivery:** Classroom

**Groups:** Integrative Courses, Research and Reading

### Advanced Current Topics in Anthropology (ANTH 498/898)

**Prereqs:** Permission.

Seminar on current issues and problems in anthropology.

**Credit Hours:** 1–6

**Max credits per degree:** 6

**Course Format:** Lecture

**Course Delivery:** Classroom

**Groups:** Integrative Courses, Research and Reading

### Biology of Human Variation (ANTH 844)

**Prereqs:** ANTH 110 or permission

Introduction to the scope and meaning of human biological variation with emphasis on present day populations.

**Credit Hours:** 3

**Campus:** Classroom

**Course Delivery:** Classroom

### Landscape Archaeology (ANTH 881)

**Credit Hours:**

**Campus:**

**Course Delivery:** Classroom
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<tr>
<td>881</td>
<td>Survey of theory, method, and practice in describing and interpreting archaeological landscapes.</td>
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<td>Lab, Lecture</td>
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<td>ANTH 887A</td>
<td>Ceramics</td>
<td>4</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ANTH 887B</td>
<td>Lithics</td>
<td>4</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ANTH 887D</td>
<td>Archaeofauna</td>
<td>4</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ANTH 887E</td>
<td>Historic Material Culture</td>
<td>4</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ANTH 894</td>
<td>Internship in Professional Archaeology</td>
<td>1–6</td>
<td>Field</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>899</td>
<td>Masters Thesis</td>
<td>6–9</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Prereqs:

Structured professional experience in archaeological research, administration, or curation outside the traditional academic setting.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 915</td>
<td>Seminar in Ethnology</td>
<td>3</td>
<td>9</td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Intensive study of theory and method in ethnology, with special attention to current research literature.</td>
<td></td>
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<tr>
<td>ANTH 935</td>
<td>Seminar in Archaeology</td>
<td>3</td>
<td>9</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Theory and method in prehistory and historic archaeology. Current research literature in the field.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ANTH 945</td>
<td>Seminar in Physical Anthropology</td>
<td>3</td>
<td>9</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Intensive study of theory and method in physical anthropology, with special attention to current research literature.</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>ANTH 994</td>
<td>Seminar in Anthropology and Geography</td>
<td>1-3</td>
<td>6</td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as GEOG 994</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research or reading in selected problems in anthropology, including the preparation of research for publication.</td>
<td></td>
<td></td>
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<tr>
<td>ANTH 996</td>
<td>Research Other Than Thesis</td>
<td>1-6</td>
<td>6</td>
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</tr>
<tr>
<td>POLS 466/866</td>
<td>Pro-seminar in International Relations I</td>
<td>3</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as HIST 479/879, SOCI 466/866, ANTH 479/879, GEOG 448/848, ECON 466/866, AECN 467</td>
<td></td>
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<tr>
<td></td>
<td>Prereqs: Senior standing and permission.</td>
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<tr>
<td></td>
<td>Open to students with an interest in international relations.</td>
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<tr>
<td></td>
<td>Topic varies</td>
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</tr>
</tbody>
</table>
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department of Anthropology Chair: Raymond Hames, Ph.D.

Graduate Committee Chair: Effie Athanassopoulos, Ph.D.

The department offers graduate courses leading to the degree of master of arts. The requirements for admission, for Candidacy, and for courses and thesis 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.

With the exception of students in the Professional Archaeology Specialization, all graduate students will be required to take three core courses in the Department of Anthropology, one from each sub-discipline. Cultural Anthropology: ANTH 812, 817 or 877; Archaeology: ANTH 831 or 832; Biological Anthropology: ANTH 830 or 842. If a student has taken any of these courses at the 400 level (ANTH 412, 417, 430, 431, 432, 442, 477) 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 remediated.

Any class taken to remediate a deficiency will not count as part of the credits required for the master 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 adviser will inform students of the scheduling and format of assessment activities.

These assessment activities will in no way affect a student’s GPA or graduation.

Specializations available:

Environmental Studies; Great Plains Studies; Professional Archaeology; Women's and Gender Studies

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Anthropology"

Applied Science

Courses for AGRI (AGRI)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 810</td>
<td>Research Strategies in Agriculture</td>
<td>1</td>
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<td>Classroom</td>
</tr>
<tr>
<td>AGRI 888</td>
<td>Teaching Undergraduate Science</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AppliedScience).

**Program Coordinator:** John Markwell, Ph.D.

**Graduate Committee:** Balschweid, Gosselin, Heng-Moss, Johnson, Jones, Wehling, Weissling, Yuen

The Master of Applied Science is an interdisciplinary degree program and students may use distance courses from a variety of disciplines. The description of each course may be found by consulting the section of the Graduate Bulletin for that discipline's degree program. Students in the Master of Applied Science program should consult with their adviser and the Graduate Program Chair in planning for courses to take and the schedule for course offerings.

**Courses from Agricultural Economics**
- AECN 883, Ecological Economics, 1 cr
- AECN 896, Strategic Issues in Business, 1 cr
- AECN 896K, Orientation Community Development, 1 cr
- AECN 896L, Community Development I, 1 cr
- AECN 896M, Special Topics, 1 cr
- AECN 896N, Community & Nat Res Mgmt, 1 cr
- AECN 896P, Community Develop II, 1 cr
- AECN 896Q, Impact Analysis, 1 cr
- AECN 896R, Cost-Benefit Analysis, 1 cr
- AECN 896T, Local Community Economic Analysis, 1 cr
- AECN/EDAD 896/890, Economics of Academic Employment, 3 cr

**Courses from Agriculture, Agronomy & Horticulture**
- AGRI/AGRO/HORT 897, Master of Agriculture Project, 1–6 cr
- AGRO 811, Crop Genetic Engineering, 1 cr
- AGRO 812, Crop and Weed Genetics, 1 cr
- AGRO/HORT/TLMT 814, Trufgrass Disease Management, 1 cr
- AGRO/ENTO 815A, Self Pollinated Crop Breeding, 1 cr
- AGRO/ENTO 815B, Germplasm & Genes, 1 cr
- AGRO/ENTO 815D, Cross Pollinated Crop Breeding, 1 cr
- AGO/BIOC 818, Agricultural Biochemistry, 2 cr
- AGRO 822, Integrated Weed Management, 1 cr
- AGRO 823, Herbicide Action in Plants, 1 cr
- AGRO 824, Plant Nutrition & Nutrient Management, 3 cr
- AGRO 831, Spatial Variability in Soils, 1 cr
- AGRO 837, Animal, Food and Industrial Uses of Grain, 2 cr
- AGRO 838, Producing Grain for Animals and Industry, 1 cr
- AGRO 846, Forage Quality, 3 cr
- AGRO 851, Grassland Plant Identification, 2 cr
- AGRO/HORT/TLM 880, Turf & Landscape Modified Rootzones, 1 cr
- AGRO 896, Advanced Plant Breeding Topics, 1 cr
- AGRO 896, Independent Study, 1-6 cr
- AGRO 896, Teaching Biotechnology, 3 cr
- AGRO 896, Teaching Plant Science, 3 cr
- AGRO 896A, Sprayer & Spreader Technology, 1 cr
- AGRO 896, Turf and Landscape Weed Management, 1 cr
- AGRO 896, Pest Resistance Management, 2 cr
- AGRO 896, Crop Genetics
- AGRO/ASCI 896, Forage Quality, 3 cr
- HORT 896, Herbaceous Perennials and Grasses, 1-3 cr

*Course begins with a mandatory two–day workshop

Courses from Agricultural Leadership, Education and Communication
- ALEC 410/810, Environmental Leadership, 3 cr
- ALEC 801, Theoretical Foundation of Leadership, 3 cr
- ALEC 804, Problems of Beginning Ag Teachers, 3 cr
- ALEC 805, College Teaching Methods, 3 cr
- ALEC 806, Introduction to Distance Education, 3 cr
- ALEC 807, Supervisory Leadership, 3 cr
- ALEC 816, Management Strategies in Dist Education, 3 cr
- ALEC 826, Program Evaluation, 3 cr
- ALEC 845, Research in Leadership Education, 3 cr
- ALEC 880, Program Planning Overview, 3 cr
- ALEC 893, Technical Ag Workshop, 1–6 cr
- ALEC 896, Independent Study, 1–3 cr
- ALEC 906, Theoretical Foundation of Dist Education, 3 cr
- ALEC 995, Leadership Studies, 3 cr
- ALEC 995, Doctoral Seminar, 3 cr
- ALEC 996, Non–Thesis Research, 2–6 cr

Course from Animal Science
- ASCI 422/822, Advanced Feeding and Feed Formulation, 3 cr

Courses from Entomology
- ENTO 402/802, Aquatic Insects, 2 cr
- ENTO 403/803, Management of Horticultural Insects, 3 cr
- ENTO 406/806, Insect Ecology, 3 cr
- ENTO 407/807, Urban & Industrial Entomology, 3 cr
- ENTO 412/812, Entomology & Pest Mgmt, 3 cr
- ENTO/FORS 414/814, Forensic Entomology, 3 cr
- ENTO 415/815, Medical Entomology, 3 cr
- ENTO 496/896, Insect Physiology, 3 cr
- ENTO 496/896, Plant Resistance Abiotic & Biotic Stressors, 3 cr
- ENTO 496/896, Invasive Pests & Intnernational Trade, 3 cr
- ENTO 810, Insects for Educators, 3 cr
- ENTO/PLPT 813, Biological Control, 3 cr
- ENTO 818, Insect Identification & Natural History, 4 cr
- ENTO 819, Insect Behavior, 3 cr
- ENTO 820, Insecticide Toxicology, 3 cr
- ENTO 888, MS Degree Project, 4 cr
- ENTO 896, Independent Study, 1–6 cr
- ENTO/AGRI 826, Scientific Illustration, 3 cr
- ENTO 896, International Plant Protection, 3 cr
- ENTO 825, Management Agronomic Insects, 3 cr
- ENTO 991, Advanced Topics in Entomology, 1–5 cr
- ENTO 991B, Presentation Methods, 2 cr

Courses from Food Science & Technology
- FDST 801, Teaching Applications of Food Science, 3 cr
- FDST 805, Food Microbiology, 3 cr
- FDST 848, Food Chemistry, 3 cr
- FDST 855, Microbiology of Fermented Foods, 2 cr

Courses from Forensic Science
- FORS 802, Principles of Forensic Photography, 1 cr
- FORS 803, Advanced Forensic Photography, 1 cr
- FORS 804, Bloodstains as Evidence, 1 cr
- FORS 806, Crime Scene Management, 1 cr
Courses from Mechanized Systems Management
- MYSM 452, Irrigation Systems Management, 3 cr

Courses from Natural Resource Sciences
- NRES 809, Laboratory Earth: Earth and Its Systems, 3 cr
- NRES 814, Laboratory Earth: Earth's Natural Resource Systems, 3 cr
- NRES 822, Laboratory Earth: Earth's Changing Systems, 3 cr
- NRES 896, Urban Wildlife Damage Management, 3 cr
- NRES 896A, Laboratory Earth, 3 cr
- NRES 898, Laboratory Earth: Human Dimensions of Climate Science

Course from Nutrition and Health Sciences
- NUTR 859, Nutrition: Focus on Life Stages, 3 cr

Courses from Veterinary and Biomedical Sciences
- VBMS 811, Introduction to Veterinary Epidemiology, 2 cr
- VBMS 847A, Interdisciplinary Concepts in Beef Production, 3 cr
- VBMS 909, Seminar, 1 cr
- VBMS 998, Population Approaches to Medicine, 2 cr
- VBMS 951, Advanced Molecular Infectious Disease, 3 cr

Architectural History and Theory I
Prereqs:
For undergraduate: Admission to the BSD program or permission.
For student in the professional program: Admission to the Professional Program in Architecture or permission.
Selected aspects of the history and theory of fifteenth–through eighteenth-century architecture emphasizing the architect as a creative personality.

African Architecture
Prereqs:
Sophomore standing.
Survey of the architectural traditions of the African continent, from prehistoric times to the present day. Buildings—famous and typical—theories, and approaches that are appropriate to the specific cultural environments.

Product Design
Prereqs:
Crosslisted as IDES 417
Junior standing or permission.

Practical investigation in the use of materials and their fabrication process with emphasis on wood, plastic, and steel. Generate a design from conception to a finished product.

**Fabrication and Construction Team**

<table>
<thead>
<tr>
<th>Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>418/518/818</td>
<td>1-6</td>
</tr>
</tbody>
</table>

**Prereqs:**
Permission.

The shifting relationship between conceiving and making through hands-on, collaborative experience with actual design-construct projects in which students play a decisive role in all aspects of research, design and construction of the commission.

**Advanced Architectural Drawing**

<table>
<thead>
<tr>
<th>Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>424/524/824</td>
<td>2</td>
</tr>
</tbody>
</table>

**Prereqs:**
For undergraduate: Admission to the BSD program or permission. For student in the professional program: Admission to the Professional Program in Architecture or permission.

Advanced work in architectural drawing. Discourse about various drawing problems encountered in design process and practice.

**Computer-aided Drawing/Design (CADD) in Architecture**

<table>
<thead>
<tr>
<th>Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>425/525/825</td>
<td>3</td>
</tr>
</tbody>
</table>

**Prereqs:**
Permission.

Application of advanced CADD systems, technology, and techniques to the solution of problems in architecture. Use of sophisticated software and hardware in drawing management with emphasis on its application to design, graphics, and professional drawings. Potentials and limitations of CADD systems in the professional practice of architecture.

**Advanced Lighting Design**

<table>
<thead>
<tr>
<th>Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>435/535/835</td>
<td>3</td>
</tr>
</tbody>
</table>

**Prereqs:**
ARCH 333 or IDES 335 or by permission.

Translation of physical measurements of sensory stimuli into architectural-spatial relationships with respect to artificial and natural illumination; advanced lighting theories and techniques through lecture, discussion, simulation, and direct application to spatial design/development.

**Architectural Acoustics**

<table>
<thead>
<tr>
<th>Code</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>437/537/837</td>
<td>2</td>
</tr>
</tbody>
</table>

**Prereqs:**
ARCH 310, 411, 333.

Course Delivery: Classroom
Advanced acoustic design. Translation of physical measurements of sensory stimuli into architectural-spatial relationships with respect to internally and externally generated sound.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 441/541/841</td>
<td>Architectural History and Theory II</td>
<td>Admission to the BSD Program or permission.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 442/542/842</td>
<td>Contemporary Architecture</td>
<td>ARCH 441 or permission.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 446/546/846</td>
<td>Theory and Criticism in Architecture Since 1945</td>
<td>ARCH 341, ARCH 446/546/846</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 448/548/848</td>
<td>Architecture of the Great Plains</td>
<td>Admission into Third Year or permission.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>ARCH 450/550/850</td>
<td>Survey of Asian Architecture</td>
<td>Senior or graduate standing.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
pre-eighteenth century India, China, and Japan.

**Latin American Architecture**

**ARCH 451/851**

*Prereqs:*
- [ARCH 441](http://bulletin.unl.edu/courses/ARCH/441) / [541](http://bulletin.unl.edu/courses/ARCH/541) / [841](http://bulletin.unl.edu/courses/ARCH/841)

**ARCH 451** requires no previous study of Latin America.

Introduction to Latin American architecture. 20th century Latin American architecture. The two main factors that have shaped Latin American architecture: cultural context and ecological context. The environment (in a broad cultural frame) and architecture as a cultural artifact.

**Behavioral and Social Factors in Environmental Design**

**ARCH 456/556/856**

Survey of theory, methods, research, and findings from the social and behavioral sciences as they relate to architectural design, interior design and regional and community planning. Application of principles to the development of architectural and interiors programs and designs and to the planning process.

**Housing Issues in Contemporary Society**

**ARCH 457/557/857**

*Prereqs:*
- Admission into Third Year or permission.

Survey of social, psychological, political and economic research regarding housing in today’s global economy. Focuses on how the research can impact the practice of design at the interior and architectural as well as the community and regional planning scale.

**The Changing Workplace**

**ARCH 458/558/858**

Survey and integration of theory, methods, research and findings from the social, behavioral, and managerial sciences as they relate to the design of work environments. Factors effecting change in the contemporary workplace.

**Architectural Preservation**

**ARCH 463/563/863**

Introduction to the principles, processes, and practice of architectural preservation and the conservation of historic districts.

**Community Design Center**

**ARCH**
**Women in Design**

Crosslisted as IDES 481

**Prereqs:**
- Admission to the BSD program or permission.

Community-oriented design studio. The design process and its relationship to the environmental development process.

**Advanced Color Theory**

Crosslisted as IDES 482/882

**Prereqs:**
- Admission to the third year in architecture or Interior Design Program; or permission.

Advanced color theories and their application to the Built environment.

**Case Study in the Study and Practice of Architecture**

**Prereqs:**
- Permission.

A group investigation into a recently completed professional building project. Methodology as prescribed by the American Institute of Architects "Case Study Work Group", and the "Large Firm Roundtable – The Educator/Practitioner Net".

**Selected Topics in Architecture**

**Prereqs:**
- Permission.

Group investigation of a topic in architecture originated by the instructor.

**Problems in Architecture**

**Prereqs:**
- Permission.

Individual investigation of a topic in architecture.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>ARCH 510/810</td>
<td>Advanced Architectural Design I</td>
<td>5th year standing, professional program</td>
<td>5</td>
<td>Studio</td>
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<tr>
<td>ARCH 511/811</td>
<td>Advanced Architectural Design II</td>
<td>5th year standing, professional program</td>
<td>5</td>
<td>Studio</td>
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<td>Classroom</td>
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<tr>
<td>ARCH 516/816</td>
<td>Modern Craft</td>
<td>Permission</td>
<td>3</td>
<td>Lab 3, Lecture 1.5</td>
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<td>Classroom</td>
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<tr>
<td>ARCH 526/826</td>
<td>Digital Fabrication</td>
<td>Permission</td>
<td>3</td>
<td>Lab 4, Lecture 1</td>
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<td>Classroom</td>
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<tr>
<td>ARCH 530/830</td>
<td>Advanced Elements of Building Construction</td>
<td>Admission to the fifth year or permission</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
<td>Credits</td>
<td>Campus</td>
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<tr>
<td>ARCH 531/831</td>
<td>Architectural Structures III</td>
<td>ARCH 411</td>
<td>3</td>
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<tr>
<td>ARCH 532/832</td>
<td>Production Drawings</td>
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<td>3</td>
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<tr>
<td>ARCH 532A/832A</td>
<td>Seismic Design for Architects</td>
<td>Permission</td>
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<tr>
<td>ARCH 533/833</td>
<td>Architectural Systems Design II</td>
<td>ARCH 530/530</td>
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<tr>
<td>ARCH 536/836</td>
<td>Daylighting and Energy</td>
<td>ARCH 333/430</td>
<td>3</td>
<td>Lab 4</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>ARCH 545/845</td>
<td>Architecture, Society, and Culture I</td>
<td>Admission to the fifth year, ARCH 541/542</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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</tr>
</tbody>
</table>
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.

 ARCH 560/860  
Environmental Survey and Analysis  
Crosslisted as CRPL 872  

Prereqs:  
Permission

This course is a prerequisite for: ARCH 561

Comprehensive review of contemporary methods and theories of environmental survey and analysis in the fields of landscape architecture, regional planning, conservation, and related areas, with emphasis on interrelationships between human and natural systems.

 ARCH 561/861  
Studies in Environmental Design  

Prereqs:  
ARCH 560

Comparative case studies in environmental development in the fields of landscape architecture, regional planning, conservation, and related areas with emphasis on program techniques. Development of individual or group project programs of contemporary environmental development of large-scale sites, including movement systems, siting of structures, growth phasing, and aesthetic controls.

 ARCH 562/862  
Urban Form Typology  

Prereqs:  
Enterance into 5th year professional program or permission

Addresses core aspects of the architecture of cities. Reviews current typological theories and undertakes descriptive, normative and critical studies of urban examples according to ecological and anthropological criteria. Includes lectures by faculty, guest speakers and seminar presentations by students.

 ARCH 564/864  
Urban Design I  

Prereqs:  
Permission

This course is a prerequisite for: ARCH 565

Detailed study of the context, theory, process, and practice of urban design.

 ARCH 565/865  
Urban Design II  

Prereqs:  
ARCH 564

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom  
Campus:
Comparative case studies in urban design and social planning directed at an understanding of urban form.

**Planting Design**

Crosslisted as HORT 341

**Prereqs:**
- HORT 266
- MATH 102
- MSYM 109
- PHYS 141
- SOIL 153 and CNST 131

Lab exercises and field trips are required. Landscape construction, techniques and practices including site measurement and layout, topography, grading, cut-fill drainage and runoff calculations, topsoil protection; bioengineering and urban site erosion control; retaining walls; non-living landscape construction and design techniques as a part of the design process using problem-solving.

**Architectural Design: Terminal Project Studio I**

**Prereqs:**
- ARCH 510
- ARCH 810
- Submission of a statement of intent and a contract with a faculty mentor

This course is a prerequisite for ARCH 614.

Advanced architectural design. The first part of a year-long design project initiated by the student and developed in conjunction with a faculty mentor. The first course in the sequence consists of initial studies that are further developed and completed in the following semester. These initial studies lead to a written and visual proposal that sets the parameters and the agenda for detailed formal design explorations in the following semester.
Advanced architectural design. The second part of a year-long design project initiated by the student under the supervision and guidance of a faculty mentor. The second course in the sequence develops the formal expression and representation of a specific architectural project as described in the previous semester’s work.

**Architectural Structures IV**

**Prereqs:**

[ARCH 613](http://bulletin.unl.edu/courses/ARCH/613)

Research projects concerning architectural structures.

**Professional Practice**

**Prereqs:**

[ARCH 411](http://bulletin.unl.edu/courses/ARCH/411)

Orientation to professional practice through a study of the architects' and the contractors' relationships to society, specific clients, their professions, and other collaborators in the environmental design and construction fields. Ethics; professional communication and responsibility; professional organizations; office management; construction management; legal and contractual relationships; professional registration; and owner-architect-contractor relationships.

**Architectural Programming**

**Prereqs:**

[ARCH 550](http://bulletin.unl.edu/courses/ARCH/550)

Lecture/seminar/research studying architectural programming/evaluation methods and leading toward the development of an architectural program and statement of design intent for the final studio problem to be done in either [ARCH 913](http://bulletin.unl.edu/courses/ARCH/913) or [ARCH 914](http://bulletin.unl.edu/courses/ARCH/914).

**Seminar in Architecture**

**Prereqs:**

[ARCH 550](http://bulletin.unl.edu/courses/ARCH/550) and permission

Contemporary problems in design and practice.
Contemporary problems in design and practice.

**Internship**

**ARCH 695/895**

Prereqs: [ARCH 550](http://bulletin.unl.edu/courses/ARCH/550) and permission

Exposure to the architectural profession through office application including job promotion, client relations, data collection, design, production drawings, estimating, specifications, bid documents, and quality control.

**Problems in Programming**

**ARCH 696/896**

Prereqs: ARCH *810, *812 and 911, and approval of the faculty

Research and programming in preparation of master’s thesis.

**Masters Thesis**

**ARCH 699/899**

Prereqs: ARCH *896; any two of ARCH 511, 612, or 613/913; admission to masters degree program and permission of major adviser

Projects to place special emphasis upon a major field of interest. Design problem or written thesis.

**Architectural Design: Terminal Project Studio I**

**ARCH 815**

Prereqs: MArch/MCRP dual degree candidate

Coreq: CRPL 990. Advanced architectural design. Initial investigation into the parameters and agenda leading to a proposal for the terminal studio project.

**Research Methods in Architecture and Interior Design**

**ARCH 885**

Crosslisted as IDES 885

Research methods employed by the diverse specializations within the disciplines of architecture and interior design. Methods which contribute to a theoretical and informational body of knowledge as well as those contributing directly to design application.

**Planting Design**

**HORT 467**

Crosslisted as ARCH 467/567/867, LARC 467

Prereqs:
Design processes, principles, and elements as applied to the use of native and ornamental plant materials. Aesthetic, functional, and micro-climatic arrangements of plant material in parks, on commercial property, on home grounds, along roadways, and in urban open spaces. Develop a palette of plants and graphics for designs.

### Courses for IDES (IDES)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 417/617/817</td>
<td><strong>Product Design</strong></td>
<td>Junior standing or permission.</td>
<td>3</td>
<td>Lecture 4</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 456/556/856</td>
<td><strong>Behavioral and Social Factors in Environmental Design</strong></td>
<td>Survey of theory, methods, research, and findings from the social and behavioral sciences as they relate to architectural design, interior design and regional and community planning. Application of principles to the development of architectural and interiors programs and designs and to the planning process.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 458/558/858</td>
<td><strong>The Changing Workplace</strong></td>
<td>Survey and integration of theory, methods, research and findings from the social, behavioral, and managerial sciences as they relate to the design of work environments. Factors effecting change in the contemporary workplace.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 481/581/881</td>
<td><strong>Women in Design</strong></td>
<td>Admission to the BSD program or permission.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ARCH 482/582/882</td>
<td><strong>Advanced Color Theory</strong></td>
<td></td>
<td>3</td>
<td>Lecture 4</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Admission to the third year in architecture or Interior Design Program; or permission.

Advanced color theories and their application to the Built environment.

### Research Methods in Architecture and Interior Design (ARCH 885)
**Crosslisted as IDES 885**

Research methods employed by the diverse specializations within the disciplines of architecture and interior design. Methods which contribute to a theoretical and informational body of knowledge as well as those contributing directly to design application.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**ACE Outcomes:** 5, 7

### Design in an Age of Digital Environments (IDES 426/826)

Prereqs:
Admission to the BSD program.

Digital environments and their implications for design. Types of digital environments: intelligent reality, real virtual reality, and neural reality. These environments have qualities which provide unique challenges for their design: intelligence, temporal sequencing, and interactivity. Alternative design processes for handling these special qualities.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom, Web

### History of Interiors and Designed Objects (IDES 445/845)

Prereqs:
Admission to the professional program in interior design or architecture.

History and development of interiors and furnishings from prehistoric times to the present day, emphasizing the eighteenth, nineteenth, and twentieth centuries. Interiors and furnishings focused on the West yet considered within a global context.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

### Interior Design Studio 3 (IDES 450/850)

Prereqs:
IDES 318 [Link](http://bulletin.unl.edu/courses/IDES/318) and 351 [Link](http://bulletin.unl.edu/courses/IDES/351).

This course is a prerequisite for IDES 451 [Link](http://bulletin.unl.edu/courses/IDES/451).

Advanced application of the design process with emphasis on complex residential and commercial problems, including systems design, and individual professional objectives.

**Credit Hours:** 5

**Course Format:** Studio 12

**Course Delivery:** Classroom

### Interior Design Studio 4 (IDES 451/851)

Prereqs:
IDES 450 [Link](http://bulletin.unl.edu/courses/IDES/450), prior or concurrent work experience in interior design or related field.

Design of multipurpose interior (contract and residential) spaces with complete drawings and specifications. Individual and team problems.

**Credit Hours:** 5

**Course Format:** Studio 12

**Course Delivery:** Classroom

**ACE Outcomes:** 10
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDES 460/860</td>
<td>Preservation and Conservation of Historic Interiors</td>
<td>IDES 340 <a href="http://bulletin.unl.edu/courses/IDES/340">Link</a></td>
<td>2</td>
<td>Lecture 2</td>
<td>Classroom</td>
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<tr>
<td>IDES 483/883</td>
<td>Domesticity and Power in the Colonial World</td>
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<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>IDES 484/884</td>
<td>Material Culture: The Social Life of Things</td>
<td></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>IDES 486/886</td>
<td>Evolving Issues in Interior Design</td>
<td>Admission to the BSD Program.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom, Web</td>
</tr>
<tr>
<td>IDES 491/891</td>
<td>Selected Topics in Interior Design</td>
<td></td>
<td>1-24</td>
<td>Lecture</td>
<td>Classroom</td>
</tr>
<tr>
<td>IDES 498/898</td>
<td>Problems in Interior Design</td>
<td></td>
<td>1-6</td>
<td>Independent Study</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
## Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Architecture).

**Program Director, Architecture:** Jeffrey Day, AIA  
**Program Director, Interior Design:** Betsy Gabb, FIDFC, IIDA  
**Graduate Committee:** Professor Hinchman (Chair), Professor Handa; Assistant Professor Olshavsky

Website: archweb.unl.edu

The Architecture Program in the College of Architecture offers three degrees: a professional degree, the Master of Architecture (M.Arch); a graduate degree, the Master of Science (MS); and a doctoral degree (PhD/EdD) specialization in architecture education. In addition, the Program offers joint graduate degrees with the Colleges of Business Administration (MBA) and Engineering (MEng) and internal to the College with Community and Regional Planning (MCRP).

### Master of Architecture Degree

The professional program in architecture is administered by the College of Architecture and is designed to educate highly skilled professional architects. The program features design studios and a range of professional electives in theory, technology, representation, cultural issues, and urban design. Each applicant, depending on previous academic training, professional practice experience and specific interests, works with a faculty adviser to establish a specific program of study suited to his or her interests and career objectives.

Two curricula of study are provided in the master of architecture program. The choice is dependent upon the applicant’s prior educational and professional experience.

- **Applicants holding a four-year bachelor of science in architectural studies or environmental design, or an equivalent baccalaureate degree granted by an accredited institution, normally complete a 54–credit hour professional program in two years (four academic semesters).**
- **Applicants with degrees from other fields are eligible to enter the professional program with deficiencies. These deficiencies are established by a departmental faculty committee on an individual basis after a review of the applicant’s transcripts and other pertinent materials. Students in this program will be required to complete 27 to 50 hours of selected undergraduate courses (a minimum of one additional year) prior to pursuing the course work of the professional program. Applicants with deficiencies exceeding 50 credit hours will not be admitted.**

**Curriculum.**

The Master of Architecture (M.Arch) program is designed to empower the student to develop a course of study to begin the process of defining their existence as a design professional. Through selections from option studies proposed by the faculty and the professional elective array offered by the faculty each student can customize their curriculum to support their emerging image of the architect they want to be. Further, students in the last year can propose, develop and design a project of their own choosing working one on one with a faculty mentor as a culminating experience of their graduate studies.

With the adviser’s approval, elective courses may be selected from other University departments at either the 800– or 900–course level. Half of the required hours must be earned at the University of Nebraska–Lincoln.

**Internships.**

The Architecture Program offers students in the professional program the opportunity to participate in a Summer Internship Program for academic credit. Students have secured internships with prominent national and international firms. The internship program is available to students who have completed the BSD program.
and will have at least one semester of study remaining after interning.

**International Studies Program.**
Professional program students are eligible to participate in international programs offered in London, England and Tianjin, China.

**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 program application.
- 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 application.

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 program 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 Architecture Program’s master of architecture professional program. The Graduate School application requires GRE scores to be submitted as a part of the application. Students interested in pursuing one of these options must include a letter of interest with their application materials.

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 adviser, 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 adviser and committee. Candidates for 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.

**Master of Science in Architecture**
The Master of Science is a research-based program for students who want to pursue such a career as teaching or research-based design. In addition to the specialization in Interior Design described below, students can pursue a variety of topics covered by the faculty expertise including healthcare, sustainable environment, educational facilities, digital fabrication, and history/theory. Those who seek a first professional degree in architecture or interior design should apply to our Master of Architecture or undergraduate Interior Design programs.

**Specialization Available for the Master of Science Degree:**

**Interior Design**

**Admission Requirements for the Master of Science.**
Minimum entrance requirements are:
- acceptance to the UNL Graduate Program,
- an undergraduate degree in architecture, interior design, or a related discipline,
- a B average or better in past academic programs, and
- a TOEFL score of 550 (paper) or 213 (computer), 79-80 (Internet) or higher for international students whose first language is not English.

The required submittals for the Master of Science are as follows:
- Graduate School Application ([http://www.unl.edu/gradstudies/](http://www.unl.edu/gradstudies/))
- $45 Application Fee
- Research Goals (Submitted on GAMES) - Please provide answers to the following questions.
  - Why do you want a master’s degree?
  - What are your research interests?
  - What are your academic goals?
  - Is there a faculty member with whom you would like to work?
- A Portfolio of Design Work. The Program Office will return portfolios only if a return envelope and postage are provided or if arrangement is made for pick-up at the Program Office. Please note that the PORTFOLIO submission must be sent to the College of Architecture directly at: UNL College of Architecture, Graduate Admissions Coordinator, 302 Architecture Hall, Lincoln, NE 68588–0105.
- Official Transcripts. All undergraduate and graduate transcripts are required.
- Letters of Recommendation. Applicants are required to submit three letters of recommendation using the instructions listed on GAMES.
- TOEFL Scores. Results from an English proficiency are required of all international student applicants. (A Bachelors degree from an accredited university in the United States, Canada or England replaces the TOEFL requirement.)
- Financial Certification. International Students only.
- GRE scores.

**Master of Science in Architecture Specialization in Interior Design**
The Specialization in Interior Design within the master of science degree in architecture is a scholarly research-based curriculum. This 36-credit-hour program of study is designed for those students who have successfully completed a CIDA accredited undergraduate degree in interior design or closely related field and are interested in approaching the design of the built environment as user-centered providing a basis for informed design decisions. It is understood that of prime importance in the design of the built environment is the satisfaction of the user’s physical, psycho-social, and spiritual needs and the protection of their health,
To fulfill the requirements of the Specialization in Interior Design, candidates must: a) maintain a 3.0 GPA, b) receive a grade of B or better in all courses counted toward the degree, c) pass the required cumulative examinations, d) pass an oral examination covering their area of preparation and thesis research, and e) complete the requirements for the thesis.

Distance Education Options
In addition, the Interior Design Program has launched a Distance Education portion to the Masters degree. For more information on the Distance Ed/MS-ID program, please click on the following link: [http://interiordesign.unl.edu/idesdistance/index.html](http://interiordesign.unl.edu/idesdistance/index.html). The Masters, therefore, can be completed partially, or in its entirety through distance education. Courses offered through distance education are only available when the same course is offered for ‘in residence’ students. Completing the Masters through distance education will take more than the two years for a typical resident student.

Doctorate in Educational Studies with a Specialization in Architecture Education

We are not accepting applications for the PhD program at this time.

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; b) administrative leaders of architecture programs in higher education; and c) leaders in design profession whose practice is informed by research. 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 the College of Education and Human Sciences.

Curriculum
The program of study offers broad objectives and specific experiences for each student. The common core of studies provides students with a multicultural perspective, a direct teaching experience, and an active research program as well as opportunities for working with community and professional leaders to explore contemporary architecture education problems. The program culminates with either a dissertation (PhD) or field study (EdD). Higher Education/Education Administration

Admission Requirements
The applicant must have an undergraduate degree in architecture or a related discipline and a research-related graduate degree. Those applicants who do not have a research-related graduate degree may be admitted to our Master of Science program instead. 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 representative members of the respective departments (Architecture and Educational Administration) will collectively administer the admissions process. The application shall include the following:

- College of Architecture Ph.D. Application.
- Graduate School Application – must be completed online.
- $50 Application Fee – payable by credit card online.
- Research Goals – Please provide answers to the following questions.
  - Why do you want a doctoral degree?
  - What are your research interests?
  - What are your academic goals?
  - Which faculty member would you like to work with?

1. A Portfolio of Design Work – The Department will return portfolios only if a return envelope with postage is provided or if arrangement is made for pick up at the Department office.
2. Official Transcripts – All undergraduate and graduate transcripts are required.
3. Letters of Recommendation – Applicants are required to submit three letters of recommendation.
4. TOEFL Scores – Results from this English proficiency exam of 550 or higher are required of all international student applicants. (A bachelors degree from an accredited university in the United States, Canada, or England replaces the TOEFL requirement.)
5.GRE – Applicants must have a GRE score sent to the Office of Graduate Studies.
6. Evidence of Scholarly Writing and Research Ability – Provide two examples of scholarly writing that demonstrates research ability.
7. Evidence of Experience with Diverse Cultures – Provide written description and/or documentation.

All qualified students are encouraged to apply. If you have any questions or need an application packet mailed to you, please e-mail the Admissions Coordinator at architecture2@unl.edu, or you may call the Programs Office at (402) 472–9280.

Each applicant will need to gain the agreement of a member of the Graduate Faculty 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.

Faculty
For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/framework/programs/Architecture).

- Allisma, Tom – 2006; Assistant Professor; BS 1998, MArch 2000 Nebraska (Lincoln)
- Bahe, Lindsey Ellsworth – 2005; Assistant Professor; BSD 2001, MArch 2003 Nebraska (Lincoln)
- Borner, William L. – 1972; Professor Emeritus and Registered Architect; BArch 1967 Western Reserve; MArch 1968 Michigan
- Cheon, Janghwan – 2009; Assistant Professor; MArch 2004 Columbia
- Day, J. L. – 2001; Assistant Professor and Registered Architect; AB 1988 Harvard; MArch 1995 California (Berkeley)
- Despang, Martin – 2005; Associate Professor, Architecture; Dipl Ing Architeckt 1994 Hanover (Germany)
- Drummond, Wayne – 2000; Dean, Professor; BArch 1968 Louisiana State; MArch 1969 Rice
- Duncan, Robert J. – 1976; Professor; BS Arch 1960 Kansas; MArch 1968 Iowa State
- Ertl, Ted A. – 1974; Associate Professor Emeritus and Registered Architect (AIA); BArch 1969, MArch 1975 Colorado
- Gabb, Betsy S. – 1986; Director Interior Design Program and Professor; BS 1970 Nebraska (Lincoln); MA 1972 Minnesota; EdD 1982 Nebraska (Lincoln)
- Handa, Rumiko – 1996; Professor and Registered Architect; BArch 1979 Tokyo; MArch 1983, PhD 1992 Pennsylvania
Art and Art History

Subject Areas

- Art History and Criticism (AHIS) (#AHIS)
- Art Theory and Practice (ARTP) (#ARTP)
- Ceramics (CERM) (#CERM)
- Drawing (DRAW) (#DRAW)
- Graphic Design and Illustration (GRPH) (#GRPH)
- Painting (PANT) (#PANT)
- Printmaking (PRNT) (#PRNT)
- Photography (PHOT) (#PHOT)
- Sculpture (SCLP) (#SCLP)
- Watercolor (WATC) (#WATC)

Courses for AHIS (AHIS)

**AHIS**

**411/811**

**Classical Architecture**

- **Prereqs:** 12 hrs in art history or related disciplines with permission.
- History and development of architectural orders and styles from ancient Greece and Italy.

**412/812**

**Greek Sculpture**

- **Prereqs:** 12 hrs in art history or related disciplines with permission.
- Greek sculpture from the Bronze Age through the Hellenistic periods. Stylistic evolution and classical themes as presented in individual freestanding and architectural sculpture. Techniques, materials, and uses of sculpture.

**413/813**

**Roman Painting**

- **Prereqs:** 12 hrs art history or in related disciplines with permission.
Gothic Painting and Prints

418/818

Prereqs:
12 hrs in art history, including AHIS 318 (http://bulletin.unl.edu/courses/AHIS/318), or in related disciplines with permission.

Style, iconography, history, and function of painting and prints from ca. 1150 to 1475 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.

The Italian Renaissance City

421/821

Prereqs:
12 hrs in art history, or in related disciplines with permission.

Exploration of the art and architecture of the Italian city in the late middle ages and Renaissance, with particular attention to civic projects and the role of art in defining the identity, and creating the "myths" of that city.

Northern Renaissance and Reformation Art

426/826

Prereqs:
12 hrs in art history, including AHIS 318 (http://bulletin.unl.edu/courses/AHIS/318) or 418 (http://bulletin.unl.edu/courses/AHIS/418), or in related disciplines with permission.

Art of the Renaissance and Reformation in Germany and the Netherlands. Stresses the influences of Italian Renaissance Art and the impact of the Protestant Reformation from ca. 1475 to 1575.

Italian Baroque Art

431/831

Prereqs:
12 hr in art history or in related disciplines with permission.

Painting, sculpture and architecture in Italy from the late sixteenth to the late seventeenth century.

Impressionism and Post-Impressionism

441/841

Prereqs:
12 hr 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 the avant-garde and the changing relationship of the artist to society.
### Art since 1945

**Prereqs:** 12 hrs in art history, including AHIS 102 (http://bulletin.unl.edu/courses/AHIS/102) and 246 (http://bulletin.unl.edu/courses/AHIS/246).

Art from 1945 to the present focusing on the development of the avant-garde, the transition from modernism to post-modernism, and the various art world institutions.

<table>
<thead>
<tr>
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<tbody>
<tr>
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</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

### Post-Modernism

**Prereqs:** 12 hrs in art history, including AHIS 102 (http://bulletin.unl.edu/courses/AHIS/102) or 246 (http://bulletin.unl.edu/courses/AHIS/246) and 446 (http://bulletin.unl.edu/courses/AHIS/446); or 12 hrs in related disciplines with permission.

Developments in art since 1970, exploring the various art styles and the relationship of the artists to their audience and to the institutions of the art world.

<table>
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</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

### 19th-Century American Art

**Prereqs:** 12 hrs art history including AHIS 251 (http://bulletin.unl.edu/courses/AHIS/251) or 341 (http://bulletin.unl.edu/courses/AHIS/341) or permission.

19th Century American art and material culture.

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</tr>
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<td>Course Delivery:</td>
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### American Art, 1893–1939

**Prereqs:** 12 hrs art history including AHIS 252 (http://bulletin.unl.edu/courses/AHIS/252) or 346 (http://bulletin.unl.edu/courses/AHIS/346) or permission.

Early 20th-century American art.

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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Colonial Art of Latin America

**Prereqs:** 12 hrs in the history of art or in related disciplines with permission.

Emphasizing New Spain, the Viceroyalty of Peru, and Brazil.

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</tbody>
</table>

### History of Photography

Emphasizing the history of photography from its inception to the present.

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<tr>
<th>Credit Hours:</th>
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<tbody>
<tr>
<td>Course Format:</td>
<td>Lecture</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</tbody>
</table>
Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom

Prereqs: Permission.

This course is a prerequisite for: [AHIS 472](http://bulletin.unl.edu/courses/AHIS/472)

Introduction to the history of still photography with major emphasis on its development as an art form.

**Photography Since 1960**

Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom

Prereqs: [AHIS 471](http://bulletin.unl.edu/courses/AHIS/471) or permission.

Movements in photography since 1960 with emphasis on the interaction with art theory and criticism.

**History of Prints**

Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom

Prereqs: 12 hrs in art history, including [AHIS 221](http://bulletin.unl.edu/courses/AHIS/221), [226](http://bulletin.unl.edu/courses/AHIS/226), or [231](http://bulletin.unl.edu/courses/AHIS/231), or in related disciplines with permission.

Introduction to the history of prints stressing printmaking techniques, i.e., woodcut, engraving, drypoint, etching, and the makers of prints during the first 300 years of printmaking in Europe. Baldung, Goltzius, Bruegel, and Rembrandt. Major technical developments, such as the introduction of printing colored woodcuts, are included.

**Directed Individual Reading**

Credit Hours: 1–6
Max credits per semester: 6
Max credits per degree: 24
Course Format: Independent Study
Course Delivery: Classroom

Prereqs: Permission of department chair.

**Independent Research in Art History**

Credit Hours: 1–6
Max credits per semester: 6
Max credits per degree: 24
Course Format: Independent Study
Course Delivery: Classroom

Prereqs: Permission of department chair.

**Internship in Art History**

Credit Hours: 1–6
Max credits per semester: 6
Max credits per degree: 24
Course Format: Independent Study
Course Delivery: Classroom

Prereqs: Permission of department chair.
**Advanced Archaeological Fieldwork**

**Prereqs:**
Senior standing and permission of department chair.

**Credit Hours:** 3

**Max credits per degree:** 12

**Course Format:** Field

**Course Delivery:** Classroom

**Prereqs:**
AHIS 286 or equivalent, and permission.

*Art and Art History majors must register for a letter grade.*

Further training in archaeological field research techniques.

**Pre-Columbian Art**

**Prereqs:**
Permission

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

Emphasizing the Mesoamerican and Andean traditions.

**Masters Thesis**

**Prereqs:**
Permission

**Credit Hours:** 1-10

**Max credits per degree:** 10

**Campus:**

**Course Delivery:** Classroom

History of the discipline, with an examination of the various art historical approaches. Development and refinement of specialized research skills appropriate to the field.

**Methodology and Historiography**

**Prereqs:**
Permission

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom
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<td>AHIS 911</td>
<td>Seminar in Classical Art and Archaeology</td>
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<td>AHIS 916</td>
<td>Seminar in Medieval Art</td>
<td>Permission</td>
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<td>Seminar in Northern Renaissance Art</td>
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<td>AHIS 931</td>
<td>Seminar in Baroque Art</td>
<td>Permission</td>
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<td>AHIS 946</td>
<td>Seminar in Modern Art</td>
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<td>Seminar in American Art</td>
<td>Permission</td>
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</table>
Seminar in Latin American Art

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs: Permission

Seminar in Latin American Art

Credit Hours: 1-3
Campus: 
Course Delivery: Classroom

Prereqs: Permission

Seminar in Art Historical Problems

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs: Permission

Introduction to the Interdisciplinary Study of the Middle Ages

Crosslisted as ENGL 988, HIST 988, MODL 988, MUSC 988

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.

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Introduction to the Interdisciplinary Study of the Renaissance

Crosslisted as ENGL 989, HIST 989, MODL 989, MUSC 989

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.

Credit Hours: 3
Campus: 
Course Delivery: Classroom

African Architecture

Crosslisted as ETHN 347, AHIS 366

Survey of the architectural traditions of the African continent, from prehistoric times to the present day. Buildings--famous and typical--theories, and approaches that are appropriate to the specific cultural environments.

Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom

Courses for ARTP (ARTP)
Japanese Visual Culture in Context

Crosslisted as ARTP 480/880

ADPR/ARTP 480 is a study abroad course that includes four days on campus in Lincoln and two and one-half weeks in Japan. ADPR/ARTP 480 is 'Letter grade only'.

Test and hone visual literacy skills in a foreign country. Observe, analyze, and interpret visual information without the aid of text in the native Japanese language. Sharpen perceptual and analytical skills through daily drawing, writing, and photography in Japan. Increase global awareness through analysis of an issue.

Advanced Problems in Studio

Prereqs: Permission

Problems in technique and expression on a tutorial basis.

Studio Thesis

Prereqs: Admission to masters degree program and permission of major adviser

Original work in studio, under direction.

Capstone Senior Exhibition

Prereqs: Senior standing and permission.

ARTP 99 (http://bulletin.unl.edu/courses/ARTP/99) must be taken during the final year.

Public exhibition to demonstrate artistic proficiency.

Problems in Studio Art

Prereqs: Permission

Problems in technique and expression. Advanced laboratory experience.

Colloquium

Prereqs: Permission

Problems and approaches relating to the practice of art, with special attention to media.
<table>
<thead>
<tr>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>CERM 434/834</td>
<td>Glaze Formulation</td>
<td>3</td>
<td>Studio 6</td>
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<tr>
<td>Practical and theoretical information to develop, mix, fire, and troubleshoot ceramic surfaces for pottery and sculpture.</td>
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<td>Kiln Design and Construction</td>
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<tr>
<td>Design and build a kiln for firing pottery or sculpture.</td>
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<td>Special Topics in Ceramics</td>
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<td>12</td>
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<tr>
<td>CERM 831</td>
<td>Ceramics I</td>
<td>1–6</td>
<td>24</td>
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<td></td>
<td>Graduated various ceramic media and concepts.</td>
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<tr>
<th>Course Code</th>
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<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CERM 832</td>
<td>Ceramics II</td>
<td>1–6</td>
<td>24</td>
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<tr>
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<tbody>
<tr>
<td>CERM 896</td>
<td>Advanced Problems in Ceramics</td>
<td>1–6</td>
<td>24</td>
<td>Studio</td>
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<td>Prereqs: Permission.</td>
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<tr>
<td>Problems in technique and expression.</td>
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</tbody>
</table>
**Studio Thesis in Ceramics**

**CERM 899**

Prereqs: Admission to master's degree program and permission of major adviser

Original work in studio.

**Ceramics III**

**CERM 931**

Prereqs: CERM *831–832

Graduate-level individual work in ceramics.

**Ceramics IV**

**CERM 932**

Prereqs: CERM *831–832

Graduate-level individual work in ceramics.

**Problems in Ceramics**

**CERM 996**

Prereqs: Permission

Problems in technique and expression. Advanced laboratory experience.

**Courses for DRAW (DRAW)**

**Drawing I**

**DRAW 801**

Graduate-level work in various drawing media and concepts.

**Drawing II**

**DRAW 802**

Graduate-level work in various drawing media and concepts.
Course Delivery: Classroom

**Drawing III**

Course Delivery: Classroom

[901](http://bulletin.unl.edu/courses/DRAW/901)

Graduate-level work in drawing, that can include the exploration of a variety of media and visual ideas.

**Drawing IV**

Course Delivery: Classroom

[902](http://bulletin.unl.edu/courses/DRAW/902)

Graduate-level work in drawing, that can include the exploration of a variety of media and visual ideas.

Courses for GRPH (GRPH)

**Graphic Design I**

Course Delivery: Classroom

[821](http://bulletin.unl.edu/courses/GRPH/821)

Graduate-level work in various graphic design media and concepts.

**Graphic Design II**

Course Delivery: Classroom

[822](http://bulletin.unl.edu/courses/GRPH/822)

Graduate-level work in various graphic design media and concepts.

**Advanced Graphic Design I**

Course Delivery: Classroom

[921](http://bulletin.unl.edu/courses/GRPH/921)

Prereqs: GRPH *821–822 or permission

Advanced graduate-level work in various graphic design media and concepts.

**Advanced Graphic Design II**

Course Delivery: Classroom

[922](http://bulletin.unl.edu/courses/GRPH/922)

Prereqs:
### Book Arts

**GRPH 925**

**Prereqs:**
[GRPH 825](http://bulletin.unl.edu/courses/GRPH/825) or permission

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<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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Continued graduate work in limited edition and/or unique book arts.

### Courses for PANT (PANT)

#### Painting I

**PANT 851**

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<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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Graduate-level work in various painting media and concepts.

#### Painting II

**PANT 852**

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<th>Credit Hours:</th>
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<td>Classroom</td>
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<td>Course Delivery:</td>
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Graduate-level work in various painting media and concepts.

#### Painting III

**PANT 951**

**Prereqs:**
PANT *851–852* or permission

<table>
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<tr>
<th>Credit Hours:</th>
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<td>Campus:</td>
<td>Classroom</td>
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<td>Course Delivery:</td>
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Graduate-level work in various painting media and concepts.

#### Painting IV

**PANT 952**

**Prereqs:**
PANT *851–852* or permission

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<tbody>
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<td>Course Delivery:</td>
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</tr>
<tr>
<td>PHOT 491/891</td>
<td>Special Topics in Photography</td>
</tr>
<tr>
<td>PHOT 861</td>
<td>Photography I</td>
</tr>
<tr>
<td>PHOT 862</td>
<td>Photography II</td>
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<tr>
<td>PHOT 896</td>
<td>Problems in Photography</td>
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<tr>
<td>PHOT 899</td>
<td>Studio Thesis in Photography</td>
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<tr>
<td>PHOT 961</td>
<td>Photography III</td>
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### Photography IV

**Course Code:** PHOT 962  
**Prereqs:** PHOT 961 or permission  
**Credit Hours:** 1-6  
**Max credits per degree:** 6  
**Course Delivery:** Classroom  
**Description:** Graduate-level work in various photographic media and concepts.

### Advanced Problems in Photography

**Course Code:** PHOT 996  
**Prereqs:** Permission  
**Credit Hours:** 1-24  
**Max credits per semester:** 10  
**Max credits per degree:** 24  
**Course Delivery:** Classroom  
**Description:** Problems in technique and expression. Advanced laboratory experience. Independent study.

### Courses for PRNT (PRNT)

#### Printmaking I

**Course Code:** PRNT 841  
**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Delivery:** Classroom  
**Description:** Graduate-level work in various printmaking media and concepts.

#### Printmaking II

**Course Code:** PRNT 842  
**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Delivery:** Classroom  
**Description:** Graduate-level work in various printmaking media and concepts.

#### Printmaking III

**Course Code:** PRNT 941  
**Prereqs:** PRNT 841–842  
**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Delivery:** Classroom  

#### Printmaking IV

**Course Code:** PRNT 942  
**Prereqs:** PRNT 841–842  
**Credit Hours:** 1–6  
**Max credits per degree:** 6
### Courses for SCLP (SCLP)

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<td>SCLP 811</td>
<td>Sculpture I</td>
<td><a href="http://bulletin.unl.edu/courses/SCLP/811">Link</a></td>
<td>1–6</td>
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<td>SCLP 812</td>
<td>Sculpture II</td>
<td><a href="http://bulletin.unl.edu/courses/SCLP/812">Link</a></td>
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<td>SCLP 911</td>
<td>Sculpture III</td>
<td><a href="http://bulletin.unl.edu/courses/SCLP/911">Link</a></td>
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<tr>
<td>SCLP 912</td>
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</table>

- **Prereqs:** SCLP 811-812 or permission
- Graduate-level work in various sculpture media and concepts.

### Courses for WATC (WATC)

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>URL</th>
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<tr>
<td>WATC 857</td>
<td>Watercolor I</td>
<td><a href="http://bulletin.unl.edu/courses/WATC/857">Link</a></td>
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</table>

- Graduate-level work in various watercolor media and concepts.
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary at [http://www.unl.edu/gradstudies/prospective/programs/Art](http://www.unl.edu/gradstudies/prospective/programs/Art)

Department Chair: Peter Pinnell, M.F.A.

Graduate Committee: Associate Professors Ingraham (Chair), Bolland, Fritz

The department offers graduate instruction leading to the degrees of Master of Arts (M.A.) in art history, and Master of Fine Arts (M.F.A.) in studio art. Candidates may pursue the MFA in the following areas of emphasis: ceramics, drawing, graphic design, painting, photography, printmaking, sculpture, new genres, or a combination of several of these disciplines.

Undergraduate Requirements

Candidates for the M.F.A. must have obtained the bachelors degree from an institution of recognized standing and preferably have completed undergraduate preparation substantially the equivalent of that required for the bachelor of fine arts degree at the University of Nebraska–Lincoln.

Applicants for the M.A. in art history will ordinarily have a bachelor’s degree with an art history major or minor. However, we recognize that M.A. applicants may come from a wide variety of backgrounds, and we are willing to tailor the program to meet the individual needs of the applicant. Those without a demonstrated background in art history may be advised to take undergraduate courses in the department prior to admission to the program or concurrent with their M.A. studies (these classes will not count toward M.A. program requirements). Regardless of an applicant’s undergraduate major, admission to the M.A. program assumes a minimum of a B average in undergraduate work.

Master of Arts in Art History Requirements

The M.A. program requires a minimum of 30 hours of advanced study, balanced between coursework designed to promote coverage of the field, cross-disciplinary explorations, and focused research. M.A. candidates must pass a minimum of 30 credit hours, pass a written comprehensive exam, and write a thesis, on which there will be an oral exam. Competency in a modern foreign language is also required. Applicants for the M.A. must apply for special permission to pursue a non-thesis option.

Master of Fine Arts Requirements

The M.F.A. 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.
Faculty
For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Art).

Retrieved from "[http://bulletin.unl.edu/graduate/Art_and_Art_History](http://bulletin.unl.edu/graduate/Art_and_Art_History)"

## Biochemistry

### Courses for BIOC (BIOC)

<table>
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<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>AGRO 810</td>
<td>Plant Molecular Biology</td>
<td>AGRO 315 (AGRO/315) or BIOS 206 (BIOS/206)</td>
<td>Molecular genetic basis of biological function in higher plants. Genome organization, gene structure and function, regulation of gene expression, recombinant DNA, and genetic engineering principles. Material taken primarily from current literature.</td>
</tr>
<tr>
<td>AGRO 818</td>
<td>Agricultural Biochemistry</td>
<td>Undergraduate major in life sciences or related area, and a course in biochemistry</td>
<td>A Web-based course. Biochemical underpinnings of agricultural production and processing systems. Agricultural biotechnology; bioenergetics; kinetics and enzyme regulation; interaction of biomolecules with light, photosynthesis and the balance between anabolism and catabolism in microbes, plants and animals.</td>
</tr>
<tr>
<td>ASCI 949</td>
<td>Biochemistry of Nutrition</td>
<td>BIOS 832 (BIOS/832) or &quot;839, or permission</td>
<td>Offered odd-numbered calendar years. Interrelationships of nutrients, nutritional state and metabolic processes. Energy metabolism, integration of nutrition and metabolism and nutritional regulation of gene function.</td>
</tr>
<tr>
<td>BIOC 431/831</td>
<td>Biomolecules and Metabolism</td>
<td>CHEM 252 (CHEM/252) or 262 (CHEM/262), BIOS 102 (BIOS/102)</td>
<td>This course is a prerequisite for BIOC 432 (BIOC/432), BIOC 433 (BIOC/433), BIOS 950.</td>
</tr>
</tbody>
</table>
First course of a two-semester, comprehensive biochemistry course sequence.

Structure and function of proteins, nucleic acids, carbohydrates and lipids; nature of enzymes; major metabolic pathways; and biochemical energy production.

**BIOC 432/832 Gene Expression and Replication**
Crosslisted as BIOS 432, CHEM 432/832

**Prereqs:**
[BIOC 431](http://bulletin.unl.edu/courses/BIOC/431) and [BIOC 831](http://bulletin.unl.edu/courses/BIOC/831).

Continuation of [BIOC 431](http://bulletin.unl.edu/courses/BIOC/431) and [BIOC 831](http://bulletin.unl.edu/courses/BIOC/831). Structural and biochemical aspects of DNA replication and gene expression, and biotechnology.

**BIOC 433/833 Biochemistry Laboratory**
Crosslisted as BIOS 433/833, CHEM 433/833

**Prereqs:**
[BIOC 431](http://bulletin.unl.edu/courses/BIOC/431) and [BIOC 831](http://bulletin.unl.edu/courses/BIOC/831) or concurrent enrollment.

Introduction to techniques used in biochemical and biotechnology research, including measurement of pH, spectroscopy, analysis of enzymes, chromatography, fractionation of macromolecules, electrophoresis, and centrifugation.

**BIOC 434/834 Plant Biochemistry**
Crosslisted as BIOS 434/834, CHEM 434/834, AGRO 434/834

**Prereqs:**
[BIOC/BIOS/CHEM 431 /831](http://bulletin.unl.edu/courses/BIOC/431) or concurrent enrollment.

Offered every other year beginning spring 2007.

Biochemical metabolism unique to plants. Relationships of topics previously acquired in general biochemistry to biochemical processes unique to plants. Biochemical mechanisms behind physiological processes discussed in plant or crop physiology.

**BIOC 437/837 Research Techniques in Biochemistry**
Crosslisted as BIOS 437/837

**Prereqs:**
[BIOC/BIOS/CHEM 433 /833](http://bulletin.unl.edu/courses/BIOC/433) or permission.

Methods approach to systems biology analysis. Molecular identification and quantification employing techniques such as mass spectrometry, chromatography, electrophoretic fractionation, transcriptomics, proteomics and metabolomics. Data and pathway analysis with computational methods.

**BIOC 486/886 Advanced Topics in Biophysical Chemistry**
Crosslisted as BIOS 486/886, CHEM 486/886

**Prereqs:**
[BIOC 486/886](http://bulletin.unl.edu/courses/BIOC/486) and [CHEM 486/886](http://bulletin.unl.edu/courses/CHEM/486).
### Applications of thermodynamics to biochemical phenomena, optical properties of proteins and polynucleotides, and kinetics of rapid reactions.

**Physical Basis of Macromolecular Function**

![Crosslisted as CHEM 836](http://bulletin.unl.edu/courses/BIOC/836)

- **Course Format:** Lecture 3
- **Course Delivery:** Classroom
- **Credit Hours:** 3

Introduction to the theory and practice of biophysical characterization of macromolecules. The course will be based on primary research literature, although a supporting text will be used for in depth discussion of the methods.

**Survey of Biochemistry**

![Crosslisted as BIOS 839, CHEM 839](http://bulletin.unl.edu/courses/BIOC/839)

- **Prereqs:** Permission
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom
- **Credit Hours:** 3

Comprehensive survey of biochemistry for incoming graduate students. Topics include those in BIOC 831 and 832, but not all topics discussed in lecture periods. Depth enhanced by assigned readings.

**Redox Biochemistry**

![Crosslisted as CHEM 848](http://bulletin.unl.edu/courses/BIOC/848)

- **Prereqs:** 3 hrs BIOC and 3 hrs inorganic chemistry
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom
- **Credit Hours:** 3

Redox (oxidation and reduction)-based biochemical processes (energy generation, oxygen transfer, enzyme catalysis, signaling, gene regulation, and diseases). Recent progress in these areas. Roles of metals in biochemical reactions, metal homeostasis, and biosynthesis of metal cofactors and metal sites. Biochemistry and pathophysiology of redoxactive species and radicals. Antioxidant molecules and enzymes.

### Chemistry for Secondary School Classrooms

![Crosslisted as BIOS 883, CHEM 869, TEAC 869](http://bulletin.unl.edu/courses/BIOC/869)

- **Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences.**
  - Course taught via World Wide Web.
  - Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe–experiments, simulations, at-home experiments, teaching materials, and industrial applications related to the title description.
  - A. Structure and Properties of Matter: Water and Solutions (1 cr)
  - B. Structure and Properties of Matter: Periodicity (1 cr)
  - D. Structure and Properties of Matter: Bonding and Structure (1 cr)
  - E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
  - J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
  - 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)
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<th>Course Title</th>
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<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>BIOC 898</td>
<td>Research in Biochemistry</td>
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<td>1–6</td>
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<td>BIOC 899</td>
<td>Masters Thesis</td>
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<tr>
<td>BIOC 992K</td>
<td>Seminar in Biological Chemistry</td>
<td>Prereqs: BIOC 832 or 839 and permission</td>
<td>1–2</td>
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<td>Classroom</td>
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<tr>
<td>BIOC 998</td>
<td>Advanced Topics in Biochemistry</td>
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<tr>
<td>BIOC 999</td>
<td>Doctoral Dissertation</td>
<td>Prereqs: Admission to doctoral degree program and permission of supervisory committee chair</td>
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</table>
**Proteins**

Crosslisted as BIOS 932, BIOC 932

Prereq:
BIOC/BIOS/CHEM 832 (http://bulletin.unl.edu/courses/CHEM/832) or BIOC/BIOS/CHEM *839

| Protein structure and function.

**Enzymes**

Crosslisted as BIOS 933, BIOC 933

Prereq:
BIOC/BIOS/CHEM 432 (http://bulletin.unl.edu/courses/CHEM/432)/832 (http://bulletin.unl.edu/courses/CHEM/832), or BIOC/BIOS/CHEM *839

| Kinetics regulation and reaction mechanisms of enzymes.

**Genome Dynamics and Gene Expression**

Crosslisted as BIOS 934, BIOC 934

Prereq:
BIOC/BIOS/CHEM 832 (http://bulletin.unl.edu/courses/CHEM/832) or permission


**Metabolic Function and Dysfunction**

Crosslisted as BIOS 935, BIOC 935

Prereq:
BIOC/CHEM/BIOS 432 (http://bulletin.unl.edu/courses/BIOS/432)/832 (http://bulletin.unl.edu/courses/BIOS/832) and permission

| BIOC/CHEM/BIOS 935 (http://bulletin.unl.edu/courses/BIOS/935) is offered even-numbered calendar years.

| Current metabolic research at the bioenergetic, metabolomic, and molecular level. The normal metabolic processes that go awry in cancer, obesity, and oxidative stress.

**Computational Biology**

Crosslisted as BIOC 442/842

Prereq:
Any introductory course in biology, or genetics, or statistics.

| Databases, high-throughput biology, literature mining, gene expression, next-generation sequencing, proteomics, metabolomics, systems biology, and biological networks.

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**Description**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Biochemistry).
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 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.

The faculty of the Center for Biological Chemistry is made up of faculty in Nutrition and Health Sciences, Agronomy and Horticulture, Biological Sciences, Chemistry, and Veterinary and Biomedical 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 Examination are required for a student to be considered for admission. The advanced Graduate Record Examination 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, N200 Beadle Center, City Campus. Also visit the biochemistry Web site at biochem.unl.edu.

**Master of Science Degree.**

All students must take BIOC 836, 932, 933, 934, 935, and at least 4 credits of biochemistry seminar (BIOC 992K). Other course requirements are arranged in consultation with the Examining Committee. Students under Option I (advance 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 publicized seminar open to faculty and students at which the work comprising the MS 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. Course requirements are arranged in consultation with the student’s Supervisory Committee but should include credit hours in BIOC 836, 932, 933, 934, 935 and 8 credits in biochemistry seminar (BIOC 992K).

Students must pass a comprehensive examination consisting of written and oral components. This examination will include preparation and defense of an original research proposal and the student’s Supervisory Committee is responsible for administering the exam.

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.

**Minor in Biochemistry.**

To fulfill the requirements for a minor in biochemistry, graduate students outside the Center for Biological Chemistry seeking a masters degree are required to complete at least 9 credits in BIOC–listed or cross–listed courses at the 800 or 900 level, with at least 3 credits at the 900 level. Students seeking a doctoral degree must complete at least 15 credits in BIOC–listed or cross–listed courses at the 800 or 900 level with at least 6 credits at the 900 level (for the doctoral degree).

**Faculty**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Biochemistry).

Retrieved from ["http://bulletin.unl.edu/graduate/Biochemistry"](http://bulletin.unl.edu/graduate/Biochemistry)
Soil from a microbe's perspective—growth, activity and survival strategies; principles governing methods to study microorganisms and biochemical processes in soil; mechanisms controlling organic matter cycling and stabilization with reference to C, N, S, and P; microbial interactions with plants and animals; and agronomic and environmental applications of soil microorganisms.

**Plant–Water Relations**

Crosslisted as BIOS 817, NRES 807

**Prereqs:**
AGRO 325 or equivalent; MATH 106 recommended

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 of the plant. Stomata 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 several plant–environment systems.

**Plant Molecular Biology**

Crosslisted as BIOS 810, BIOC 810, HORT 810

**Prereqs:**
AGRO 315 or BIOS 206; BIOC 831 or permission

Molecular genetic basis of biological function in higher plants. Genome organization, gene structure and function, regulation of gene expression, recombinant DNA, and genetic engineering principles. Material taken primarily from current literature.

**Genetics of Host–Parasite Interaction**

Crosslisted as BIOS 963, HORT 963

**Prereqs:**
BIOS 206 or 820; BIOS 312 or 864A or 864B; and BIOC 837. Offered even-numbered calendar years.

**Human Growth and Development**

Crosslisted as BIOS 448/848

**Prereqs:**
ANTH 242 and 242L, or BIOS 101 and 101L

Biological diversity from an evolutionary perspective. The history of the study of human physical growth and biological principles of growth. Genetic, epigenetic and hormonal effects on human and other mammal growth patterns, and environmental factors that influence growth. Effects of nutrition, disease, socio-economic status, pollution, etc. Unique features of
human growth in its various stages. How anthropologists interpret variation in growth patterns among human populations and the possible adaptive significance of this variation.

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<th>ASCI</th>
<th>Endocrinology</th>
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<td>442/842</td>
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<tr>
<td><strong>Prereqs:</strong></td>
<td>A course in vertebrate physiology and/or biochemistry.</td>
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<tr>
<td></td>
<td>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.</td>
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<th>Biochemistry of Nutrition</th>
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<td>949</td>
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<td>431/831</td>
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<td><strong>Prereqs:</strong></td>
<td>CHEM 252 (<a href="http://bulletin.unl.edu/courses/CHEM/252">http://bulletin.unl.edu/courses/CHEM/252</a>) or 262 (<a href="http://bulletin.unl.edu/courses/CHEM/262">http://bulletin.unl.edu/courses/CHEM/262</a>), BIOS 102 (<a href="http://bulletin.unl.edu/courses/BIOS/102">http://bulletin.unl.edu/courses/BIOS/102</a>) recommended.</td>
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<td>First course of a two-semester, comprehensive biochemistry course sequence.</td>
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<td>Structure and function of proteins, nucleic acids, carbohydrates and lipids; nature of enzymes; major metabolic pathways; and biochemical energy production.</td>
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<th>Gene Expression and Replication</th>
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<td>Crosslisted as BIOS 432, CHEM 432/832</td>
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<td><strong>Prereqs:</strong></td>
<td>BIOS 431 (<a href="http://bulletin.unl.edu/courses/BIOC/431">http://bulletin.unl.edu/courses/BIOC/431</a>), BIOS 831 (<a href="http://bulletin.unl.edu/courses/BIOS/831">http://bulletin.unl.edu/courses/BIOS/831</a>).</td>
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<td>Continuation of BIOS 431 (<a href="http://bulletin.unl.edu/courses/BIOC/431">http://bulletin.unl.edu/courses/BIOC/431</a>), Structural and biochemical aspects of DNA replication and gene expression, and biotechnology.</td>
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<th>Biochemistry Laboratory</th>
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<td><strong>Prereqs:</strong></td>
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<td>Credit Hours: 2</td>
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</table>
Introduction to techniques used in biochemical and biotechnology research, including measurement of pH, spectroscopy, analysis of enzymes, chromatography, fractionation of macromolecules, electrophoresis, and centrifugation.

**Plant Biochemistry**  
Crosslisted as BIOS 434/834, CHEM 434/834, AGRO 434/834

**Prereqs:**  
BIOC/BIOS/CHM 431 (http://bulletin.unl.edu/courses/BIOC/431) or 831  
(http://bulletin.unl.edu/courses/BIOC/831).

Offered every other year beginning spring 2007.

Biochemical metabolism unique to plants. Relationships of topics previously acquired in general biochemistry to biochemical processes unique to plants. Biochemical mechanisms behind physiological processes discussed in plant or crop physiology.

**Research Techniques in Biochemistry**  
Crosslisted as BIOS 437/837

**Prereqs:**  
BIOC/BIOS/CHM 433 (http://bulletin.unl.edu/courses/BIOC/433) or permission.

Methods approach to systems biology analysis. Molecular identification and quantification employing techniques such as mass spectrometry, chromatography, electrophoretic fractionation, transcriptomics, proteomics and metabolomics. Data and pathway analysis with computational methods.

**Advanced Topics in Biophysical Chemistry**  
Crosslisted as BIOS 486/886, CHEM 486/886

**Prereqs:**  
CHEM 471 (http://bulletin.unl.edu/courses/CHM/471) or 871  
(http://bulletin.unl.edu/courses/CHM/871) or 481  
(http://bulletin.unl.edu/courses/CHM/481) or 881  
(http://bulletin.unl.edu/courses/CHM/881).

Applications of thermodynamics to biochemical phenomena, optical properties of proteins and polynucleotides, and kinetics of rapid reactions.

**Survey of Biochemistry**  
Crosslisted as BIOS 839, CHEM 839

**Prereqs:**  
Permission

Comprehensive survey of biochemistry for incoming graduate students. Topics include those in BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831) and 832 (http://bulletin.unl.edu/courses/BIOC/832), but not all topics discussed in lecture periods. Depth enhanced by assigned readings.

**Chemistry for Secondary School Classrooms**  
Crosslisted as BIOS 883, CHEM 869, TEAC 869

**Prereqs:**  
Permission

Comprehensive survey of biochemistry for incoming graduate students. Topics include those in BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831) and 832 (http://bulletin.unl.edu/courses/BIOC/832), but not all topics discussed in lecture periods. Depth enhanced by assigned readings.
Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes:

content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments, teaching materials, and industrial applications related to the title description.

A. Structure and Properties of Matter: Water and Solutions (1 cr)
B. Structure and Properties of Matter: Periodicity (1 cr)
D. Structure and Properties of Matter: Bonding and Structure (1 cr)
E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
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: Acids and Bases (1 cr)
T. Chemical Reactions: Kinetics (1 cr)
U. Chemical Reactions: Oxidation, Reduction and Electrochemistry (1 cr)
V. Equilibrium: Unifying Theme (1 cr)
W. Conservation of Energy and the Increase in Disorder: Thermodynamics (1 cr)
Y. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
Z. Structure of Atoms: Nuclear Chemistry (1 cr)

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**BIOS 402/802 Cancer Biology**

**Prereqs:**
Twelve credit hours in biological sciences, preferable from BIOS102, 206, 213, 214, 103, or equivalents.

Principles of cancer genetics, cancer prevention, and new methods for diagnosis and therapy. Fundamentals of the cell and molecular events that lead to human cancer.

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**BIOS 407/807 Biology of Cells and Organelles**

**Prereqs:**
[BIOS 102](http://bulletin.unl.edu/courses/BIOS/102) and [206](http://bulletin.unl.edu/courses/BIOS/206).

Regulation and timing of macromolecular synthesis during the cell cycle; the genetic autonomy of mitochondria and chloroplasts.

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**BIOS 412/812 Human Genetics**

**Prereqs:**
[BIOS 101](http://bulletin.unl.edu/courses/BIOS/101) and [101L](http://bulletin.unl.edu/courses/BIOS/101L), or [102](http://bulletin.unl.edu/courses/BIOS/102); [BIOS 206](http://bulletin.unl.edu/courses/BIOS/206).

Three semesters high school algebra or equivalent recommended.

Genetic basis of human variation, with emphasis on methods of applying genetic principles to humankind. Genetic ratios in pooled data; population and quantitative genetics; consanguinity; polygenic inheritance; blood types; sex linkage; linkage and crossing over; sex determination; visible
Developmental Biology

**BIOS 415/815**

**Prereqs:**
12 hrs BIOS.

Survey of topics in developmental biology, both animal and plant development.

Advanced Genetics

**BIOS 418/818**

**Prereqs:**
12 hrs BIOS including BIOS 206 or equivalent.

In-depth study of the principles and methodology of genetics, with emphasis on Drosophila: multiple alleles and complex loci, linkage and recombination, chromosome rearrangements, fine structure analysis, sex determination, recombinant DNA, and gene function in development.

Molecular Genetics

**BIOS 420/820** Crosslisted as VBMS 820

**Prereqs:**
12 hrs BIOS including BIOS 206 or equivalent.

Molecular basis of genetics. Gene structure and regulation, transposable elements, chromosome structure, DNA replication, and repair mechanisms and recombination.

Comparative Physiology

**BIOS 422/822**

**Prereqs:**
BIOS 213 or BIOS 423 recommended.

Comprehensive survey of comparative physiology with emphasis on the diversity of adaptations in basic physiological systems and the effects of environmental parameters upon such systems. Comparative physiology of osmoregulation, temperature regulation, metabolism, muscle, central nervous function, and sensory function.

Plant Biotechnology

**BIOS 425/825**

**Prereqs:**
BIOS 109 and 206.

Introduction to the use of plants for basic and applied purposes by
deliberate manipulation of their genomes; techniques in plant genetic 
engineering; manipulations of plant development and metabolism; 
engineering pest, disease, and stress resistance; plants as bioreactors; and 
environmental and social impacts of plant biotechnology.

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<td>Practical Bioinformatics Laboratory</td>
<td><a href="http://bulletin.unl.edu/courses/BIOS/427">Link</a></td>
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<td>BIOS 428/828</td>
<td>Perl Programming for Biological Applications</td>
<td><a href="http://bulletin.unl.edu/courses/BIOS/428">Link</a></td>
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<td>BIOS 429/829</td>
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<td>BIOS 440/840</td>
<td>Microbial Physiology</td>
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<td>BIOS 443/843</td>
<td>Immunology</td>
<td><a href="http://bulletin.unl.edu/courses/BIOS/443">Link</a></td>
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</tbody>
</table>

**Practical Bioinformatics Laboratory**

Prerequisites:
- BIOS 206 or equivalent.

No computer programming skill is required.

Basic knowledge and skills needed for general bioinformatics, genomics and 
proteomics analyses. Various computational analyses including database 
search, sequence alignment, phylogenetic reconstruction, gene 
prediction/mining, microarray data analyses and protein structure analyses.

**Perl Programming for Biological Applications**

Prerequisites:
- 12 hrs BIOS.

Computer programming, using Perl, as applied to biological sciences, 
bioinformatics, computational biology, and genomics.

**Phylogenetic Biology**

Prerequisites:
- BIOS 102 or 206 or 103 or 207 or parallel; or equivalent.

Principles of phylogenetic inference and emphasis on the application of 
phylogenetic hypotheses in biology and the biomedical sciences. How 
inferences derived from phylogenetic trees can be applied in different areas 
of biological investigation including systematics, biogeography, conservation 
biology, molecular evolution, genome structure, epidemiology, population 
biology, ecology, character evolution, behavior, and macroevolution.

**Microbial Physiology**

Prerequisites:
- BIOS 312 and either 313 or 314, or permission.

Molecular approaches to the study of prokaryotic cell structure and 
physiology, including growth, cell division, metabolism, and alternative 
microbial life styles.

**Immunology**

Prerequisites:
- BIOS 206 and one semester
**Organic Chemistry.**

BIOS 102 is recommended.  

Fundamental consideration of cellular and humoral mechanisms of immunity, the structure and function of immunoglobulins, antigen–antibody interactions, hypersensitivity, transplantation and tumor immunity, immune and autoimmune disorders.

**BIOS 444/844 Geomicrobiology**  
Crosslisted as GEOL 444/844

**Prereqs:**  
3 hours biological sciences and 3 hours chemistry.

Lectures and discussions of primary literature regarding microorganisms and their role transforming Earth through geologic time.

**BIOS 452/852 Field Epidemiology**  
Crosslisted as BIOS 452

**Prereqs:**  
12 hours biological sciences.

Principles of epidemiology and the role in modern medicine. Combination of theory and practice with living populations.

**BIOS 454/854 Ecological Interactions**  
Crosslisted as NRES 454/854

**Prereqs:**  
BIOS 102, 103, and either BIOS 207 or BIOS 220, or equivalent courses.

Nature and characteristics of populations and communities. Interactions within and between populations in community structure and dynamics. Direct and indirect interactions and ecological processes, competition, predation, parasitism, herbivory, and pollination. Structure, functioning and persistence of natural communities, foodweb dynamics, succession, and biodiversity.

**BIOS 455/855 Great Plains Flora**  
Crosslisted as BIOS 455

**Prereqs:**  
12 hrs biological sciences or permission.  
May also be offered at Cedar Point Biological Station.

Plant identification. Field study of the flora in various habitats. Field trips include grassland and woodland vegetation of this region.

**BIOS 456/856 Mathematical Models in Biology**  
Crosslisted as NRES 456/856

**Prereqs:**  
Junior standing; major in the biological sciences; MATH 106
Biological systems, from molecules to ecosystems, are analyzed using mathematical techniques. Strengths and weaknesses of mathematical approaches to biological questions. Brief review of college level math; introduction to modeling; oscillating systems in biology; randomness in biology; review of historically important and currently popular models in biology.

**Ecosystem Ecology**  
**BIOS 457/857**  
Crosslisted as **GEOL 457/857**  
**Prereqs:**  
BIOS 207 or 220; CHEM 110; and MATH 107.  
Processes controlling the cycling of energy and elements in ecosystems and how both plant and animal species influence them. Human-influenced global and local changes that alter these cycles and ecosystem functioning.

**Animal Behavior**  
**BIOS 462/862**  
**Prereqs:**  
12 hrs BIOS.  
Introduction to animal behavior stressing the ethological approach. Anatomical and physiological bases of behavior, ontogenetic and phylogenetic observations, and the relations of animal behavior studies to genetics, ecology, taxonomy, and evolution. Assigned reading.

**Field Animal Behavior**  
**BIOS 468/868**  
**Prereqs:**  
12 hrs biological sciences or permission.  
Offered in the summer at Cedar Point Biological Station. Requires extensive field work and independent research project.  
Behavior of animals. Stresses methods for testing evolutionary hypotheses under field conditions with emphasis on foraging behavior, animal communication, and animal social systems.

**Prairie Ecology**  
**BIOS 470/870**  
**Prereqs:**  
BIOS 207 or equivalent.  
Extensive field work is required.  
Structure, function, and distribution of communities. Interaction of different species with their biotic and abiotic environments.

**Plant Taxonomy**  
**BIOS 471/871**
Prerequisites:
12 hrs biological sciences.

Principles of plant classification, with emphasis on taxonomic procedures, nomenclatural rules, and plant identification. Lab work on taxonomic analysis and plant identification.

BIOS 473/873

Freshwater Algae

Prerequisites:
12 hrs biological sciences.

May also be offered at Cedar Point Biological Station.

Classification, identification, and life histories of algae from freshwater, soil, and air.

BIOS 475/875

Ornithology

Prerequisites:
12 hrs BIOS.

This course is a prerequisite for BIOS 475L (http://bulletin.unl.edu/courses/BIOS/475L).

Optional lab (BIOS 475L (http://bulletin.unl.edu/courses/BIOS/475L)/875L (http://bulletin.unl.edu/courses/BIOS/875L)) by arrangement. May also be offered at Cedar Point Biological Station.

Review of avian biology. Functional morphology, evolutionary relationships and breeding biology.

BIOS 475L/875L

Ornithology Lab

Prerequisites:
Parallel BIOS 475 (http://bulletin.unl.edu/courses/BIOS/475)/875 (http://bulletin.unl.edu/courses/BIOS/875) and permission.

BIOS 477/877

Bioinformatics and Molecular Evolution

Prerequisites:
BIOS 101 (http://bulletin.unl.edu/courses/BIOS/101) and 101L (http://bulletin.unl.edu/courses/BIOS/101L), or 102 (http://bulletin.unl.edu/courses/BIOS/102); BIOS 206 (http://bulletin.unl.edu/courses/BIOS/206) or parallel or CHEM 251 (http://bulletin.unl.edu/courses/CHEM/251) or BIOL 221 (http://bulletin.unl.edu/courses/BIOL/221), or equivalent.

Basic statistics recommended.

Pairwise and multiple alignments, sequence similarity and domain search, distance estimation, phylogenetic methods, gene mining, protein classification and structure. Algorithms used in bioinformatics as well as fundamental concepts of molecular evolution that underlie various bioinformatics methods.

BIOS 478

Plant Anatomy

Prerequisites:

Basic statistics recommended.

Pairwise and multiple alignments, sequence similarity and domain search, distance estimation, phylogenetic methods, gene mining, protein classification and structure. Algorithms used in bioinformatics as well as fundamental concepts of molecular evolution that underlie various bioinformatics methods.
Field Parasitology

- **Prereqs:**
  - 12 hrs biological sciences.
  - Offered summers only at Cedar Point Biological Station.

Animal host-parasite relationships, epizootiology, ecology, host distribution, classification, and life cycle stages of animal parasites.

Natural History of the Invertebrates

- **Prereqs:**
  - 12 hrs biological sciences.
  - Offered summers only at Cedar Point Biological Station.

Field course in invertebrate community relations stressing on-site observation of community components, natural history, and interactions.

Ichthyology

- **Prereqs:**
  - 12 hrs biological sciences.
  - May also be offered at Cedar Point Biological Station.

Fishes, their taxonomy, physiology, behavior, and ecology. Dynamics of fish stocks and factors regulating their production.

Special Topics in Biological Sciences

- **Prereqs:**
  - 12 hrs biological sciences and permission.
  - Topics vary by term.

Topics vary by term.

Independent Research in Biological Sciences

- **Prereqs:**
  - 12 hrs BIOS and permission.

Four credit hours may be counted toward the undergraduate BIOS major.
Before registering, arrangements must be made with a faculty member in BIOS to reach an agreement on the scope and to determine the amount of credit for the project.

Independent study and laboratory or field investigation of a specific problem.

**PRINCIPLES OF EVOLUTION (BIOS 803)**

- **Description:** Micro- and macroevolutionary patterns and processes. Population genetics, evolutionary ecology, speciation, phylogenetic systematics, and biogeographic patterns of extant and extinct taxa.

**PRINCIPLES OF BEHAVIORAL ECOLOGY (BIOS 804)**

- **Description:** Introduction to the ecology and evolution of animal behavior.

**PRINCIPLES OF ECOLOGY (BIOS 805)**

- **Description:** Ecological principles at the populations, community, and ecosystem levels. Population growth, meta–population dynamics, competitive and predatory interactions, temporal and spatial variation in community food webs, tropic cascades, patterns and mechanisms underlying species diversity, ecosystem processes, nutrient cycling, and global change.

**PROFESSIONALISM (BIOS 809)**

- **Description:** P/N only. Discussion of skills needed to be a professional scientist including: writing, submitting, editing, and revision of journal articles and grant proposals; preparation or oral and poster presentations; and ethical issues in research and teaching.

**PLANT TISSUE CULTURE (BIOS 811)**

- **Prerequisites:** BIOS 109, AGRO 325, CHEM 109, 110
- **Description:** Survey of techniques used in plant cell, tissue and organ culture, including current research. Laboratory emphasizes practical manipulation of plant cells, tissues, and organs, including examples from woody and herbaceous plant species.
### BIOS 816 Computer-Aided Sequence Analysis Primer

**Crosslisted as VBM 818**

**Prereqs:**
- BIOS 831 (http://bulletin.unl.edu/courses/BIOS/816) or BIOS 801 (http://bulletin.unl.edu/courses/BIOS/801) or 820 (http://bulletin.unl.edu/courses/BIOS/820)

 Introductory course in biological sequence display, analysis and manipulation with computers. Applied rather than theoretical aspects of different programs are emphasized providing skills to satisfy the analysis demands of molecular biology research. Students completing this course will be able to search, display and analyze the biological information content of macromolecules.

**Credit Hours:** 2
**Campus:**
**Course Delivery:** Classroom

### BIOS 823 Advanced Animal Physiology

**Prereqs:**
- BIOS 213 (http://bulletin.unl.edu/courses/BIOS/213) or equivalent and one semester organic chemistry

 More detailed mechanisms operating in selected physiology systems of man and other animals. Neural, cardiovascular, renal, and endocrine systems. Additional areas examined if time permits.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:**
**Course Delivery:** Classroom

### BIOS 835 Animal Biochemistry

**Crosslisted as VBM 835**

**Prereqs:**
- BIOS 831 (http://bulletin.unl.edu/courses/BIOS/831) or permission

 Biochemistry of animal cells and tissues, with integration of major metabolic pathways and aspects of their control mechanism.

**Credit Hours:** 3
**Course Format:** Lecture
**Campus:**
**Course Delivery:** Classroom

### BIOS 849 Woody Plant Growth and Development

**Crosslisted as HORT 849, NRES 849**

**Prereqs:**
- CHEM 251 (http://bulletin.unl.edu/courses/CHEM/251) and AGRO 325 (http://bulletin.unl.edu/courses/AGRO/325)

 Offered fall semester of odd-numbered calendar years. Plant growth and development specifically of woody plants as viewed from an applied whole-plant physiological level. Plant growth regulators, structure and secondary growth characteristics of woody plants, juvenility, senescence, abscission and dormancy.

**Credit Hours:** 3
**Course Format:** Lecture 2
**Campus:**
**Course Delivery:** Classroom

### BIOS 860 Advanced Limnology

**Crosslisted as NRES 866**

**Prereqs:**
- NRES 859 (http://bulletin.unl.edu/courses/NRES/859) or equivalent

 In-depth consideration of selected areas of limnology including stream limnology, primary production, secondary production, nutrient cycling, and eutrophication.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

### BIOS Principles of Plant Pathology I

**Prereqs:**
- NRES 859 (http://bulletin.unl.edu/courses/NRES/859) or equivalent

 Principles of Plant Pathology I
**864A**

**Prereqs:**
PLPT 369 (http://bulletin.unl.edu/courses/PLPT/369) or equivalent; an introduction to biochemistry course

This course is a prerequisite for: BIOS 866 (http://bulletin.unl.edu/courses/BIOS/866), BIOS 865 (http://bulletin.unl.edu/courses/BIOS/865).

Epidemiology and disease control through cultural, biological, chemical and host plant resistance strategies.

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**864B**

**Prereqs:**
PLPT 369 (http://bulletin.unl.edu/courses/PLPT/369) or equivalent; an introduction to biochemistry course

Molecular and cellular approach to the study of plant pathological principles.

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**865**

**Prereqs:**
8 hrs biological sciences including BIOS 864 (http://bulletin.unl.edu/courses/BIOS/864) preceding or parallel and 6 hrs entomology or biological sciences (zoology)

ENTO *865 is offered even-numbered calendar years.*

Relationships between plant diseases and their vectors with emphasis on virus diseases and transmission by aphids.

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**866**

**Prereqs:**
BIOS 864A (http://bulletin.unl.edu/courses/BIOS/864A) or *864B, or permission*

Offered odd-numbered calendar years. Lecture and laboratory course concerning principles of nematode-induced disease of plants.

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**867**

**Prereqs:**
BIOS 312 (http://bulletin.unl.edu/courses/BIOS/312), 864A (http://bulletin.unl.edu/courses/BIOS/864A) or *864B, and CHEM 832 (http://bulletin.unl.edu/courses/CHEM/832) or 836 (http://bulletin.unl.edu/courses/CHEM/836) or permission

Offered even-numbered calendar years. Principles and methods of identification, chemistry and function of cell constituents, role and characterization of antibacterial agents, spread and survival mechanisms of pathogenicity, host–parasite relations and control measures.

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**867L**

**Prereqs:**
BIOS 867 (http://bulletin.unl.edu/courses/BIOS/867)

Offered even-numbered calendar years. Principles and methods of identification, chemistry and function of cell constituents, role and characterization of antibacterial agents, spread and survival mechanisms of pathogenicity, host–parasite relations and control measures.
### Phytopathogenic Fungi

**Prereqs:**
- Parallel registration in BIOS *867*

**Description:** Offered even-numbered calendar years. Ecology and taxonomy of plant pathogenic and plant associated fungi with emphasis on environment influences and on microbial interactions leading to biological control.

### Plant Growth and Development

**Prereqs:**
- AGRO 325 [Link](http://bulletin.unl.edu/courses/AGRO/325)
- BIOS 478 [Link](http://bulletin.unl.edu/courses/BIOS/478)
- BIOS 478 [Link](http://bulletin.unl.edu/courses/BIOS/478)
- CHEM 252 [Link](http://bulletin.unl.edu/courses/CHEM/252)
- BIOL/BIOS/CHEM 431 [Link](http://bulletin.unl.edu/courses/CHEM/431)

**Description:** Processes involved in plant growth and development, seed formation, dormancy, germination, differential growth, flowering, and senescence. The role of extrinsic factors (e.g., light, water, and gravity) and intrinsic factors (e.g., hormones, pigments, and energy sources) on these processes.

### Helminthology

**Prereqs:**
- 12 hrs biological sciences including BIOS 385 [Link](http://bulletin.unl.edu/courses/BIOS/385) and permission

**Description:** Classification, morphology, biology of helminth parasites, chiefly of animals other than humans. Includes collection, preparation of specimens, and technique.

### Masters Thesis

**Prereqs:**
- Admission to masters degree program and permission of major adviser

**Description:**

### Developmental Genetics

**Prereqs:**
- Permission

**Description:**
Prereqs: General genetics or equivalent

Effects of various mutations on developing biological systems. Mechanisms by which the abnormal genome expresses its phenotype. Special consideration to vertebrate organisms.

**BIOS 915 Graduate Seminar**

Prereqs: Permission

Topics include the following:
A. Graduate Seminar  
D. Botany  
E. Ecology  
G. Cell Biology and Genetics  
M. Microbiology  
P. Parasitology  
W. Evolutionary Biology  
Z. Other Topics

**BIOS 916 Research Seminar**

Aimed at improving research design in evolutionary biology. Experience with presenting scientific ideas, as well as help with specific project.

**BIOS 924 Molecular Phylogenetics**

Prereqs: Permission

Theory and methodology of phylogenetic inference based on molecular characters (mainly DNA sequences). Population genetic principles and analysis of microsatellite loci. Emphasis on project design, data analysis, and hypothesis testing. Training on current computer programs for phylogenetic analysis acquired.

**BIOS 940 Microbial Diversity**

Prereqs: 6 hrs microbiology and BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831) or permission

Diversity of microbial structures, shape, movement, metabolism, symbioses, and adaptations to extreme environments using both bacterial and fungal examples. A physiological approach used throughout.

**BIOS 941 Physiology of Anaerobic Microorganisms**
**BIOS 942**
Genetics, Genomics, and Bioinformatics of Prokaryotes

Prereqs:
**BIOS 241** and **312**

Methods of energy transduction, growth, and metabolism of anaerobic microorganisms from a variety of habitats. Microbes considered range from methane producers to photosynthetic bacteria. Molecular and phylogenetic analyses as well as interactions among microorganisms in anaerobic environments.

**BIOS 945**
RNA Biology

Prereqs:
**BIOS 820** or permission

Role of RNA in regulation of gene expression and in determining genome structure. Regulation of mRNA stability and function, RNA as regulatory molecules and enzymes, and computer-based methods of analysis.

**BIOS 947**
Industrial Microbiology and Biotechnology

Prereqs:
**BIOS 312** or equivalent, **BIOS 831** or **840**

Biosynthetic activity of bacteria, yeasts, and fungi, including genetically engineered organisms: antibiotic, amino acid, enzyme, and vitamin production; polysaccharides, steroid transformation, microbes as food sources, microbial insecticides, petroleum microbiology, fermentation engineering, and mass production of microbial cells.

**BIOS 950**
Medical Molecular Virology

Prereqs:
**BIOS/CHEM/BIOC 431** and **432**

Offered odd-numbered calendar years. Current topics in molecular virology relevant to the natural history and pathogenesis of viral diseases of humans and animals.

**BIOS 951**
Quantitative Analysis in Biology
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>951</td>
<td>Credit Hours: 4&lt;br&gt;Campus: Classroom&lt;br&gt;Course Delivery: Classroom</td>
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<tr>
<td>BIOS 953</td>
<td>Advanced Population Ecology</td>
<td>Permission</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>BIOS 955</td>
<td>Advanced Behavioral Ecology</td>
<td>Previous course work in ecology or behavioral comparative psychology</td>
<td>3</td>
<td>Lecture 3, Classroom</td>
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<tr>
<td>BIOS 956</td>
<td>Biochemical Adaptation</td>
<td>Permission; a course in biochemistry is strongly recommended</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>BIOS 958</td>
<td>Genetic Ecology</td>
<td>Background in genetics and ecology</td>
<td>3</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>BIOS 959</td>
<td>Advanced Community Ecology</td>
<td></td>
<td>3</td>
<td>Classroom</td>
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</tr>
</tbody>
</table>
### Biosystematics and Nomenclature

**BIOS 960**

Crosslisted as ENTO 960

Methods and principles of systematics and nomenclature.

**Credit Hours:** 2-3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

### Animal Communication

**BIOS 962**

Prereqs: Course work in ecology and/or evolution and/or animal behavior, or permission

Course work in physics recommended. Advanced introduction to the evolution of animal communication. Addresses evolution of signal structure (including acoustic, visual, electrical, and chemical signals), environmental effects on signal transmission, and the evolution of receiver responses to signals.

**Credit Hours:** 3

**Course Delivery:** Classroom

### Signal Transduction

**BIOS 964**

Prereqs: BIOS 832, BIOS 820

Molecular basis of genetics in eukaryotes. Gene structure and regulation, transposable elements, chromosome structure, DNA replication and repair mechanisms and recombination.

**Credit Hours:** 3

**Course Delivery:** Classroom

### Plant Pathology–Plant Virology

**BIOS 965**

Prereqs: BIOS 864A or *864B or permission

Offered odd-numbered calendar years.

**Credit Hours:** 3

**Course Format:** Lecture 2

**Course Delivery:** Classroom

### Advanced Viral Pathogenesis

**BIOS 966**

Prereqs: BIOS 843, VBMS 852

Crosslisted as VBMS 966

**Credit Hours:** 3

**Course Delivery:** Classroom
Advanced analysis on the mechanisms of cell and tissue damage by viruses, the spread of viruses through the body, and the host response.

**Seminar in Plant Pathology**

**BIOS 968**

- **Prereqs:** Permission

- **Credit Hours:** 1
- **Campus:**
- **Course Delivery:** Classroom

**Assessment of the Major**

**BIOS 99**

- **Prereqs:** Senior standing.

- **Credit Hours:** 0
- **Course Format:** Lecture, Personalized System of Instruction
- **Course Delivery:** Classroom

**Research**

**BIOS 996**

- **Prereqs:** Permission of instructor and departmental Graduate Committee

- **Credit Hours:** 3–10
- **Campus:**
- **Course Delivery:** Classroom

**Special Topics in the Life Sciences**

**BIOS 998**

- **Prereqs:** Permission

- **Credit Hours:** 1–24
- **Campus:**
- **Course Delivery:** Classroom

**Doctoral Dissertation**

**BIOS 999**

- **Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair

- **Credit Hours:** 1–24
- **Max credits per degree:** 55
- **Campus:**
- **Course Delivery:** Classroom

**Proteins**

**CHEM 932**

- **Prereqs:** BIOS 932, BIOC 932

- **Credit Hours:** 2
- **Course Format:** Lecture 2
- **Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credits</th>
<th>Format</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>CHEM 933</td>
<td>Enzymes</td>
<td>Crosslisted as BIOS 933, BIOC 933</td>
<td>2</td>
<td>Lecture 2</td>
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<td></td>
<td>Kinetics regulation and reaction mechanisms of enzymes.</td>
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<tr>
<td>CHEM 934</td>
<td>Genome Dynamics and Gene Expression</td>
<td>Crosslisted as BIOS 934, BIOC 934</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>CHEM 935</td>
<td>Metabolic Function and Dysfunction</td>
<td>Crosslisted as BIOS 935, BIOC 935</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td></td>
<td>Current metabolic research at the bioenergetic, metabolomic, and molecular level. The normal metabolic processes that go awry in cancer, obesity, and oxidative stress.</td>
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<tr>
<td>ENTO 402/802</td>
<td>Aquatic Insects</td>
<td>Crosslisted as BIOS 485/885, NRES 402/802</td>
<td>2</td>
<td>Lecture 2</td>
<td>Classroom, Web</td>
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<tr>
<td></td>
<td>Biology and ecology of aquatic insects.</td>
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<tr>
<td>ENTO 402L/802L</td>
<td>Identification of Aquatic Insects</td>
<td>Crosslisted as BIOS 485L/885L, NRES 402L/802L</td>
<td>1</td>
<td>Lab</td>
<td>Classroom</td>
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</tbody>
</table>
Identification of aquatic insects to the family level.

### Insect Ecology

**Course Code:** ENTO 406/806  
**Crosslisted as:** BIOS 406/806

**Prereqs:**
BIOS/NRES 220 and 222.  
ENTO 406 (is offered spring semester of odd numbered calendar years. ENTO 406 is also offered on the internet via the World Wide Web (WWW) in the spring semester of odd-numbered calendar years.

Biotic and abiotic factors as they influence insect development, behavior, distribution, and abundance.

### Field Entomology

**Course Code:** ENTO 411/811  
**Crosslisted as:** BIOS 482/882

**Prereqs:**
12 hrs biological sciences.  
Offered only at Cedar Point Biological Station.

Field course in insect taxonomy and biology emphasizing field collection, specimen preparation, classification, and insect natural history.

### Food Microbiology

**Course Code:** FDST 405/405X/805  
**Crosslisted as:** BIOS 445/845

**Prereqs:**
BIOS 312; CHEM 251; BIOC 321.  
This course is a prerequisite for: FDST 406, FDST 415, FDST 424, FDST 425, FDST 452, FDST 453, FDST 455, FDST 460, FDST 871, FDST 872, FDST 877.

Nature, physiology, and interactions of microorganisms in foods.  
Introduction to foodborne diseases, the effect of food processing systems on the microflora of foods, principles of food preservation, food spoilage, and foods produced by microorganisms. Food plant sanitation and criteria for establishing microbial standards for food products.

### Food Microbiology Laboratory

**Course Code:** FDST 406/806  
**Crosslisted as:** BIOS 446/846

**Prereqs:**
Parallel in FDST 405 (is also offered in the spring semester.)  
FDST 405 (is also offered in the spring semester.)  
FDST 405X  
FDST 805  
BIOS 446  
BIOS 446X

Nature, physiology, and interactions of microorganisms in foods.  
Introduction to foodborne diseases, the effect of food processing systems on the microflora of foods, principles of food preservation, food spoilage, and foods produced by microorganisms. Food plant sanitation and criteria for establishing microbial standards for food products.
This course is a prerequisite for [FDST 415](http://bulletin.unl.edu/courses/FDST/415).

The microorganisms in foods and the methods used to study them as discussed in [FDST 405](http://bulletin.unl.edu/courses/FDST/405) or [805](http://bulletin.unl.edu/courses/FDST/805).

**Quaternary Paleoclimatology and Paleoecology**

Crosslisted as [BIOS 436/836](http://bulletin.unl.edu/courses/BIOS/436)

**Prereqs:**
12 hrs GEOL or BIOS.

Analysis and interpretation of the Quaternary period's paleoecological data. Patterns of long-term climate variation. Distribution patterns and responses of organisms and ecosystems to Quaternary environmental change.

**Biogeochemical Cycles**

Crosslisted as [BIOS 438/838](http://bulletin.unl.edu/courses/BIOS/438)

**Prereqs:**
CHEM 109 or 113; 12 hrs geology or biological sciences.

Chemical cycling at or near the earth's surface, emphasizing interactions among the atmosphere, biosphere, geosphere and hydrosphere. Modern processes, the geological record, and human impacts on elemental cycles.

**Marine Ecology and Paleoecology**

Crosslisted as [BIOS 461/861](http://bulletin.unl.edu/courses/BIOS/461)

**Prereqs:**
BIOS/NRES 220.

Geology majors should register for [GEOL 439L](http://bulletin.unl.edu/courses/GEOL/439)/[BIOS 461L](http://bulletin.unl.edu/courses/BIOS/461).

Introduction to the fundamentals of marine ecology and their application to paleoecology.

**Marine Ecology and Paleoecology Lab**

Crosslisted as [BIOS 461L/861L](http://bulletin.unl.edu/courses/BIOS/461L)

**Prereqs:**
Parallel GEOL 439 or 839.

Lab includes several field trips.

**Biology of Wildlife Populations**

Crosslisted as [BIOS 450/850](http://bulletin.unl.edu/courses/BIOS/450)

**Prereqs:**
BIOS 220.
**Course Delivery:** Classroom

**Limnology**
Crosslisted as BIOS 459/859, WATS 459

Here is a brief description of the course:

Principles of population dynamics. Management strategies (for consumptive and nonconsumptive fish and wildlife species) presented utilizing principles developed.

Prereqs:
12 hrs BIOS, including BIOS/NRES 220 (http://bulletin.unl.edu/courses/NRES/220)/BIOS220x; two semesters CHEM.

May also be offered at Cedar Point Biological Station.

**Fisheries Biology**
Crosslisted as BIOS 464/864

Here is a brief description of the course:

Physical, chemical, and biological processes that occur in fresh water. Organisms occurring in fresh water and their ecology; biological productivity of water and its causative factors; eutrophication and its effects.

Prereqs:
BIOS/NRES 489 (http://bulletin.unl.edu/courses/NRES/489)/889 (http://bulletin.unl.edu/courses/NRES/889) or equivalent.

**Wetlands**
Crosslisted as BIOS 458, WATS 468

Here is a brief description of the course:

Physical, chemical and biological processes that occur in wetlands; the hydrology and soils of wetland systems; organisms occurring in wetlands and their ecology; wetland creation, delineation, management and ecotoxicology.

Prereqs:
12 hrs biological sciences: BIOS 220 (http://bulletin.unl.edu/courses/BIOS/220); CHEM 109 (http://bulletin.unl.edu/courses/CHEM/109) and 110 (http://bulletin.unl.edu/courses/CHEM/110).

Offered even-numbered calendar years.

**Herpetology**
Crosslisted as BIOS 474/874

Here is a brief description of the course:

Fossil and living amphibians and reptiles. Anatomy, classification, ecology and evolution.

Prereqs:
BIOS/NRES 386 (http://bulletin.unl.edu/courses/NRES/386) and permission. BIOS 388 (http://bulletin.unl.edu/courses/BIOS/388) recommended.

May also be offered at Cedar Point Biological Station.

**Mammalogy**
Crosslisted as BIOS 476/876
Evolution, natural history, ecology, and functional morphology of planetary mammals and mammals of the Northern Great Plains.

Physiology of Exercise
Crosslisted as BIOS 484/884

**Prereqs:**
12 hrs biological sciences, including BIOS 213 or equivalent; BIOS 214 or equivalent.

**Effects of physical activity on the circulatory, respiratory, and other physiological processes.**

Behavioral Neuroscience
Crosslisted as BIOS 419/819

**Prereqs:**
12 hrs psychology or 12 hrs biological sciences, including PSYC 373 or BIOS 373.

**Relationship of physiological variables to behavior, an introduction to laboratory techniques in neuropsychology.**

Functional Histology
Crosslisted as BIOS 408/808

**Prereqs:**
BIOS 101, 101L, or 102, BIOS 213, ASCI 240, BIOS 315 recommended.

**Microscopic anatomy of the tissues and organs of major vertebrate species, including humans. Normal cellular arrangements of tissues and organs as related to their microscopic anatomy and function, with reference to subcellular characteristics and biochemical processes. Functional relationships among cells, tissues, organs, and organ systems, contributory to organismal well being. General introduction to pathological processes and principles underlying some diseases.**

Pathogenic Microbiology
Crosslisted as BIOS 441/841

**Prereqs:**
BIOS 312 and either 313 or 314, or permission.
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Director of School of Biological Sciences: Valery Forbes, Ph.D.

Graduate Committee: Associate Professor Pilson (Chair); Professors Gardner, Wagner; Associate Professors Mitra, Chia, E. Moriyama, Harris

The major goal of the School of Biological Studies (SBS) is to develop an integrated perspective of biological sciences and to provide a well-rounded education based on a functional understanding that extends from fundamental cell and molecular biology to global ecology. The SBS graduate program is important to UNL and the state in that we are the only major biology department that awards the PhD in Nebraska. The breadth and diversity of the graduate program extends through several specific research interest clusters termed Graduate Research Emphasis Groups (GREGs). The GREGs represent formally approved groups of SBS faculty, adjunct faculty, and graduate students who share common research interests. The GREGs set forth requirements for graduate studies and also are intended to provide an interactive forum for more focused research interests that reflect SBS and interdepartmental strengths of the faculty. GREG research areas constitute specializations for degrees offered by the School of Biological Sciences. Our dedication to excellence in research, teaching, and training is evidenced by our funding support and our ability to attract outstanding postdoctoral fellows and graduate students. We train approximately 25 postdoctoral and 80 graduate students at any given time and take pride in launching our trainees into successful and productive careers ranging from biomedical researchers in industry, to postdoctoral faculty members at other institutions. For current GREG information, visit www.biosci.unl.edu.

Each application must be accompanied by scores from the General Test of the Graduate Record Examinations (GRE). A statement (no more than 300 words) stating long-range goals and specific research interests and experiences, and a curriculum vita or resume is required. Applicants should indicate the kind of graduate work planned and identify the appropriate research area of interest. Applicants should have a minimum cumulative grade point average equivalent to 3.0 (B) or score in at least the 50th percentile in each portion of the GRE taken. Admission also depends on the nature of the applicant’s interest and whether appropriate faculty, space, and facilities are available for the type of graduate training proposed. Entering graduate students are normally expected to have taken a year of physics, one semester of calculus, and chemistry through organic chemistry, or one semester each of organic chemistry and biochemistry.

Master of Science Degree.

Students admitted to the School of Biological Sciences choose a GREG (specialization) in which to pursue a degree. During the first semester after admission, it is

### VMED 645
**Animal Physiology I**
Crosslisted as BIOS 813, ASCI 845, VBMS 845

**Prereqs:**
For ASCI/VBMS *845/BIOS *813: An undergraduate course in biochemistry or biology or physiology. For VMED 645: First year standing in and admission to VMED.

This course is a prerequisite for VMED 645 (http://bulletin.unl.edu/courses/VMED/645)

Primarily for students in animal or biological sciences or veterinary medicine.

Mammalian physiology and cellular mechanisms. Physiology of the cell, embryology, and neuro-sensory, neuromuscular, endocrine, and reproductive systems.

### VMED 646
**Animal Physiology II**
Crosslisted as BIOS 814, ASCI 846, VBMS 846

**Prereqs:**
For ASCI/VBMS *846/BIOS *814: An undergraduate course in biochemistry or biology or physiology. For VMED 646: First year standing in and admission to VMED.

This course is a prerequisite for VMED 646 (http://bulletin.unl.edu/courses/VMED/646)

**ASCI/VBMS *846/BIOS *814/VMED 646** (http://bulletin.unl.edu/courses/VMED/646) is designed for students in animal or biological sciences or veterinary medicine.

Mammalian physiology and cellular mechanisms. Physiology of the digestive, cardiovascular, respiratory, and renal systems.
the responsibility of each student, with the help of a faculty adviser, to seek a guidance interview 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 the student’s Graduate Research Emphasis Group (GREG). Option II is available to students in biological sciences only by special permission of the Graduate Committee obtained at the time of entry in the program. Option III is not open for masters degree programs in biological sciences.

Minor in Biology:

Masters students in other departments may seek a minor in biological sciences by fulfilling the appropriate course work. The student is required to make arrangements with the Graduate Committee in Biological Sciences before the program of studies is approved.

Specializations Available at the Masters Level:

Bioinformatics; Ecology, Evolution and Behavior; Genetics, Genomics and Bioinformatics; Microbiology and Molecular Biology; Parasitology; Plant Pathology

Doctor of Philosophy Degree.

Entering doctoral students must affiliate with one of the GREGs of 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 GREGs taken before the end of the second semester. A supervisory committee of at least five members representing at least two GREGs satisfies the graduate college requirement of an external member. The supervisory committee will guide 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. GREGs may stipulate additional requirements.

Specializations Available at the Doctoral Level:

Bioinformatics; Ecology, Evolution and Behavior; Genetics, Genomics and Bioinformatics; Microbiology and Molecular Biology; Parasitology; Plant Pathology; Plant Systems Biology

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

http://www.unl.edu/gradstudies/prospective/programs/BiologicalSciences

Retrieved from "http://bulletin.unl.edu/graduate/Biological_Sciences"

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Business

Subject Areas

- Finance (FINA) (FINA)
- Graduate Business Administration (GRBA) (GRBA)
- Management (MNGT) (MNGT)
- Marketing (MRKT) (MRKT)
- School of Accountancy (ACCT) (ACCT)

Courses for FINA (FINA)

ECON 413/813 Social Insurance

Crosslisted as FINA 413/813

LINK (http://bulletin.unl.edu/courses/ECON/413)

| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |
| Groups: | General Economics and Theory |

Nature and causes of economic insecurity. Analysis of public programs such as Social Security, unemployment insurance, workers’ compensation, and public assistance.

FINA 412/812 Life and Health Insurance

LINK (http://bulletin.unl.edu/courses/FINA/412)

| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |

Prereqs:

FINA 307 (http://bulletin.unl.edu/courses/FINA/307)/307H (http://bulletin.unl.edu/courses/FINA/307H); FINA 361 (http://bulletin.unl.edu/courses/FINA/361)/361H (http://bulletin.unl.edu/courses/FINA/361H)
The economic functions of life insurance. The human-life value 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 provision. Health and other specialized forms of human-life value insurance.

### Enterprise Risk Management

**FINA 438/838**

**Prereqs:**
FINA 338 or ACTS 440/840.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

Major and minor pure loss exposures facing business firms, the alternative risk management techniques for dealing with these exposure, the most appropriate technique(s) for controlling each exposure, and the financial results so the risk management program remains effective. Actual risk management audits of business firms and case studies are used to integrate the concepts, techniques, and tools.

### Advanced Finance

**FINA 461/861**

**Prereqs:**
FINA 361, 363, and MATH 104.

**Credit Hours:** 3

**Course Delivery:** Classroom

Advanced development of the finance specialization with major emphasis on the theoretical issues. Application of quantitative techniques and the role of capital markets into the external financing policy of the firm.

### Bank Management

**FINA 465/865**

**Prereqs:**
FINA 361 and 365.

**Credit Hours:** 3

**Course Delivery:** Classroom

Bank asset management; policy and practices for reserves, loans and investments. Internal organization of commercial banks. New problems and recent innovations in commercial banking.

### Options, Futures and Derivative Securities

**FINA 467/867**

**Prereqs:**
FINA 338 or 863 or ACTS 440/840.

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

The use of derivative securities in risk reduction and portfolio management strategies.

### Portfolio Practicum I

**FINA 468**

**Prereqs:**
FINA 338 or 863 or ACTS 440/840.

**Credit Hours:** 3

**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>468/868</td>
<td>Portfolio Practicum II</td>
<td>FINA 363 and admission to the Finance Department's CFA® Investments Option.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>FINA 468 is the first course of a two-semester sequence that includes FINA 469.</td>
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<td>FINA 468 is “Letter grade only”.</td>
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<td></td>
<td>Practical experience in financial asset management. Economic and industry information, money and capital market forecasts, to determine how to select individual securities and how to develop a portfolio strategy.</td>
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<tr>
<td>469/869</td>
<td>Portfolio Practicum II</td>
<td>FINA 468/868</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>FINA 469 is the second course of a two-semester sequence that includes FINA 468.</td>
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<td>FINA 469 is “Letter grade only”.</td>
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<td></td>
<td>Practical experience in financial asset management. Economic and industry information, money and capital market forecasts, to determine how to select individual securities and how to develop a portfolio strategy.</td>
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<tr>
<td>482/882</td>
<td>Real Estate Finance</td>
<td>FINA 382</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>This course may be used towards fulfillment of the Nebraska Real Estate Commission's educational requirements.</td>
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<td></td>
<td>Consideration of procedure, instruments, techniques, and trends in financing urban real property; an examination of realty credit markets and sources of funds (private and public); valuation of real property for lending and investment purposes; and measurement of investment performance.</td>
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<tr>
<td>807</td>
<td>Property and Liability Insurance</td>
<td>FINA 307</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>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.</td>
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<td>Course Code</td>
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<tr>
<td>FINA 820</td>
<td>Employee Benefit Plans</td>
<td>ECON 210, or 211, and FINA 307</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
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<td>Analysis of group life insurance, group medical expense and disability</td>
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<td>income insurance, private pension plans, profit sharing and thrift plans,</td>
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<td>Section 401(k) plans, individual retirement accounts (IRAs), Keogh plans</td>
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<td>for the self-employed, group property and liability insurance, and other</td>
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<td></td>
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<td>employee benefits. An analysis of major public policy issues.</td>
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<tr>
<td>FINA 850</td>
<td>Multinational Financial Analysis</td>
<td>GRBA 811 and permission</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>FINA 850 is open to masters level and PhD students only.</td>
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<td>International aspects of financial management. Exchange risk analysis</td>
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<td>and management. Accessing international capital markets. International</td>
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<td>capital budgeting. Numerical optimization technique.</td>
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<tr>
<td>FINA 855</td>
<td>Capital Markets and Financial Institutions</td>
<td>FINA 365 or permission</td>
<td>3</td>
<td>Classroom</td>
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<td>Open to masters level and PhD students only.</td>
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<td></td>
<td>Analysis of the development and functions of the various financial</td>
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<td></td>
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<td>institutions, with emphasis on the nonbank financial intermediary.</td>
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<td>Sources and uses of funds for each of the major types of intermediary,</td>
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<td>the nature and structure of financial markets, the behavior of financial</td>
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<td>institutions, and the theories of interest rate determination.</td>
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<tr>
<td>FINA 862</td>
<td>Security Valuation and the Buffett Investment Method</td>
<td>GRBA 811 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>This course covers methods used to value publicly-traded and private</td>
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<td>equities. Methods used by Warren Buffett are emphasized.</td>
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<tr>
<td>FINA 863</td>
<td>Portfolio Management</td>
<td>GRBA 811</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
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<td>The workings of securities markets. The fundamental intuition of the</td>
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<td>risk–return trade–off. The role of information in financial markets.</td>
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<td>All major asset pricing models and application to risk management in a</td>
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<td>portfolio context.</td>
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</tbody>
</table>
Masters Thesis (FINA 899)

Prereqs:
Admission to masters degree program and permission of major adviser

Credit Hours: 6–10
Campus: Classroom

Insurance Seminar (FINA 907)

Credit Hours: 3
Campus: Classroom

Financial Management (FINA 960)

Prereqs:
Completion of the MBA core requirements

Open to masters level and PhD students only. Assuming a background of knowledge which includes the finance function in business and the technique of financial analysis, this course confronts the student with the unique role of financial management which relates both to the company as an operating entity and to the interest of the owners in the results of the operation.

Advanced Theory of Finance (FINA 961)

Prereqs:
FINA 361

This course is a prerequisite for FINA 994.

Open to masters level and PhD students only. Critical examination of the relation of the capital markets to the external financing problems of the firm. Advanced developments of the finance specialization with major emphasis on the theoretical issues.

Research Methods in Finance and Accounting (FINA 962)

Prereqs:
Admitted to PhD degree program in Economics or the College of Business Administration.

This class covers the research methods used in accounting and finance. Emphasis is on empirical testing using statistical and mathematical programming languages.

Survey of Teaching Methods in Business (FINA 963)

Prereqs:
Admission to PhD degree program in Finance.
This course is a primer to help facilitate new PhD candidates in their transition from student to teacher. The course is largely self-directed study, however there is mentoring from a faculty member. The course is based around four accountabilities. The student will learn strategies to develop: 1) an environment conducive to learning, 2) a curriculum, 3) a delivery system for the curriculum, and 4) an evaluation system. The course culminates with the construction of a teaching portfolio.

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Delivery</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Prereqs</th>
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</thead>
<tbody>
<tr>
<td>FINA 965</td>
<td>Seminar in Banking</td>
<td>Classroom</td>
<td>3</td>
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<td>Open to PhD students only.</td>
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<tr>
<td>FINA 966</td>
<td>Seminar in Investments</td>
<td>Classroom</td>
<td>3</td>
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<td>Open to PhD students only.</td>
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<tr>
<td>FINA 968</td>
<td>Seminar in Finance</td>
<td>Classroom</td>
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<td>Open to PhD students only.</td>
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<td>FINA 97</td>
<td>Ethics Assessment</td>
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<td>Ethical standards for investment professionals.</td>
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<tr>
<td>FINA 994</td>
<td>Seminar in Selected Subjects: Special Topics</td>
<td>Classroom</td>
<td>3</td>
<td></td>
<td>FINA 961 (<a href="http://bulletin.unl.edu/courses/FINA/961">http://bulletin.unl.edu/courses/FINA/961</a>)</td>
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<td></td>
<td>Open to PhD students only.</td>
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<tr>
<td>FINA 996</td>
<td>Directed Reading or Research</td>
<td>Classroom</td>
<td>1-3</td>
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</table>
Doctoral Dissertation

999

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1–24
Max credits per degree: 55

Courses for GRBA (GRBA)

Ethical and Legal Considerations in Management

800

Prereqs:
Permission of the MBA director

Introduction to the Legal System; Introduction to Legislation and Impact on Business-State; Evolution of Concepts in Law; Introduction to Legislation and Impact on Business-Federal; Other 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.

Credit Hours: 3

Survey of Accounting

801

Prereqs:
Permission of the MBA director

A one-semester course for graduate students without prior study in financial and managerial accounting. Common Body of Knowledge materials as described by the American Assembly of Collegiate Schools of Business. Concepts essential to thorough understanding of managerial and business concepts and practices.

Credit Hours: 3

Finance

804

Prereqs:
Permission of the MBA director

Foundation for studying advanced financial principles at the graduate level. Efficient resource utilization and associated costs. Portfolio theory, capital asset pricing model (CAPM), advanced budgeting techniques, cost of capital theory, financial forecasting, and financial planning.

Credit Hours: 3

Marketing Management

805

Prereqs:
Permission of the MBA director

Credit Hours: 3
Examination of marketing system, its relations with the socioeconomic system, and the influences of each upon the other as these elements affect the management of marketing activities. Trends in the structure of marketing institutions, processes and practices. Consideration of customer attributes and behavioral characteristics, and how a marketing manager responds to these in the design of marketing strategies, using research, product development, pricing, distribution structure, and promotion.

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>GRBA 806</td>
<td>Management Theory and Organizational Behavior</td>
<td>Permission of the MBA director</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
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<td>Behavioral science foundations of management theory. Techniques of human resource administration and utilization explored with particular emphasis on the behavioral science rationale for the application of these techniques.</td>
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<tr>
<td>GRBA 810</td>
<td>Contemporary Managerial Accounting</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
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<td>Internal accounting as a tool to generate information for managerial planning and control. Problems and case material used to review basic financial accounting, to develop operational understanding of elementary cost systems, capital and operating budgeting concepts, incremental analysis, transfer pricing, performance evaluation, and other selected quantitative techniques available to assist management in the performance of the planning and control functions.</td>
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<tr>
<td>GRBA 811</td>
<td>Managerial Finance</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>3</td>
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<td>Classroom</td>
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<td>A case course designed to meet the financial core requirement in the MBA program. Application of financial theory to business problems. Financial statement analysis, working capital management, capital structure planning, cost of capital, and capital expenditure analysis.</td>
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<tr>
<td>GRBA 812</td>
<td>Managerial Economics</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>3</td>
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<td>Classroom</td>
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<td>Applies economics to problems faced by managers in both the private and public sector. Consideration is given to the impact of the economic environment on decisions made by the firm including the effects of legal, regulatory and social constraints. Internal allocation of resources in organizations from an economic perspective. Economic tools that aid managers, including statistical analysis, are applied to practical decisions.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
<td>Description</td>
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<tr>
<td>GRBA 813</td>
<td>Managerial Marketing</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>Mixture of case discussions, readings, lectures, plus written and oral assignments. Development of analytical and decision making skills, and an understanding of the market forces which influence those decisions. Major emphasis on the decision areas of product, distribution, personal selling, advertising and pricing, as well as on the development of integrated marketing programs. Social, ethical, and global issues.</td>
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<tr>
<td>GRBA 814</td>
<td>Applied Organizational Behavior</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>Critical behavioral science theories that contribute to the effective management of human behavior in organizations. Conceptual frameworks that help diagnose and explain the potential for common interpersonal problems. These models serve as the foundation for student efforts to develop behavioral skills and intervention techniques that promote effective individual and team activity leading to positive managerial experiences. Communication, power and influence, conflict management, and perception.</td>
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<tr>
<td>GRBA 815</td>
<td>Operations and Information Systems Strategy</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>Understanding of how operations and information systems can be used to capture competitive advantage in the marketplace. Relationships between operations and information systems and other functional areas of organizations, e.g., marketing, finance, and engineering/research and development.</td>
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<tr>
<td>GRBA 851</td>
<td>Managerial Decision Making</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>Advanced quantitative tools for aiding and enhancing managerial decision-making so that students develop skills for formulating, analyzing, and solving a wide range of interdisciplinary business problems. Decision-making under certainty, uncertainty and risk, and in competitive situations. Use of various quantitative models and computer-based tools, including problem formulation, interpretation of solution, sensitivity and shadow price, heuristic approaches, simulation and game models.</td>
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<tr>
<td>GRBA 852</td>
<td>International Business</td>
<td>Admission to the MBA program and/or permission of the MBA director</td>
<td>Reconsideration of marketing, management, accounting, and financial planning. The course covers international business strategies, including market analysis, international trade, and strategic management in a global context.</td>
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</tbody>
</table>
concepts within and between foreign environments. Understanding of alternative cultural, economic, and political systems which affect the operations of business firms. Attention to functional business decision making.

**GRBA 853 Strategic Management and Business Policy**

**Prereqs:**
Admission to the MBA program and/or permission of the MBA director

Development and implementation of corporate strategies and policies. Interrelationships between the external and internal environments of the organization (including functional areas) are stressed through identification, analysis, and implementation of solutions to strategic situations facing varying types of organizations. Policy cases, live cases/industry analyses, and an executive level simulation game. Bridging the gap between management theory and practice.

**GRBA 860 Management: Theory, Issues and Practice**

**Prereqs:**
Admission to the MBA program and/or permission of the MBA director

Historical background, various approaches to management, and the functions, roles, and activities of the modern manager within the organizational and environmental context. Contemporary issues such as total quality management, employee productivity, and international management. The theme and perspective is how to make the practice of management of today’s organizations more effective.

**GRBA 890 Administrative Internship**

**Prereqs:**
Admission to the MBA program and/or permission of the MBA director; and the permission of a graduate faculty member

Maximum of 6 semester hours of GRBA 890 can be counted towards a graduate degree. Students present oral and written reports to faculty seminar once a semester. Independent study of theories, principles, practices, techniques, and strategies utilized in the business field. Practical experience in managerial, administrative situations.

**GRBA 896 Directed Readings or Research in Business**

**Prereqs:**
Admission to the MBA program and/or permission of the MBA director; and the permission of a graduate faculty member

Credit Hours: 1-3

Campus: Classroom

Course Delivery: Classroom

**GRBA 98 MBA Assessment**

Required of graduating MBA students for assessment and communication. All components offered via Blackboard. Complete a nationally normed exit exam, the MBA exit survey, an employment survey, and other activities related to assessment.

Credit Hours: 1-3

Campus: Classroom

Course Delivery: Classroom
### Ma, MS and PhD Assessment

**Prereqs:**
Admission to the MA, MS, and/or PhD business program

**Course Format:** Independent Study

**Campus:**

**Course Delivery:** Classroom

Complete the graduate exit survey, employment survey, and other activities related to assessment.

### Raikes School: Design Studio I

**Crosslisted as GRBA 802**

**Prereqs:**
Admission to the MBA program; BSAD/CSCE/RAIK 402H

The first semester of a two semester sequence of the Raikes School of Computer Science and Management Graduate Design Studio. Application of software design principles in a team oriented project management setting. Complete projects in consultation with private and public sector clients.

### Raikes School: Design Studio II

**Crosslisted as GRBA 803**

**Prereqs:**
Admission to the MBA program; GRBA/RAIK *802

The second semester of a two semester sequence of the Raikes School of Computer Science and Management Graduate Design Studio. Application of software design principles in a team oriented project management setting. Complete projects in consultation with private and public sector clients.

### Courses for MNGT (MNGT)

#### Small Business Owner

**Crosslisted as MNGT 422A/822A**

**Prereqs:**
Junior standing.

Credit toward the degree cannot be earned in both ENTR/MNGT422/822 and ENTR/MNGT422A/822A.

The obligations and operating practices required by ownership of one's own business, whether new or acquired. Interactions with owners of small businesses (e.g., on-site visits and discussions). Cases and projects relevant to small businesses.

#### Initiating and Managing Entrepreneurial Growth

**Crosslisted as MNGT 821**

**Prereqs:**
Focuses on the management of new firms, including small businesses designed to be lifestyle ventures and firms destined to grow. Exposure to variety of growth opportunities including franchising, organic growth and expansion of smaller businesses or units within larger firms. Teaches how to manage a new business and exploit an entrepreneurial opportunity and manage resources to sustain the firm once the business is running. Learn through a variety of hands-on methods designed to enhance their critical thinking and practical business skills. Case study analysis and exposure to thought leadership in the field are part of the core learning methods.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTR 822</td>
<td>Managing Rapid Growth and Change in Organizations</td>
<td>Crosslisted as MNGT 822</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td></td>
<td><strong>Prereqs:</strong> MNGT 321 or 360; or permission.</td>
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<td>Addresses financial, human resource, operations and marketing issues that face entrepreneurs whose businesses are confronted with significant growth. In addition, will learn change management concepts that are targeted towards managing an organization in extremely turbulent times. Prepares students to work in fast-growth firms, whether they are interested in starting their own business or joining an already established fast-growth firm. Helpful for students interested in fast-growth industries such as life science and high technology.</td>
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<tr>
<td>ENTR 823</td>
<td>Business Plan Development and Decision Making</td>
<td>Crosslisted as MNGT 823</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
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<td><strong>Prereqs:</strong> MNGT 321 or 360; or permission.</td>
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<td></td>
<td>ENTR 823 may be taken by non-management majors with departmental permission.</td>
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<td>Takes an in-depth look at the business planning process. By the end of the class, students produce their own business plans. Learn through their own business plan writing, through in–depth cases studies, by engaging in role plays and by interacting with business executives. Business plans are a critical part of any organization, thus, preparing students to develop business plans for a variety of new concepts and ideas, whether inside an established firm or as part of the start–up new venture. Students will be asked to enter their business plans into the business planning competitions in which the University participates.</td>
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<tr>
<td>MIST 452/852</td>
<td>Database Organization and Management</td>
<td>Crosslisted as SCMS 452, MNGT 452/852</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td><strong>Prereqs:</strong> MNGT/MIST 350.</td>
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<td>Database technology and related human and managerial considerations. Databases from two perspectives: the logical view, as the manager and applications programmer see and use the organization's data; and the physical view, as the systems software programmers and database manager view the data. Theory on database organization and the practical applications of databases.</td>
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<tr>
<td>MIST 454/854</td>
<td>Information Systems Analysis and Design</td>
<td>Crosslisted as SCMS 454, MNGT 454/854</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
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<td><strong>Prereqs:</strong> MNGT/MIST 350.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Crosslisted As</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
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<tr>
<td>456/856</td>
<td>Object-Oriented Systems Development</td>
<td></td>
<td>MIST/MNGT 350</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>457/857</td>
<td>Business Data Communications</td>
<td></td>
<td>MIST/MNGT 350</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>458/858</td>
<td>Electronic Business</td>
<td></td>
<td>MIST/MNGT 350</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>853</td>
<td>Data Mining and Warehousing</td>
<td></td>
<td>MIST/MNGT 350</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>411/811</td>
<td>Leading People and Projects</td>
<td></td>
<td>MIST/MNGT 350</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
</tbody>
</table>
Organizations are complex systems calling for a leadership processes including the leader, the follower and the context to affect change. Students should emerge with an understanding of many of the basic concepts and generalizations about leadership, which relate to human behavior and interactions in organizations. Objectives and class activities focus on understanding how leaders function in organizations and on one’s leadership operations in the organizational setting. Participants will utilize concepts, generalizations, theories and frames of reference to analyze organizations and leadership to understand and improve their functions. Topics covered include: Systems Theory and Organizational theory, the change process and the leadership process, roles in changing organizations, power and politics in organizations, congruence of individual and organizational ethics, the behavioral concerns in project management.

**MNGT 431/831 Enterprise Management Systems**
Crosslisted as SCMS 431

**Prereqs:**
Junior Standing; MNGT 360 and 311 (departmental permission is required if MNGT 360 and/or MNGT 311 have not been completed).

Credit towards the degree cannot be earned in both MNGT 411 and MNGT 465 / 865.

**MNGT 437/837 Supply Chain Risk Management**
Crosslisted as SCMS 437

**Prereqs:**
Senior standing; MNGT 331 or equivalent.

Analytical approach to the design, planning, and control of operations management systems, including domestic and international, manufacturing and service operations.

**MNGT 455/855 Mobile and Ubiquitous Commerce**
Crosslisted as SCMS 455, MIST 455/855

**Prereqs:**
MIST/MNGT 350.

The impact of wireless and mobile technology on the ways in which business is conducted and the strategic implications of wireless applications in organizations.

**MNGT 459/859 Global Information Systems**
Crosslisted as SCMS 459, MIST 459/859
The worldwide political and economic changes in the last decade that have propelled city, state, country governments, and corporations to expand business globally and enter into new markets. Information technology (IT) as a key role in the globalization of businesses. The necessary concepts and ideas to understand the issues in the global or international use of information technology. IT environments around the world, national infrastructures and regulatory regimes, global IT applications, global IS development strategies, global management support systems, and global IT management strategies.

**Labor Relations**

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<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Prereqs</th>
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</thead>
<tbody>
<tr>
<td>MNGT 462/862</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Junior standing: <a href="http://bulletin.unl.edu/courses/MNGT/360">MNGT 360</a> or <a href="http://bulletin.unl.edu/courses/ECON/381">ECON 381</a>.</td>
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</table>

Interdisciplinary approach to labor-management relations with emphasis on collective bargaining and grievance administration. Appreciation of collective bargaining process gained through actual negotiating of a labor-management contract. On-going union-management relationships explored.

**The Regulatory Environment for Employment and Labor**

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<tr>
<th>Course Code</th>
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<th>Course Format</th>
<th>Course Delivery</th>
<th>Prereqs</th>
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<tbody>
<tr>
<td>MNGT 466/866</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Junior Standing: <a href="http://bulletin.unl.edu/courses/MNGT/360">MNGT 360</a> and <a href="http://bulletin.unl.edu/courses/MNGT/361">361</a> (departmental permission is required if <a href="http://bulletin.unl.edu/courses/MNGT/360">MNGT 360</a> and/or <a href="http://bulletin.unl.edu/courses/MNGT/361">MNGT 361</a> have not been completed). <a href="http://bulletin.unl.edu/courses/ECON/381">ECON 381</a> FOR ECON students.</td>
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</tbody>
</table>

Government regulation of employment and labor relations. Includes laws and agencies relating to employment practices, pay, hours, equal employment opportunity, labor relations, safety, health, pensions, and benefits. Social and economic implications of governmental regulation considered.

**Business Policies and Strategies**

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<tr>
<th>Course Code</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Prereqs</th>
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</thead>
<tbody>
<tr>
<td>MNGT 475/475X/875</td>
<td>3</td>
<td>Classroom, Web</td>
<td>ACE Outcomes: 10</td>
<td>For MNGT 475: Senior standing and a 2.5 GPA; major in the College of Business Administration: <a href="http://bulletin.unl.edu/courses/ACCT/201">ACCT 201</a> and <a href="http://bulletin.unl.edu/courses/ACCT/202">202</a>, or <a href="http://bulletin.unl.edu/courses/ACCT/306">306</a>; <a href="http://bulletin.unl.edu/courses/ECON/211">ECON 211</a> and <a href="http://bulletin.unl.edu/courses/ECON/212">212</a>; <a href="http://bulletin.unl.edu/courses/FINA/361">FINA 361</a> and <a href="http://bulletin.unl.edu/courses/FINA/361H">361H</a>; <a href="http://bulletin.unl.edu/courses/MIST/MNGT/350">MIST/MNGT 350</a>; <a href="http://bulletin.unl.edu/courses/MNGT/331">MNGT 331</a>; <a href="http://bulletin.unl.edu/courses/MNGT/360">MNGT 360</a>; <a href="http://bulletin.unl.edu/courses/MNGT/360H">360H</a>; <a href="http://bulletin.unl.edu/courses/MRKT/341">MRKT 341</a> and <a href="http://bulletin.unl.edu/courses/MRKT/341H">341H</a>; or equivalent. For MNGT 875: <a href="http://bulletin.unl.edu/courses/ACCT/201">ACCT 201</a> and <a href="http://bulletin.unl.edu/courses/ACCT/202">202</a>, or <a href="http://bulletin.unl.edu/courses/ACCT/306">306</a>; <a href="http://bulletin.unl.edu/courses/ECON/211">ECON 211</a> or <a href="http://bulletin.unl.edu/courses/ECON/212">212</a>; <a href="http://bulletin.unl.edu/courses/FINA/361">FINA 361</a>.</td>
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</table>
This course is a prerequisite for MNGT 475. MNGT 475 is open only to students in the College of Business Administration. Seniors graduating at the end of the current term will have first priority. If class is oversubscribed, non-graduating seniors may be dropped.

**Leadership in a Global Context**

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>MNGT 311 or MNGT 360</th>
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</table>

Credit towards the degree cannot be earned in both MNGT 414 and 828.

Taught from the perspective of US 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. Emphasis on problems of managing in Latin America, Europe, and Asia.

**Management Information Systems**

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>MNGT 360 or MNGT 361</th>
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</table>

Education or experience with computers and/or experience in administration. Consideration of kinds of information needed to support the full spectrum of decision making in private and public organizations. Techniques of measuring and reporting on outcomes of managerial decisions. The design of management information systems (MIS) with regard to the proper role of the computer, systems analysts, programmers, managers and users, data management technology, and kinds of computer hardware and software.

**Strategic Human Resource Management**

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<tr>
<th>Prereqs:</th>
<th>MNGT 360 or MNGT 361</th>
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The purpose of this course is to engage students with the theory and practice of strategic human resource management in contemporary organizational settings. Students will examine in detail the fundamentals of HRM strategic planning and scenario models. Students will learn the importance of evidenced based decision making, and using HRM analytics such as return on investment. The primary focus is human resource management effectiveness and engagement as a strategic partner in organizations.
### Compensation Administration (MNGT 863)

**Prereqs:**
- MNGT 360 (http://bulletin.unl.edu/courses/MNGT/360) and 361 (http://bulletin.unl.edu/courses/MNGT/361).

Design and administration of compensation systems. Deals with determinants of general level of pay, pay structures, wage and salary surveys, job analysis, job evaluation, performance evaluation, benefit plans, and financial incentive systems.

### Talent Acquisition and Staffing (MNGT 864)

**Prereqs:**
- MNGT 360 (http://bulletin.unl.edu/courses/MNGT/360) and 361 (http://bulletin.unl.edu/courses/MNGT/361).

This course will explain the process by which organizations forecast employment needs, recruit potential employees, select high potential candidates from applicant pools, assess job performance levels, give feedback, train and develop existing employees, and deal with voluntary and involuntary turnover. Students will be provided with examples of tools used by HR professionals in the staffing process. Students will also be expected to evaluate and suggest improvements to real HR recruiting and selection systems based on the information learned in the classroom.

### Strategic Management (MNGT 876)

**Prereqs:**
- Management Department permission

Theories, concepts, techniques, and practices of strategic management. Includes strategic decision making, assessing the strategic situation, strategic planning systems and techniques, and implementation and control.

### Masters Thesis (MNGT 899)

**Prereqs:**
- Admission to masters degree program and permission of major adviser

### Research Design and Methodology (MNGT 905)

**Prereqs:**
- Permission

Research designs appropriate for basic and field research, including methodology for implementing such designs. An analysis of various statistical methods for evaluating research data. Includes prospectus and manuscript writing and submission; critical review of various research currently published.

### Operations Planning and Control Systems (MNGT 931)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>931</td>
<td>931</td>
<td>3</td>
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<td>Taught predominately by the case method with a few classes for review and summary lectures. Concentrates on higher management decisions involving the manufacturing, service, and public sectors. Facilities planning, labor, aggregate planning, strategic planning, capacity management, and trade-off analysis.</td>
</tr>
<tr>
<td>MNGT 932</td>
<td>Business History</td>
<td>2-3</td>
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<td>History of business of the leading nations with emphasis on the United States, including the effect of environment upon business, the development of entrepreneurship and management, and the impact of business upon the community and nation. Case histories and entrepreneurial-managerial appraisals.</td>
</tr>
<tr>
<td>MNGT 933</td>
<td>Advanced Topics in Supply Chain Management</td>
<td>3</td>
<td></td>
<td>Advanced conceptual and methodological practices in designing and planning supply chain systems. Advances and strategies in supply chain procurement, transportation, distribution and warehousing, globalization, outsourcing, and technology.</td>
</tr>
<tr>
<td>MNGT 941</td>
<td>Management Science</td>
<td>3</td>
<td>Graduate students who have completed all quantitative core requirements equivalent to MATH 104 or 105; ECON 215; and MNGT 331</td>
<td>Main concepts and techniques of modern management science for management decision analysis. Application of the tools to real-world decision-making situations.</td>
</tr>
<tr>
<td>MNGT 954</td>
<td>Advanced Topics in Information Systems</td>
<td>3</td>
<td>Permission</td>
<td>Identifies and addresses the current issues in Information Systems. Includes technical and managerial aspects, e.g., Internet, software project management, etc.</td>
</tr>
<tr>
<td>MNGT 960</td>
<td>Organizational Behavior</td>
<td>3</td>
<td>Permission</td>
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</tbody>
</table>
Human behavior within organizations. Research findings and the contributions of behavioral science.

Course Delivery: Classroom

### Organization and Management Theory

**969**

**Prereqs:** Permission

Major historical perspectives and some of the current competing paradigms in the field of organization theory. Classical management theory, human relations theory, the technology–structure and structure–environment contingency perspectives for organizational design, strategic human resource management, organizational culture, institutional theory, and such current topics as organizational demography and groups in organizations. Critiquing 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.

### Strategic Leadership

**971**

**Prereqs:** Permission

The effect of leadership throughout organizations on successful development and execution of organizational strategies. Strategic leadership in organizations and its relationship to domains such as top management teams, board leadership development, organizational visions and cultures, and organizational effectiveness. Relevance of strategic leadership theory and practice to organizational change and/or transformation, strategic alignment, organizational, adaptability, global organizational systems, and authentic organizational decision-making and cultures.

### Seminar in Interpersonal Processes in Organizations

**980**

**Prereqs:** Permission

Field of organizational behavior at the individual level. Two specific features of human behavior: understanding how individuals interact with their environment to explain behavior and performance; and how individuals interact with other actors in their work environment to both facilitate and evaluate attitudes and behavior. Students read existing research literature–to learn the “classic” studies that serve as the foundations for significant organizational behavior theories, and to understand the current conceptual trends, hypotheses, and methodologies involved in advancing these theories.

### Seminar in Labor Relations

**981**

**Prereqs:** Permission

### Seminar in Human Resource Management
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credits</th>
<th>Campus</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>982</td>
<td>Seminar in Organizational Behavior</td>
<td></td>
<td>3</td>
<td></td>
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<tr>
<td>983</td>
<td>Seminar in Organizational Behavior</td>
<td>Permission</td>
<td>3</td>
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<tr>
<td>984</td>
<td>Seminar in Operations Management</td>
<td></td>
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<tr>
<td>985</td>
<td>Seminar in Strategic Management and Business Policy</td>
<td>MNGT 876 and GRBA 853, or equivalent</td>
<td>3</td>
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<tr>
<td>988</td>
<td>Seminar in Management Information Systems</td>
<td>MNGT 950 or equivalent</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>989</td>
<td>Seminar in Organization and Management Theory</td>
<td>Permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
### Seminar in History of Management Thought

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

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.

### Seminar in Selected Topics I

**Credit Hours:** 3–6  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Management department permission

### Seminar in Selected Topics II

**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Management department permission

### Directed Reading or Research

**Credit Hours:** 1–6  
**Campus:**  
**Course Delivery:** Classroom

### Doctoral Dissertation

**Credit Hours:** 1–24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Admission to doctoral degree program and permission of supervisory committee chair

### Courses for MRKT (MRKT)

#### Marketing and Globalization

**Prereqs:**  
GRBA *813 or equivalent

Globalization and resulting changes in the business environment. Access to new consumers, new supplies. The effect on consumer choices. Readings from scholarly and popular press, videos, and a “real world” application. Marketing strategies developed for Nebraska firms and organizations such as...
Services Marketing

Prereqs: MRKT 341 (http://bulletin.unl.edu/courses/MRKT/341).

Services marketing and the services marketing process. Key concepts, issues and terminology. Specific tools and frameworks enabling communication with other professional marketers and analysis of services marketing situations to make realistic recommendations for managerial action.

Sports Marketing

Prereqs: MRKT 341 (http://bulletin.unl.edu/courses/MRKT/341) or permission.

Basic concepts and theories unique to sports marketing, review of the basic principles of marketing in the context of sports. Framework provided for incorporation of unpredictable nature of the sports industry and exploration of the complex relationships between the elements of sports and marketing. Current research in the area of sports marketing, coverage if the growing popularity of women's sports, and the globalization of sports.

Marketing and Electronic Commerce

Prereqs: MRKT 341 (http://bulletin.unl.edu/courses/MRKT/341); MRKT 350 (http://bulletin.unl.edu/courses/MRKT/350) or MNGT/MIST 350 (http://bulletin.unl.edu/courses/MIST/350).

Strategies to deal with opportunities and challenges of evolving technology and marketing in digital networks of customers, suppliers, and employees; different interactive marketing platforms for e-commerce; the future and strategic, societal, and ethical implications of technology and interactive marketing in e-commerce.

Strategic Database Marketing

Prereqs: For MRKT 450: ECON 215 (http://bulletin.unl.edu/courses/ECON/215) or equivalent; MRKT 341 (http://bulletin.unl.edu/courses/MRKT/341) and 350 (http://bulletin.unl.edu/courses/MRKT/350). For MRKT 850: ECON 215 (http://bulletin.unl.edu/courses/ECON/215) or equivalent.

This course is a prerequisite for: MRKT 450 (http://bulletin.unl.edu/courses/MRKT/450).


Applied Marketing Research

This course is a prerequisite for: MRKT 450 (http://bulletin.unl.edu/courses/MRKT/450).

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>MRKT 822</td>
<td>Survey of Buyer Behavior</td>
<td>GRBA *813 or equivalent, or permission</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Research methods to supply marketing information pertaining to the:</td>
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<td>assessment of the nature of demand, assessment of the extent of demand,</td>
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<td></td>
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<td>marketing program development, and the monitoring of marketing</td>
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<td></td>
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<td>performance.</td>
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<tr>
<td>MRKT 824</td>
<td>Advanced Quantitative Analysis in Marketing</td>
<td>GRBA *813 or equivalent, or permission</td>
<td>3</td>
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<td>Crosslisted as SRAM 824</td>
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<td>Review, evaluation, and design of advanced marketing research</td>
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<td>investigations. State-of-the-art methodological issues relevant to</td>
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<td>marketing to provide an understanding of multivariate data analysis</td>
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<td>pertinent to the marketing literature. Analysis of linkage, structure,</td>
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<td></td>
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<td>and causality/change for marketing phenomena.</td>
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<tr>
<td>MRKT 830</td>
<td>Strategic Issues in Marketing Communication</td>
<td>GRBA *813 or equivalent, or permission</td>
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<td></td>
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<td>Analysis and application of current concepts regarding the formulation</td>
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<td>and evaluation of marketing communication strategy in organizations</td>
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<td></td>
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<td>which operate on a profit and not-for-profit basis.</td>
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<tr>
<td>MRKT 835</td>
<td>Marketing Channels and Distribution</td>
<td>GRBA *813 or equivalent, or permission</td>
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<td></td>
<td></td>
<td>Marketing management issues related to selection of intermediaries,</td>
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<td>channel control, marketing institutions, channel power and pricing.</td>
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<td>Distribution management issues: location, finished goods inventory,</td>
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<td>transportation, communication, and customer service.</td>
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<tr>
<td>MRKT 896</td>
<td>Sports Marketing Practicum</td>
<td>MRKT 828 (and permission)</td>
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<td></td>
<td></td>
<td>Supervised sports marketing related internship.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
<td>Credit Hours</td>
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<tr>
<td>MRKT 898</td>
<td>Seminar: Special Topics</td>
<td>GRBA 813 or equivalent, or permission</td>
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<td></td>
<td>Current topics in marketing; services marketing, ethics, and business-to-business marketing.</td>
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<tr>
<td>MRKT 899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6–10</td>
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<td>Classroom</td>
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<tr>
<td>MRKT 940</td>
<td>Marketing Management</td>
<td>Permission</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Decision-making activities in problems concerned with the development and management of marketing programs. Strategy choices in situations involving product development, market analysis and segmentation, channels, merchandising, promotion, pricing, and marketing research.</td>
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<tr>
<td>MRKT 944</td>
<td>Theory of Logistics</td>
<td>Permission</td>
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<td></td>
<td>Critical examination of various theories of structure and operation of logistics systems. Application of logistics theory to business problems.</td>
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<tr>
<td>MRKT 954</td>
<td>Problems in International Marketing</td>
<td>Permission</td>
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<td>Simulation of marketing decision making in an international environment. Material in the course is balanced between the developed and underdeveloped countries of the world in Europe, Africa, Asia, and the Americas. Case materials are used as a basis for class discussion. Cases and discussions focus on specific interests of students enrolled.</td>
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<tr>
<td>MRKT 970</td>
<td>Development of Marketing Theory</td>
<td>Permission</td>
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</table>
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.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>MRKT 971</td>
<td>Marketing and Society</td>
<td>Permission</td>
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<tr>
<td>MRKT 972</td>
<td>Seminar: Behavioral Research in Marketing</td>
<td>MRKT 822, and permission</td>
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<td>MRKT 980</td>
<td>Marketing Colloquium</td>
<td>Permission</td>
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<td>MRKT 996</td>
<td>Directed Reading or Research</td>
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<td>1-3</td>
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<td>Classroom</td>
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<tr>
<td>MRKT 998D</td>
<td>Seminar in Special Topics</td>
<td>Permission</td>
<td>3</td>
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<tr>
<td>MRKT 999</td>
<td>Doctoral Dissertation</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>1-24</td>
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<td>Classroom</td>
</tr>
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</table>
Courses for ACCT (ACCT)

**ACCT 404/804 Advanced Accounting**

Prereqs: 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; partnership accounting; accounting for foreign currency transactions and translations; governmental and not-for-profit accounting.

**ACCT 408/808 Advanced Managerial Accounting**

Prereqs: FINA 361 and ACCT 308 with grade of C or better, 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. Problems, cases, library materials, and computer systems analysis are used to develop understanding of variance analysis, cost systems, capital budgeting, and other quantitative techniques relevant to internal accounting.

**ACCT 410/810 Auditing**

Prereqs: ACCT 309 and 314, both with a grade of C or better.

Duties and responsibilities of auditors, methods of conducting various kinds of audits; audit working papers; the preparation of the audit report; the auditor’s certificate; special problems in the audit of different kinds of enterprises.

**ACCT 412/812 Federal Tax Accounting**

Prereqs: ACCT 313 with a grade of C or better, or permission.

Federal and state income tax concepts. Includes theory and historical growth of the fundamentals of the federal tax laws and regulations. Emphasis on the 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.

**ACCT 802 Accounting Standards**

Prereqs: ACCT 810 with a grade of C
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Course Delivery</th>
<th>Prereqs</th>
<th>Credit Hours</th>
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<tr>
<td>ACCT 803</td>
<td>Seminar in Financial Accounting</td>
<td>Classroom</td>
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<td>Admission to the Masters of Professional Accountancy (MPA) program; or permission of MPA faculty adviser and instructor</td>
<td>1–3</td>
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<tr>
<td>ACCT 805</td>
<td>Financial Accounting</td>
<td>Classroom</td>
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<td>Permission of MBA or MPA director</td>
<td>3</td>
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<tr>
<td>ACCT 807</td>
<td>Professional Responsibility and Ethics in Accounting</td>
<td>Classroom</td>
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<td>Permission of MBA or MPA director</td>
<td>3</td>
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<tr>
<td>ACCT 813</td>
<td>Corporate Tax Accounting</td>
<td>Classroom</td>
<td></td>
<td>ACCT 812 and admission to the Master of Professional Accountancy Program</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>ACCT 814</td>
<td>Governmental and Not–For–Profit Accounting</td>
<td>Classroom</td>
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<td>ACCT 314</td>
<td>3</td>
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</tbody>
</table>
**Tax Research and Planning**

**ACCT 815**

Prereqs: [ACCT 812](http://bulletin.unl.edu/courses/ACCT/812)

Development of skills in identifying problems, interpreting facts, conducting research, and communicating results in the field of Federal taxation.

**Special Topics in Federal Taxation**

**ACCT 816**

Prereqs: [ACCT 812](http://bulletin.unl.edu/courses/ACCT/812)

Areas of Federal law that are especially relevant in the prevailing economic and political climate.

**The Income Tax and Management Decisions**

**ACCT 817**

Prereqs: Courses constituting the equivalent of the undergraduate Common Body of Knowledge requirement for CBA

The impact of Federal income tax law on management decisions, more from the viewpoint of recognizing problems than prescribing solutions.

**Partnership Tax Accounting**

**ACCT 819**

Federal income taxation for partnerships. Tax laws associated with formation, operation, distribution, disposal, and dissolution.

**Seminar in Auditing**

**ACCT 831**

Prereqs: Admission to the Masters of Professional Accountancy (MPA) program; or permission of MPA faculty adviser and instructor

**Taxation—Individual Income**

**ACCT 837**

Crosslisted as LAW 637G

The structure and content of the federal income tax system, focusing on taxation of individuals. Income, deductions, 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.
**Taxation--Corporate**

Prereqs: 
LAW 637G (http://bulletin.unl.edu/courses/LAW/637G).

Pre- or coreq: LAW 632 (http://bulletin.unl.edu/courses/LAW/632)/G.
Advanced federal income tax focusing on income taxation of corporations and shareholders.

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**Fraud Examination**

Prereqs: 
Admission to the Masters of Professional Accountancy (MPA) program, or permission of MPA faculty adviser and instructor.

Fraud and how fraud differs from other crimes. Fraud techniques, schemes, and actual fraud cases.

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**Business Planning**

Crosslisted as LAW 648G

Prereqs: 
LAW 632 (http://bulletin.unl.edu/courses/LAW/632)/G, 638/G

Series of separate, rather detailed planning problems. Each problem calls for the selection and planning of a transaction to meet the needs of the parties involved, in light of applicable corporate, partnership, tax, and securities considerations.

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**Controllership**

Prereqs: 
Admission to either the Masters of Professional Accountancy (MPA) or MBA program; or permission of MPA faculty adviser and instructor; ACCT 808 (http://bulletin.unl.edu/courses/ACCT/808) or GRBA 810 (http://bulletin.unl.edu/courses/GRBA/810)

Rudiments of conceptual framework for designing and evaluating management accounting and control systems for business firms and situations. Case studies on the management aspects of budgeting, standard setting, variance analysis, cost allocation, operating control, transfer pricing, capital budgeting, performance evaluation, and other pertinent topics relating to managerial uses of accounting data.

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**Seminar in Managerial Accounting**

Prereqs: 
Admission to either the Masters of Professional Accountancy (MPA) or MBA program; or permission of MPA faculty adviser and instructor

This course is a prerequisite for: ACCT 995 (http://bulletin.unl.edu/courses/ACCT/995)

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**Taxation--Individual Income II**

Crosslisted as LAW 663G
Most important tax principles affecting business and investments, as well as an introduction to basic tax procedure (both administrative and judicial), civil and criminal fraud, tax research, and certain ethical issues common in tax practice.

**Financial Reporting and Analysis**

**Prereqs:**
Intermediate financial accounting or ACCT 805 [link](http://bulletin.unl.edu/courses/ACCT/805); permission of the MBA director

How to effectively utilize accounting information presented in financial statements. Analysis of primary financial statements, revenue recognition practices, the financial reporting system, the effects of accounting method choice on reported financial data, and firm valuation.

**Masters Thesis**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Seminar in Comparative Accounting Systems**

**Prereqs:**
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, governmental or other not-for-profit systems, Securities and Exchange Commission regulations, federal income tax rules, and foreign systems. Contrasts with traditional financial and managerial reporting systems and the reasons for the differences that exist.

**Seminar in Contemporary Accounting Theory: Empirical Tests and Methodologies**

**Prereqs:**
ACCT *803

Empirical validations and implications of accounting information. The convergence of accounting with other disciplines such as: behavioral sciences; portfolio theory; and information theory. Recent empirical studies such as: implications of the efficient capital market hypothesis on external financial reporting, information content of financial reports, and market perceptions of external accounting information.

**History and Philosophy of Accounting Thought**

**Prereqs:**
Permission

Credit Hours: 3
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<tr>
<th>Course Code</th>
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<tr>
<td>ACCT 945</td>
<td>Partnership Taxation</td>
<td>ACCT 812 or LAW 637G</td>
<td>1-4</td>
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<tr>
<td>ACCT 967</td>
<td>Estate Planning</td>
<td>LAW 637G</td>
<td>1-4</td>
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<tr>
<td>ACCT 968</td>
<td>Estate Planning Problems</td>
<td>LAW 637G</td>
<td>1-4</td>
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<tr>
<td>ACCT 969</td>
<td>Tax Policy Seminar</td>
<td>LAW 637G</td>
<td>1-4</td>
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<tr>
<td>ACCT 984</td>
<td>Seminar in Selected Topics</td>
<td>Admission to PhD program and permission</td>
<td>3</td>
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<td>Lecture 3</td>
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<tr>
<td>ACCT 990</td>
<td>Accountancy Internship</td>
<td>Admission to MPA program, permission of MPA adviser, and acceptance</td>
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<td>Classroom</td>
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<td>into approved internship program</td>
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<td>Max credits per degree: 6</td>
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</table>
Maximum of 6 sem hrs can be counted towards the MPA degree. Students present oral and written reports to faculty seminar once a semester. Independent study of theories, principles, practices, techniques, and strategies utilized in the accounting field. Practical experience in professional accounting situations through a preapproved internship program.

**Seminar in Capital Market Research in Accounting**

Prereqs:
Admission to PhD program, completion of research tools requirement, and permission

Capital market effects of accounting measurements and presentation, foundation of capital market research in accounting, methodology in conducting capital market research, and implication of capital market effects on accounting policy.

**Seminar in Behavioral Accounting Research**

Prereqs:
Admission to PhD program, completion of research tools requirements, and permission

MNGT 960 recommended. Behavioral factors in accounting system, design, audit judgment, decision making using accounting data, performance evaluation, accounting policy formation, and other accounting-related tasks.

**Seminar in Analytical Accounting Models**

Prereqs:
Admission to PhD program and permission

Measurement alternatives through modeling of choices and economic analysis of information choices.

**Seminar in Contemporary Managerial Accounting: Selected Topics**

Prereqs:
ACCT 858 or equivalent

May be repeated for credit if different subject matter. Special subjects in contemporary managerial accounting.

**Directed Reading or Research**

Prereqs:

May be repeated for credit if different subject matter. Special subjects in contemporary managerial accounting.
## Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Business).

**Area Committee:** Professors Ravi Sohi (chair), Gentry, Luthans, Smith

**School/Departments Cooperating:** Accountancy, 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 MA, MBA, MBA/JD, MBA/MARC (Master of Architecture), MPA, and the PhD program. These programs are accredited by the Association to Advance 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 at mba.com. PhD students who wish to be considered for fellowships or assistantships during the academic year should begin the application process by December 1. MBA students need to be admitted by March 1 in order to be fully considered. Fellowships and assistantships are only available to full-time students in the on-campus program.

Applicants for admission to the masters programs (MA, MS, MPA), other than MBA programs, are normally graduates of an Association to Advance Collegiate Schools of Business (AACSB) accredited institution. Students who are not graduates of an AACSB accredited college or school of business are usually required to complete several courses to satisfy the Common Body of Knowledge (CBK), which consists of a combination of undergraduate and graduate courses. Students who hold a bachelors degree in business administration or who have previously completed undergraduate course work in these areas may be able to have some CBK courses 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.

**NOTE:** No student on nondegree status may take graduate courses in the business area without prior specific written approval of the chair of the Graduate Committee.

### Master of Business Administration

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Business_MBA).

The MBA program is designed to provide students with broad exposure to business administration and its functional areas. Those who have little or no previous course work in business will find the MBA program beneficial. Students from areas such as the humanities, sciences, engineering, social sciences, journalism, education, agriculture, and architecture choose the MBA program. Students interested in the MBA program may register as a full-time or part-time student. On-campus courses are offered during the fall, spring and summer sessions.

The MBA program is also available on-line. This on-line delivery, along with the modular scheduling, allows today’s working professional the opportunity to participate in an internationally recognized program without any career interruptions. If travel, job or family obligations prevent you from attending traditional on-campus classes, the flexibility of on-line classes brings the UNL MBA to you—on your schedule.

For additional information on the Distance MBA program, contact:

Kerri Hiatt  
Distance MBA Program Coordinator and Advisor  
University of Nebraska-Lincoln
The College of Business offers several joint and cooperative MBA programs:

- An MBA program with a specialization in agribusiness is offered in cooperation with the College of Agricultural Sciences and Natural Resources.
- The MBA/JD 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 MBA/M.Arch 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 three-year sequence.

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 prerequisites are calculus, statistics, and computer proficiency. Programs that hold a bachelor's degree in business may be allowed to waive some of the MBA core classes. This determination will be made upon admission.

The graduate core consists of the following 18 hours of course work: GRBA 810, 811, 812, 813, 814, and 815.

The cross-functional requirements include GRBA 851, 852, 853, and 896 or 898. GRBA 853 is to be taken in the student’s final semester in the program.

The breadth requirements include an additional 9 hours from three of the five interdepartmental business areas—accounting, economics, finance, marketing, and management. At least 6 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 with advisor approval. At least one course must be graduate-only (*800 or 900).

MBA students admitted with limited professional work experience must complete an internship. Students may receive elective credit for their internship in GRBA 890 as part of their program. A maximum of 6 credit hours may be earned from two separate internship experiences.

MBA students may structure the electives and breadth requirements into a specialization. A specialization is made up of 9 hours, 6 of which must be graduate-only (*800 or 900) in an area of business. Please see an MBA advisor for more information.

According to the policies of the Graduate College and the business interdepartmental area faculty, candidates for the MBA are required to take a final written, comprehensive examination. This exam will be administered in GRBA 853, which should be taken during a student’s final semester in the program.

In addition to the MBA application and admission requirements listed above, students interested in the MBA/JD program must also submit Law College application materials and be admitted to the law program. Because the Law College only admits first-year students in the fall semester, application materials must be received by March 1 in order to be considered for the following academic year. For further information on the program, please contact the Assistant Dean, College of Law, University of Nebraska–Lincoln.

Master of Professional Accountancy

For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/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 accountancy 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.

Students interested in a career in accounting should consider the Master of Professional Accountancy (MPA) degree. This degree may be earned by students pursuing a Bachelor of Business Administration degree at UNL or by students who have already completed an undergraduate degree. Because admission and enrollment in the MPA program involves specific requirements that differ from those of other business programs, students interested in this degree should contact the MPA adviser, Dr. Jim Brown, prior to enrolling in course work: jbrown2@unl.edu or 402-472-2320.

The MPA/JD 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.

Admission and enrollment in this program has some very specific deadlines which differ from those described above. It is very important for students interested in this program to consult with the Director of the MPA program, prior to applying for admission.

Applicants for admission to the MPA program are normally either enrolled in the bachelor's 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 one copy of an official transcript covering all collegiate work completed. At the time of admission, transcripts are reviewed to determine if any deficiencies must be completed to satisfy accreditation standards (as established 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 during the first semester of their senior year. 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 ACCT 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 GRBA 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/JD program must also 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 semester, 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 Association to Advance Collegiate Schools of Business (AASCB) accredited college or school of business administration will be required to complete the Common Body of Knowledge courses.

The Common Body of Knowledge (CBK) consists of the following classes: BLAW 371 or 372 (Legal Environment); ACCT 201 and 202 (Principles) or 306; ECON 211 and 212 (Principles) or 210, ECON 215 or STAT 218 (Statistics); FINA 341 (Finance); MKT 341 (Marketing); MGMT 360 (Managing Behavior in Organizations); and MGMT 331 (Operations and Resource Management). In addition, students are expected to have completed a course in calculus (MATH 104 or 106) and show computer proficiency (BSAD 150) and oral and written communication skills (ENGL 150, ENGL 254, or COMM 286). Furthermore, students who have not previously completed an administrative policy course will be required to take GRBA 853, Strategic Management and Business Policy.

The MA 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 adviser). The MA program is normally chosen by students who wish to build more knowledge in the area of specialization.

The MA degree is offered under all 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 or two principal fields to be selected from banking, finance, insurance, investments, management information systems, management science, organization and management theory, 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 Options 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 996, directed reading courses, may not be used to fulfill the minimum hours required in courses open exclusively to graduate students (900 level or 800 level without 400 or lower counterparts) for all three options.

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.

The Marketing Department also offers a specialization in marketing, communications studies, and advertising. This is an Option III program. The program consists of a major—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. A comprehensive oral examination is also required.

The PhD program is designed primarily for those who expect to pursue a career in research or university-level teaching.

Students in a graduate business program must 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 interested in the programs offered by the Business Interdepartmental Area may contact Graduate Advising for further information:

Graduate Advising
University of Nebraska–Lincoln
139 CBA
PO Box 880405
Lincoln, NE 68588–0405
402–472–2338
cbagrad@unl.edu

Students in the MA, MPA, MBA, MS, MBA/JD and MBA/MArch program should also be aware of the requirement of submission of the Memorandum of Courses form prior to completion of half the program. Please contact your advisor for more information.

Applicants for admission to the PhD program should be graduates of an accredited institution with a degree in business administration. Students who are not 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 doctor 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.

As part of their regular course work, doctoral students are required to take ECON 852 Teaching College Economics and Business prior to, or parallel, with the first course taught. 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 bachelors degree and may be taken as either graduate–level or undergraduate–level courses designated by the supervisory committee. The tool may include courses in one or more of the following fields designated by the supervisory committee: research methods, statistics, mathematics, computer science, or foreign language. These hours will not be part of the required minimum 90 hours for the PhD degree.

Specializations available at the doctoral level:
Accountancy; Finance; Management; Marketing

School of Accountancy
For a brief description of the program, application requirements and contact information, view the graduate program summary, Click here.

Director: Paul Shoemaker, Ph.D.
Graduate Committee Chair: David Smith, Ph.D.

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.

Finance
View the PhD program information in Finance.

Department Chair: Manferd Peterson, Ph.D.
Graduate Chair: John Geppert, Ph.D.

Management
View the program information in Business.

Department Chair: Gwen Combs, Ph.D.
Graduate Chair: Peter Harms, Ph.D.

The Ph.D. program in Management is a research–oriented opportunity for students to prepare for successful academic careers as faculty in Colleges of Business. We prepare students to pursue high quality scholarship, and to perform effectively in the classroom. The program requires full–time participation.

Admission
We will be inviting applications for admission to the program in Fall 2012. We anticipate admitting 2–3 students per year. Students admitted to the program typically will have a Masters degree in a Business discipline or related field from an accredited university. A GMAT/GRE score will be required as part of the admission process. The GMAT/GRE score is not the sole admission criterion, however the average score for admitted students will be targeted at 1400+ using the sum of GMAT (or GRE equivalent) and 200* GPA.

Coursework
The program provides a broad base in contemporary issues in Management, and will take at least four years to complete: two to two and a half years of coursework, with the remainder devoted to dissertation research, teaching, and other research projects aimed at assisting students develop their own programmatic research agenda. Typically, students will complete at least six courses from the Management Department in the areas of Organizational Behavior, Human Resources, Strategy, Leadership, and Organizational Research Methods. Students will be required to complete at least four courses in various statistical and/or qualitative data analysis techniques, and three courses in an approved minor area of study.

Typically, students will take their comprehensive exams at the end of their second summer in residence after their core curriculum requirements have been met. Upon successful completion of comprehensive exams students will be expected to defend a dissertation proposal in the following academic year, and then successfully defend the completed dissertation within 1–2 years of the proposal defense.

In addition to the feedback received in coursework, students will be evaluated each year by the faculty to ensure satisfactory progress toward the degree.

Support
Students accepted into the Ph.D. program in Management will receive a stipend, tuition remission, and basic health insurance offered by the University of
Nebraska’s student health insurance plan. Students can also expect some support for travel to professional meetings where they are presenting papers based on their research.

**Student Life**

Ph.D. students are expected to be active partners in the academic community. They will have an opportunity to work with different faculty, teach for at least two semesters, develop independent research projects, and participate in various brownbag sessions, current topics seminars, and doctoral development sessions.

**Marketing**

View the Masters Degree program information in Marketing (http://cba.unl.edu/departments/marketing/programs/masters.aspx).

View the PhD program information in Marketing (http://cba.unl.edu/departments/marketing/programs/phd.aspx).

Interim Department Chair: A. Dwayne Ball, Ph.D.

Graduate Committee Chair: James Gentry, DBA

**Faculty**

**School of Accountancy**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Accountancy).

**Finance**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Business).

**Management**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Business).

**Marketing**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Business).

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**Chemistry**

**Courses for CHEM (CHEM)**

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<th>BIOC</th>
<th>Biomolecules and Metabolism LINK (<a href="http://bulletin.unl.edu/courses/BIOC/431">http://bulletin.unl.edu/courses/BIOC/431</a>)</th>
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<tbody>
<tr>
<td>431/831</td>
<td>Crosslisted as BIOS 431/831, CHEM 431/831</td>
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Prereqs: CHEM 252 (http://bulletin.unl.edu/courses/CHEM/252) or 262 (http://bulletin.unl.edu/courses/CHEM/262), BIOS 102 (http://bulletin.unl.edu/courses/BIOS/102) recommended.

This course is a prerequisite for: BIOC 432 (http://bulletin.unl.edu/courses/BIOC/432), BIOC 433 (http://bulletin.unl.edu/courses/BIOC/433), BIOS 360 (http://bulletin.unl.edu/courses/BIOS/360).

First course of a two-semester, comprehensive biochemistry course sequence.

- Structure and function of proteins, nucleic acids, carbohydrates and lipids;
- Nature of enzymes; major metabolic pathways; and biochemical energy production.

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<tr>
<th>BIOC</th>
<th>Gene Expression and Replication LINK (<a href="http://bulletin.unl.edu/courses/BIOC/432">http://bulletin.unl.edu/courses/BIOC/432</a>)</th>
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<tr>
<td>432/832</td>
<td>Crosslisted as BIOS 432, CHEM 432/832</td>
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</table>

Prereqs: BIOC 431 (http://bulletin.unl.edu/courses/BIOC/431)/831

| Credit Hours: | 4 |
| Course Format: | Lecture 4 |
| Course Delivery: | Classroom |

| Credit Hours: | 2 |
| Course Format: | Lecture 2 |
### Biochemistry Laboratory (BIOC 433/833)

Crosslisted as BIOS 433/833, CHEM 433/833

**Prereqs:**
- BIOC 431 (http://bulletin.unl.edu/courses/BIOC/431) or concurrent enrollment.

Introduction to techniques used in biochemical and biotechnology research, including measurement of pH, spectroscopy, analysis of enzymes, chromatography, fractionation of macromolecules, electrophoresis, and centrifugation.

### Plant Biochemistry (BIOC 434/834)

Crosslisted as BIOS 434/834, CHEM 434/834, AGRO 434/834

**Prereqs:**
- BIOC/BIOS/CHEM 431 (http://bulletin.unl.edu/courses/CHEM/431) or concurrent enrollment.

Offered every other year beginning spring 2007.

Biochemical metabolism unique to plants. Relationships of topics previously acquired in general biochemistry to biochemical processes unique to plants. Biochemical mechanisms behind physiological processes discussed in plant or crop physiology.

### Advanced Topics in Biophysical Chemistry (BIOC 486/886)

Crosslisted as BIOS 486/886, CHEM 486/886

**Prereqs:**
- CHEM 471 (http://bulletin.unl.edu/courses/CHEM/471) or 481 (http://bulletin.unl.edu/courses/CHEM/481) or 871 (http://bulletin.unl.edu/courses/CHEM/871) or 481 (http://bulletin.unl.edu/courses/CHEM/481) or 881 (http://bulletin.unl.edu/courses/CHEM/881).

Applications of thermodynamics to biochemical phenomena, optical properties of proteins and polynucleotides, and kinetics of rapid reactions.

### Physical Basis of Macromolecular Function (BIOC 836)

Crosslisted as CHEM 836

Introduction to the theory and practice of biophysical characterization of macromolecules. The course will be based on primary research literature, although a supporting text will be used for in depth discussion of the methods.

### Survey of Biochemistry (BIOC 839)

Crosslisted as BIOS 839, CHEM 839

**Prereqs:**
- Permission
Comprehensive survey of biochemistry for incoming graduate students. Topics include those in BIOC 831 (http://bulletin.unl.edu/courses/BIOC/831) and 832 (http://bulletin.unl.edu/courses/BIOC/832), but not all topics discussed in lecture periods. Depth enhanced by assigned readings.

**Redox Biochemistry**  
Crosslisted as CHEM 848  

**Prereqs:**
3 hrs BIOC and 3 hrs inorganic chemistry

Redox (oxidation and reduction)–based biochemical processes (energy generation, oxygen transfer, enzyme catalysis, signaling, gene regulation, and diseases). Recent progress in these areas. Roles of metals in biochemical reactions, metal homeostasis, and biosynthesis of metal cofactors and metal sites. Biochemistry and pathophysiology of redoxactive species and radicals. Antioxidant molecules and enzymes.

**Chemistry for Secondary School Classrooms**  
Crosslisted as BIOS 883, CHEM 869, TEAC 869

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe–experiments, simulations, at–home experiments, teaching materials, and industrial applications related to the title description.

A. Structure and Properties of Matter: Water and Solutions (1 cr)
B. Structure and Properties of Matter: Periodicity (1 cr)
D. Structure and Properties of Matter: Bonding and Structure (1 cr)
E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
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: Acids and Bases (1 cr)
T. Chemical Reactions: Kinetics (1 cr)
U. Chemical Reactions: Oxidation, Reduction and Electrochemistry (1 cr)
V. Equilibrium: Unifying Theme (1 cr)
W. Conservation of Energy and the Increase in Disorder: Thermodynamics (1 cr)
Y. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
Z. Structure of Atoms: Nuclear Chemistry (1 cr)

**Seminar in Biological Chemistry**  
Crosslisted as CHEM 992K

**Prereqs:**
BIOC 832 (http://bulletin.unl.edu/courses/BIOC/832) or *839; and permission

**Analytical Chemistry**  
Crosslisted as CHEM 421/821
**CHEM 421/821**  
**Analytical Chemistry Laboratory**

- **Credit Hours:** 2
- **Course Format:** Lab 6
- **Course Delivery:** Classroom
- **Prereqs:** Same as for CHEM 421. Applications of analytical chemical principles to laboratory problems.

This course is a prerequisite for: CHEM 421.

**CHEM 423/823**  
**Advanced Organic Preparations**

- **Credit Hours:** 1-5
- **Max credits per semester:** 5
- **Course Format:** Lab
- **Course Delivery:** Classroom
- **Prereqs:** CHEM 252 or 254. For students who wish additional laboratory work in organic chemistry.

**CHEM 471/871**  
**Physical Chemistry**

- **Credit Hours:** 4
- **Course Format:** Lecture 3, Recitation 1
- **Course Delivery:** Classroom
- **Prereqs:** CHEM 114 and 116, or 221, with a grade of 'C' or better; MATH 106 and 238, or 107; one year college physics.
- **ACE Outcomes:** 10

This course is a prerequisite for: CHEM 421, BIOC 486.

Credit may not be earned in both CHEM 471 and CHEM 481.


**CHEM 481/881**  
**Physical Chemistry I**

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom
- **ACE Outcomes:** 10

This course is a prerequisite for: CHEM 421.
Credit Hours: 4
Course Format: Lecture 3, Recitation 1
Course Delivery: Classroom

Prereqs: CHEM 114 and 116 with grades of at least C, or CHEM 221 with grade of at least C; MATH 208, PHYS 212 and (recommended) 222.

This course is a prerequisite for PHYS 422, CHEM 482, and CHEM 484.

Credit may not be earned in both CHEM 471 and 481.

CHEM 481 and 482/881 form a continuous basic course in physical chemistry for students interested in chemistry as a profession. Thermodynamics and statistical mechanics and their application to the study of solids, liquids, gases, solutions, phase equilibria, and chemical equilibria.

**Physical Chemistry II**

Credit Hours: 4
Course Format: Lecture 3, Recitation 1
Course Delivery: Classroom

Prereqs: CHEM 481/881.

This course is a prerequisite for CHEM 484, CHEM 487A, and 487B.

This course should parallel CHEM 484. Continuation of CHEM 481.

Statistical mechanics and thermodynamics and their applications to the study of solids, liquids, gases, solutions, and chemical equilibria. Introduction to quantum mechanics and its application to problems in atomic and molecular structure and to spectroscopy. Chemical kinetics.

**Physical Chemical Measurements**

Credit Hours: 3
Course Format: Lab 3
Course Delivery: Classroom

Prereqs: CHEM 481/881. Parallel with CHEM 482.

CHEM 484/884 form a continuous basic course in physical chemistry for students interested in chemistry as a profession. Thermodynamics and statistical mechanics and their application to the study of solids, liquids, gases, solutions, phase equilibria, and chemical equilibria.

**Physical Chemical Measurements**

Credit Hours: 2
Course Format: Lab 3
Course Delivery: Classroom

Prereqs: CHEM 481/881.
Parallel with CHEM 482 (http://bulletin.unl.edu/courses/CHEM/482/882) (http://bulletin.unl.edu/courses/CHEM/882).

**CHEM 824**

Applied Problems in Analytical Chemistry

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821)

Selection and execution of analytical methods in the solution of typical academic and industrial chemical problems.

Credit Hours: 3

Campus: Classroom

**CHEM 825A**

Ionic Equilibria

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Survey of theory of ionic equilibrium systems of importance in chemical analysis.

Credit Hours: 1

Campus: Lecture 1

**CHEM 825B**

Electrochemical Methods

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Survey of principles and applications of electroanalytical chemistry.

Credit Hours: 2

Campus: Lecture 2

**CHEM 825D**

Mass Spectrometry

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Survey of the fundamentals (1 cr) and applications (1 cr) of mass spectrometry.

Credit Hours: 1–2

Max credits per degree: 2

Campus: Lecture 1

**CHEM 825E**

Data Handling

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Application of statistical, graphical and numerical methods for the treatment of analytical chemical data.

Credit Hours: 1

Campus: Lecture 1

**CHEM 825G**

Chromatographic Separations

Prereqs: CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Application of statistical, graphical and numerical methods for the treatment of analytical chemical data.
Optical Methods of Analysis

Prereqs:
CHEM 821 (http://bulletin.unl.edu/courses/CHEM/821) or *824

Survey of principles and analytical application of modern optical spectrometric methods.

Chemical Biology

Prereqs:
CHEM 252 (http://bulletin.unl.edu/courses/CHEM/252) or 262 (http://bulletin.unl.edu/courses/CHEM/262), and 871 (http://bulletin.unl.edu/courses/CHEM/871) or 881 (http://bulletin.unl.edu/courses/CHEM/881)

Credit toward the degree cannot be earned in both CHEM 835 (http://bulletin.unl.edu/courses/CHEM/835), and 831 (http://bulletin.unl.edu/courses/CHEM/831) and/or 832 (http://bulletin.unl.edu/courses/CHEM/832) or their equivalents. Use of recent advances in genomics to organize the field of biochemistry as well as an understanding of how biologists, biochemists and chemists use this information to cure diseases.

Inorganic Chemistry

Prereqs:
CHEM 252 (http://bulletin.unl.edu/courses/CHEM/252) or 262 (http://bulletin.unl.edu/courses/CHEM/262), and 264 (http://bulletin.unl.edu/courses/CHEM/264); parallel CHEM 843 (http://bulletin.unl.edu/courses/CHEM/843)

This course is a prerequisite for CHEM 841 (http://bulletin.unl.edu/courses/CHEM/841), CHEM 845 (http://bulletin.unl.edu/courses/CHEM/845), and the accompanying laboratory course, CHEM 843 (http://bulletin.unl.edu/courses/CHEM/843), constitute a basic course in inorganic chemistry. 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.

Inorganic Chemistry Laboratory

Prereqs:
CHEM 252 (http://bulletin.unl.edu/courses/CHEM/252) or 262 (http://bulletin.unl.edu/courses/CHEM/262), and 264 (http://bulletin.unl.edu/courses/CHEM/264); parallel: CHEM 841 (http://bulletin.unl.edu/courses/CHEM/841)

This course is a prerequisite for CHEM 841 (http://bulletin.unl.edu/courses/CHEM/841).
Introduction to typical inorganic chemistry laboratory techniques through the preparation and characterization of inorganic compounds.

**Modern Inorganic Chemistry (CHEM 845)**

**Prereqs:**
- CHEM 841
- 843
- 882

Topics in inorganic chemistry such as bioinorganics, 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.

**Advanced Organic Chemistry (CHEM 855)**

**Prereqs:**
- CHEM 252
- 262 or equivalent

Survey of modern concepts of structure/bonding, acidity/basicity, stereochemistry, and reaction mechanisms. Introduction to the fundamental tools used to investigate reaction mechanism (transition state theory, elementary Huckel 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.

**Organic Reactions (CHEM 865A)**

**Prereqs:**
- CHEM 855 and permission

Modern reactions and methodology for organic synthesis. Carbon-carbon bond-forming reactions; alkene synthesis; oxidation; reductions; function group interconversion; use of protecting groups; and organometallic reagents.

**Topics in Chemical Pedagogy (CHEM 874)**

Crosslisted as TEAC 874

A maximum combined total of 12 hours from TEAC 869 and/or 874 may be counted toward a masters degree. Credit in this course will not count towards a graduate degree in chemistry. Courses are Web-based. Topical chemistry content for high school teachers organized according to the National Science Education Standards.

A. Green Chemistry (2–3 cr)
B. Demonstrations for High School Chemistry (1–3 cr)
C. Experiments for High School Chemistry (1–3 cr)
D. Developing a Safety Culture (1 cr)
E. Chemistry of Life Processes: Biomolecules (1–3 cr)
F. Addressing Misconceptions (1–3 cr)
G. Mathematics Integration (MATH 874M) (2–3 cr) May be counted towards the MAT and MScT degrees in mathematics and statistics, not the MA, MS, or PhD.
H. Inquiry Strategies (1–3 cr)
I. Chemistry in the Workplace (1–3 cr)
J. Graphing Calculator Activities (2–3 cr)
Chemical Pedagogy in the High School Laboratory
Crosslisted as TEAC 875

Credit 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.

A. Small-scale Experiments (1-3 cr)
B. Technology Integration (3-6 cr)
E. Inquiry Experiments (1-3 cr)
K. At-home Experiments (1-3 cr)
P. Probe Experiments (1-3 cr)
T. Traditional Experiments (1-3 cr)

Survey of Modern Physical Chemistry

A one-semester survey course in modern physical chemistry, covering chemical thermodynamics, chemical kinetics, quantum chemistry, molecular structure and spectroscopy.

Special Problems

Prereqs: Permission

Introduction to Graduate Research

Prereqs: Admission to chemistry graduate program.

Series of lectures and activities designed to prepare for graduate research and graduate studies in chemistry.

Masters Thesis

Prereqs: Admission to masters degree program and permission of major adviser

Proteins
Crosslisted as BIOS 932, BIOC 932

Prereqs: BIOS/BIOS/CHM 832 or BIOS/BIOS/CHM 839

Protein structure and function.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted As</th>
<th>Prereqs</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 933</td>
<td>Enzymes</td>
<td>BIOS 933, BIOS 933</td>
<td>BIOC/BIOS/CHEM 432, or BIOC/BIOS/CHEM 832, or BIOC/CHEM 839</td>
<td>Kinetics regulation and reaction mechanisms of enzymes.</td>
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<tr>
<td>CHEM 934</td>
<td>Genome Dynamics and Gene Expression</td>
<td>BIOS 934, BIOS 934</td>
<td>BIOC/BIOS/CHEM 832 or permission</td>
<td>Detailed examination of dynamic control mechanisms of genome maintenance and gene regulation. Mechanisms of transcription, translation, and replication based on analysis of current and seminal literature.</td>
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<tr>
<td>CHEM 935</td>
<td>Metabolic Function and Dysfunction</td>
<td>BIOS 935, BIOS 935</td>
<td>BIOC/CHEM/BIOS 432, or permission BIO/CHEM/BIOS/832, or permission</td>
<td>Current metabolic research at the bioenergetic, metabolomic, and molecular level. The normal metabolic processes that go awry in cancer, obesity, and oxidative stress.</td>
</tr>
<tr>
<td>CHEM 937A</td>
<td>Advanced Topics in Plant Biochemistry: Photosynthesis and Related Processes</td>
<td>BIOS 937A</td>
<td>Permission</td>
<td>Offered every fourth semester. For course description, see BIOC 937A.</td>
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<tr>
<td>CHEM 939</td>
<td>Photobiochemistry</td>
<td></td>
<td>One year BIOC and PHYS</td>
<td>For course description, see BIOC 939</td>
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<td>CHEM 940</td>
<td>Seminar in Inorganic Chemistry</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>CHEM 943</td>
<td>Solid-State Chemistry</td>
<td>CHEM *845 and *885</td>
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<tr>
<td></td>
<td>Advanced course dealing with the structure, bonding, properties, and reactions of inorganic solid materials.</td>
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<tr>
<td>CHEM 945</td>
<td>Advanced Inorganic Chemistry</td>
<td>CHEM *845</td>
<td>2</td>
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<tr>
<td></td>
<td>Chemistry of the metallic compounds.</td>
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<tr>
<td>CHEM 946</td>
<td>Organometallic Chemistry</td>
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<td>1-6</td>
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<td></td>
<td>The chemistry of compounds that occupy the boundary between inorganic and organic chemistry.</td>
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<tr>
<td>CHEM 952</td>
<td>Stereochemistry of Organic Compounds</td>
<td>CHEM *855</td>
<td>2-4</td>
<td>4</td>
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<td></td>
<td>Types of stereoisomerism in organic compounds. Steric strain and certain other steric effects in reactions of organic substances.</td>
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<tr>
<td>CHEM 953</td>
<td>Organic Reaction Mechanisms</td>
<td>CHEM *855</td>
<td>2-4</td>
<td>4</td>
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<td></td>
<td>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-catalysis mechanisms.</td>
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<td>CHEM 954</td>
<td>Physical Organic Chemistry</td>
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[LINK](http://bulletin.unl.edu/courses/CHEM/943) [LINK](http://bulletin.unl.edu/courses/CHEM/945) [LINK](http://bulletin.unl.edu/courses/CHEM/946) [LINK](http://bulletin.unl.edu/courses/CHEM/952) [LINK](http://bulletin.unl.edu/courses/CHEM/953) [LINK](http://bulletin.unl.edu/courses/CHEM/954)
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<th>Campus</th>
<th>Course Delivery</th>
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<tr>
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<td>Metals in Organic Synthesis</td>
<td>Prereqs: CHEM 855</td>
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<td></td>
<td></td>
<td>Elementary aspects of molecular orbital (MO)</td>
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<td></td>
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<td>theory. Selected concepts in molecular</td>
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<td>calculations to reaction mechanisms and</td>
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<td>elucidation of electronic structure for</td>
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<td>experiment. Introduction to selected</td>
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<td>interdisciplinary topics.</td>
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<td>CHEM 964</td>
<td>Bioorganic Chemistry</td>
<td>Prereqs: CHEM 855</td>
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<td>Use of organometallic reagents and catalysts</td>
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<td>in organic synthesis.</td>
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<td>CHEM 965</td>
<td>Advanced Synthetic Strategy</td>
<td>Prereqs: CHEM 865</td>
<td>2-4</td>
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<td>Strategy and execution of organic synthesis</td>
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<td>Retrosynthetic analysis; total synthesis of</td>
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<td>CHEM 972</td>
<td>Quantum Chemistry I</td>
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<td>Basic principles of quantum mechanics</td>
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<td>and chemical bonding.</td>
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<td>CHEM 982</td>
<td>Chemical Thermodynamics</td>
<td>Prereqs: CHEM 885</td>
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<td>Principles of thermodynamics, with</td>
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<td>Classroom</td>
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<td>applications to chemical systems and</td>
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<td>processes, and illustrations from</td>
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<td></td>
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<td>current literature.</td>
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</tbody>
</table>
Statistical Thermodynamics

Prereqs: CHEM *885 or 982

Application of equilibrium statistical mechanics to problems of chemical interest. Calculation of thermodynamic functions from molecular structure data. Molecular theories of gases, liquids, and solutions.

Chemical Kinetics

Prereqs: CHEM *885 or 982

Concepts and equations; successive, competing, and reversible reactions; equilibrium, collision, and activated-complex theories; reaction mechanism; heterogeneous reactions; current literature.

Molecular Spectroscopy

Prereqs: CHEM 482/882 or *885 or 972; and permission.

A quantitative treatment of the principal methods of electronic, optical, and magnetic resonance spectroscopy.

Scattering

Prereqs: CHEM 482/882 or *885 or 972; and permission.

A quantitative treatment of the principal methods of light, electron and neutron scattering.

Seminar in Chemistry

CHEM 990 consists of monthly lectures presented by guest speakers from other colleges and universities, the government, and industry. Registration in CHEM 990 is required of all full-time CHEM graduate students. Current topics of chemical interest.

Selected Topics in Analytical Chemistry

Prereqs: CHEM 821 or *824, or parallel

CHEM 991A
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CHEM 991B</td>
<td>Special Topics in Inorganic Chemistry</td>
<td>CHEM *845 and permission</td>
<td>1–6</td>
<td>6</td>
<td>Classroom</td>
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<tr>
<td>CHEM 991E</td>
<td>Special Topics in Organic Chemistry</td>
<td>CHEM *855</td>
<td>2–4</td>
<td>4</td>
<td>Classroom</td>
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<tr>
<td>CHEM 991J</td>
<td>Special Topics in Physical Chemistry</td>
<td>CHEM 881 and CHEM 882, or *885</td>
<td>1–6</td>
<td>6</td>
<td>Classroom</td>
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<tr>
<td>CHEM 992A</td>
<td>Seminar in Analytical Chemistry</td>
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<td>1–5</td>
<td>5</td>
<td>Classroom</td>
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<tr>
<td>CHEM 992E</td>
<td>Seminar on Current Literature of Organic Chemistry</td>
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<td>1–5</td>
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<td>Classroom</td>
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<tr>
<td>CHEM 992J</td>
<td>Seminar in Physical Chemistry</td>
<td>CHEM *885</td>
<td>1–5</td>
<td>5</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Doctoral Dissertation

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

Description
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: James M. Takacs, Ph.D.
Graduate Committee: Professors David Hage (Chair), Jian Zhang (inorganic), Eric Dodds (analytical), Larry Parkhurst (physical), Andrzej Rajca (organic), Robert Powers (ex officio Graduate Admissions), James Takacs (ex officio Departmental Chair)

Graduate students may work towards the PhD or MS degree. Graduate courses and research are offered in five divisions of the department: analytical, biochemistry, inorganic, organic, and physical chemistry.

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. Students in good standing may continue to pursue PhD or MS degrees.

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 Option I, 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 thesis research. Students must specifically apply to the Graduate College for admission to the Option II masters degree before being admitted to the Graduate College. In addition, the student must obtain special permission from the Graduate Committee to work towards this degree option.

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; c) pass oral examinations on his/her dissertation research and on an original research proposal; d) present a dissertation which contains significant results of an original investigation 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 (MS and PhD)
Chemistry faculty are also active in the toxicology major (MS and PhD) which is offered jointly with UNMC.

Faculty
For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Chemistry"

Child, Youth and Family Studies

Courses for CYAF (CYAF)
### Supervisory Leadership

**Crosslisted as CYAF 807**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:**
- [ALEC 302](http://bulletin.unl.edu/courses/ALEC/302)

Knowledge and theoretical basis for practicing supervisors in a changing workplace where supervisors have increasing responsibilities due to the flattening or organizational structures, solving supervisory challenges in organizing and planning, problem solving and decision making, performance appraisal and leading a diverse workforce.

### Student Teaching Seminar in Family and Consumer Sciences

**Crosslisted as CYAF 403**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10

**Prereqs:**
- Parallel [CYAF 497J](http://bulletin.unl.edu/courses/CYAF/497J) / [897J](http://bulletin.unl.edu/courses/CYAF/897J)

Analysis of school programs with attention to: teacher certification in Family and Consumer Sciences; teacher and student rights and responsibilities; proper conduct of teachers; selected legal aspects of education; methods of communicating with parents and community members; current issues which impact education; and reflection and discussion of student teaching experiences. Reinforcement of learning theories, teaching principles, management, and best practices.

### Addictions and Families

**Crosslisted as CYAF 446/846**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

Introduction to addictions from a family systems perspective: theories; behavioral patterns; physiological, psychological and social impacts on individuals and the family; and implications for interventions and treatment.

### Working with GLBT Youth in Professional Contexts

**Crosslisted as WMNS 447/847**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

To introduce contextual considerations and research-informed guidelines for working with Gay, Lesbian, Bisexual, and Transgender youth in professional settings such as educational, mental health, medical, and community outreach. The systemic context of GLBT youth, including developmental transitions, unique stressors, peer relationships, and familial environments, will be explored. Ways to help GLBT youth thrive will be emphasized.

### Learning and Teaching Principles and Practices in Family and Consumer Sciences

**Crosslisted as CYAF 451/851**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:**
- Admission to the Family and Consumer Sciences Secondary Teacher Education Program; completion of 80% of subject area coursework with a 2.5 GPA or better; parallel CYAF 297J (http://bulletin.unl.edu/courses/CYAF/297J) (1 cr) or CYAF 894J (http://bulletin.unl.edu/courses/CYAF/894J) (1cr).

This course is a prerequisite for [CYAF 452](http://bulletin.unl.edu/courses/CYAF/452)

Theoretical issues in the area of teaching and learning as applied in Family and Consumer Sciences. Development of middle and secondary education
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>452/852</td>
<td>Curriculum Principles and Practices in Family and Consumer Sciences</td>
</tr>
<tr>
<td>458/858</td>
<td>Family Stress and Crisis, Coping and Recovery</td>
</tr>
<tr>
<td>460/860</td>
<td>Human Dimensions of Sustainability</td>
</tr>
<tr>
<td>474/874</td>
<td>Assessment in Early Childhood</td>
</tr>
<tr>
<td>476/876</td>
<td>Cognitive Processes in Children</td>
</tr>
</tbody>
</table>

### Curriculum Principles and Practices in Family and Consumer Sciences

**Prereqs:**
Admission to the Family and Consumer Sciences Secondary Teacher Education Program; completion of 80% of subject area course work with a 2.5 GPA or better; CYAF 451; parallel CYAF 397J (1 cr) or CYAF 894J (1 cr).

Practical issues in the area of teaching and learning as applied to Family and Consumer Sciences. Develop teaching and/or learning plans for teaching Family and Consumer Sciences. Analyze classroom management practices and develop plans for assessment.

### Family Stress and Crisis, Coping and Recovery

**Prereqs:**
Junior standing.

CYAF 458 is 'Letter grade only'.

Normative and non-normative family stressors (e.g. violence, economic conditions, war and political conflict, natural disasters) and how they affect family functioning. Family stress theories are used to understand crisis events and how families can cope and recover.

### Human Dimensions of Sustainability

Examination of the interdependence of human, ecological, economic sustainability and ways to lead a more sustainable life.

### Assessment in Early Childhood

**Prereqs:**
12 hrs family and consumer science, or related social sciences including CYAF 270 and 270L.

Selection, use, and interpretation of assessment instruments for understanding the developmental level of children from birth through age eight. Assessment of reasoning and thinking processes, concept formation, and social cognition.

### Cognitive Processes in Children

**Prereqs:**
12 hrs CYAF and/or related social sciences including CYAF 270 and 270L.

Credit Hours: 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>CYAF 477/877</td>
<td>Administration of Early Childhood Programs</td>
<td>3</td>
<td>12 hrs family and consumer sciences including CYAF 270 (<a href="http://bulletin.unl.edu/courses/CYAF/270">http://bulletin.unl.edu/courses/CYAF/270</a>).</td>
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<tr>
<td>CYAF 488/888</td>
<td>Child and Family Policy</td>
<td>3</td>
<td>Junior standing.</td>
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<tr>
<td>CYAF 490/890</td>
<td>Workshop Seminar</td>
<td>1-3</td>
<td>Current topics related to child, youth, and family studies. Topics vary.</td>
</tr>
<tr>
<td>CYAF 493/893</td>
<td>Special Topics in Contemporary Family Issues</td>
<td>1</td>
<td>Current issues such as debt management, gender and family, low-income families, retirement planning, work and family, mothering, fathering, housing. Topics vary.</td>
</tr>
<tr>
<td>CYAF 495/895</td>
<td>Special Topics in Family and Cultural Diversity</td>
<td>3</td>
<td>Current topics related to diverse populations, e.g., religion, sexual orientation, ethnicity. Topics vary.</td>
</tr>
</tbody>
</table>
### Advanced Independent Study

**Course Number:** CYAF 496/896

**Prereqs:**
12 hrs CYAF and/or related social sciences.

**Credit Hours:** 1-6
**Max credits per degree:** 6
**Course Format:** Independent Study
**Campus:** UNO
**Course Delivery:** Classroom

Individual projects in research, literature review, or creative production may or may not be an extension of course work.

**ACE Outcomes:**

### Community Internships in Child, Youth and Family Studies

**Course Number:** CYAF 497D/897D

**Prereqs:**
Junior standing; 12 hrs FACS or other social sciences.

**Credit Hours:** 3-6
**Max credits per degree:** 6
**Course Format:** Field
**Campus:** UNO
**Course Delivery:** Classroom

Fieldwork in agencies serving children, youth, families and communities.

### Student Teaching in an Infant/Toddler Program

**Course Number:** CYAF 497I/897I

**Prereqs:**
CYAF 497A. 
Pass/No Pass Only.

**Credit Hours:** 3-6
**Max credits per degree:** 6
**Course Format:** Field
**Course Delivery:** Classroom

Integrated developmental theories and research evidence into the planning, implementation, and evaluation of individual and group experiences for children in an infant and toddler program.

### Student Teaching in Family and Consumer Sciences

**Course Number:** CYAF 497J/897J

**Prereqs:**
Admission by application; completion of all required methods courses and practica with minimum grade of ‘C-‘ (2.33) in each of these courses.

This course is a prerequisite for: CYAF 403.

**Credit Hours:** 10
**Course Format:** Field 40
**Course Delivery:** Classroom

Supervised teaching experience in schools.

### Family and Consumer Sciences Methods

**Course Number:** CYAF 804A

**ACE Outcomes:**

**Prereqs:**
CYAF 497I (http://bulletin.unl.edu/courses/CYAF/497I/897I) requires one middle-level and one high school experience. CYAF 497J (http://bulletin.unl.edu/courses/CYAF/497J) is ‘Pass/No Pass only’.

Supervised teaching experience in schools.
### Family and Consumer Sciences Methods II

**Number:** 804B  
**Link:** [http://bulletin.unl.edu/courses/CYAF/804B](http://bulletin.unl.edu/courses/CYAF/804B)

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Admission to CYAF degree program and permission.  
Distance education course delivered by Central Washington State University.

The analysis and development of curriculum and methods of teaching Family and Consumer Sciences (FCS) in the context of the National Standards for FCS students, the National Standards for teachers of FCS and the standards for the state in which the candidate will teach. Learners and the learning environment; program leadership; beginning instructional strategies; Family, Career, and Community Leaders of America (FCCLA); curriculum development; integration of technology in the FCS classroom; and assessment.

### Occupational Programs in Family and Consumer Sciences

**Number:** 808  
**Link:** [http://bulletin.unl.edu/courses/CYAF/808](http://bulletin.unl.edu/courses/CYAF/808)

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Admission to CYAF graduate program.  
Distance education course delivered by Texas Tech University.

Development of curriculum and methods of teaching Family and Consumer Sciences (FCS) in the context of the National Standards for FCS students, the National Standards for teachers of FCS and the standards for the state in which the candidate will teach. Learners and the learning environment; program leadership; beginning instructional strategies; Family, Career, and Community Leaders of America (FCCLA); curriculum development; integration of technology in the FCS classroom and assessment.

### Internship: Selected Experiences

**Number:** 813B  
**Link:** [http://bulletin.unl.edu/courses/CYAF/813B](http://bulletin.unl.edu/courses/CYAF/813B)

**Credit Hours:** 3-6  
**Course Delivery:** Classroom

**Prereqs:**  
Permission  
Pass/No Pass only.

Actual and simulated experiences in working with persons through human resources and family sciences in special focused areas of student’s choice, e.g., adult education, career education, post-secondary education, special needs programs, consumer affairs.

### Evaluation in Career and Technical Education

**Number:** 814  
**Link:** [http://bulletin.unl.edu/courses/CYAF/814](http://bulletin.unl.edu/courses/CYAF/814)

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Crosslisted as:** TEAC 814

Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYAF 816</td>
<td>Educational Programming</td>
<td>Permission</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not open to human resources and family science education majors in certification track. Planning and implementing developmentally appropriate educational experiences for a variety of audiences in non-formal settings.</td>
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<tr>
<td>CYAF 817</td>
<td>Critical Issues for the Beginning Teacher</td>
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<td>1-3</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td></td>
<td>Examines issues faced by beginning or returning teachers. Possible issues are classroom management, planning, selecting resources, and other critical issues to the new teacher. The theory and its application to the students’ educational setting discussed for each issue. Includes how teachers can mentor and support one another as a collaborative group.</td>
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<tr>
<td>CYAF 818</td>
<td>History and Philosophy of Family and Consumer Science and Career and Technical Education</td>
<td>Admission to CYAF degree program and permission</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distance education course delivered by University of Nebraska–Lincoln.</td>
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<tr>
<td></td>
<td></td>
<td>History, mission, philosophy and development of Family and Consumer Sciences (CYAF) and career and technical education. Societal context for families and communities. Impact of selected legislation on family and consumer sciences programs.</td>
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<tr>
<td>CYAF 820</td>
<td>Family Economics</td>
<td>Admission to CYAF graduate program or permission</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Distance education course delivered by South Dakota State University.</td>
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<td></td>
<td></td>
<td>Major issues relative to the economics of families including household production; human capital development and the economics of crises; and public policy and family life cycle spending, saving and borrowing. New and emerging issues and the role of ethics in the field of family economics. A theoretical and research perspective used to illuminate concepts.</td>
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<tr>
<td>CYAF 821</td>
<td>Insurance Planning for Families</td>
<td>Admission to CYAF graduate program or permission</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
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<td></td>
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<td>Risk management concepts, ethical considerations, tools, and strategies for individuals and families. Life insurance; property and casualty insurance; liability insurance; accident, disability, health, and long-term care insurance; and, government–subsidized programs. Case studies provide experience in selecting appropriate insurance products.</td>
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<tr>
<td>CYAF 822</td>
<td>Financial Counseling</td>
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</tbody>
</table>
**822**

**Prereqs:**
Admission to CYAF graduate program or permission

*Distance education course delivered by North Dakota State University.*

Theory and research regarding the interactive process between clients and practitioner, including communication techniques, motivation and esteem building, the counseling environment, ethics, and methods of data intake verification and analysis. Legal issues, compensation, uses of technology to identify resources, information management, and current or emerging issues.

**823**

**Estate Planning for Families**

**Prereqs:**
Admission to CYAF graduate program or permission

*Distance education course delivered by Montana State University.*

Fundamentals of the estate planning process, including estate settlement, estate and gift taxes, property ownership and transfer, and powers of appointment. Tools and techniques used in implementing an effective estate plan, ethical considerations, and new and emerging issues in the field. Case studies provide experience.

**824**

**Fundamentals of Financial Planning**

**Prereqs:**
Admission to CYAF graduate program or permission

*Distance education course delivered by Kansas State University.*

Issues and concepts related to the overall financial planning process and establishing client-planner relationships. Services provided, documentation required, and client-CFP licensee relationships. Competencies related to gathering of client data, determining goals and expectations, and assessing the client’s financial status. Emerging issues and the role of ethics.

**825**

**Reading in the Content Area**

**Prereqs:**
Admission to CYAF graduate program

Basic reading and writing process relating to content literacy including schema theory, comprehension, and second language acquisition. The contribution of content literacy to content material and positive learning environments. Use of a variety of materials including textbooks, literature, Internet resources and media in the content classroom. Assisting diverse students in the use of reading, writing and vocabulary strategies to learn content material.

**826**

**Military Personal Financial Readiness**

*Distance education course delivered by Kansas State University.*

An overview of the topics relevant to the financial planning process including: Unique needs, terminology, benefits, and resources that impact
Campus: Classroom

Course Delivery: Classroom

Course Format: Lecture 3

Lifespan Development

Prereqs: Admission to CYAF graduate program or permission.

CYAF 827 (http://bulletin.unl.edu/courses/CYAF/827) is open to students in the Military Academic Advancement Program.

This course covers the human development including the cognitive, social-emotional, motor, language, and moral domains from both a lifespan and a bio-ecological perspective.

Retirement Planning, Employee Benefits and the Family

Prereqs: Admission to CYAF graduate program or permission.

Micro and macro considerations in retirement planning for individuals and families. Various types of retirement plans, ethical consideration in providing retirement planning services, assessing and forecasting financial needs, integration of retirement plans with government benefits, and current research and theory. Case studies provide experience.

Leadership, Administration, & Management in Community Programs

Prereqs: Admission to CYAF graduate program or permission.

CYAF 829 (http://bulletin.unl.edu/courses/CYAF/829) is open to students in the Military Academic Advancement Program.

This course serves as an overview of management and leadership concepts related to the operational and administrative competencies necessary in effective community-based family and youth organizations and agencies. It is designed to provide students with foundational skills and knowledge to manage day-to-day functions related to organizational systems such as human resource management, financial management, risk management, strategic planning, governance and advisory structures, and marketing.

Practicum in Infant Development

Current literature related to prenatal development, birth, and infancy. Observation and interaction with infants and their parents in the laboratory.

Immigrant Families and Life Stories

Current literature related to prenatal development, birth, and infancy. Observation and interaction with infants and their parents in the laboratory.
History, culture, and experiences of immigrant and transnational families. Examination of the current state of global immigrant families, future trends, and implications for family services and policy.

**Children, Families, Communities and the Natural Environment**

Examine interconnections among children, families, communities and the natural environment, with implications for sustainability and programming.

**Marriage and Committed Relationships from a Worldwide Perspective**

Examination of the complexities of marital and committed relationships from both global and developmental perspectives and through Ecological Systems and Family Systems theoretical lenses.

**Professional Practices in Financial Planning**

Prereqs:

- Admission to CYAF graduate program or permission

Distance education course delivered by Kansas State University.

Challenges of managing financial planning practices: business valuation, personnel, marketing, client services, ethics and technical applications. Case study analysis, relying on a theoretical and applied approach, will provide practical exposure to management issues. Emphasis on current research findings.

**Financial Planning Case Studies**

Prereqs:

- Completion of all courses toward the Family Financial Planning specialization or permission

Distance education course delivered by Kansas State University.

Capstone course integrating both theoretical and applied concepts, including research findings introduced in all other courses. Students develop written financial plans based on comprehensive cases, presented to a panel of practitioners.

**Families Across the Life Course**

Exploration of family interactions and individual development across the life span and the cultural, political, and social factors that impact development globally.

**Parenting Education**

Distance education course delivered by Kansas State University.
Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Web

Prereqs:
Admission to CYAF graduate program or permission.

CYAF 838 is open to students in the Military Academic Advancement Program. The course is needed for the online specialization in Family and Community Services. This course will examine theories, models, research and skills regarding parenting effectiveness and parent-child relations in the context of Western and Eastern cultures.

Program Development and Evaluation

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Web

Prereqs:
Admission to CYAF graduate program or permission.

CYAF 839 is open to students in the Military Academic Advancement Program. This course analyzes the principles and methods of program design, implementation, and outcome evaluation of family programs.

Personal Income Taxation

Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Prereqs:
Admission to CYAF graduate program or permission

Distance education course delivered by Montana State University. Income tax practices and procedures including tax regulations, tax return preparation, tax audits, appeals, preparation for an administrative or judicial forum, and ethical considerations. Family/individual case studies provide practice in applying and analyzing information.

Housing/Real Estate

Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Prereqs:
Admission to CYAF graduate program or permission

Distance education course delivered by Iowa State University. The role of housing and real estate in the financial planning process from a theoretical perspective. Taxation, legal aspects, mortgages, and financial calculations related to home ownership and real estate investments. New and emerging issues, as well as the role of ethics in financial planning.

Parent–Child Relationships Across the Life Span

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Web

Study of parent-child relationships from a developmental, systems, and life-span perspective, including theory, research methods, and application of knowledge.

Family, School and Community Partnerships

Credit Hours: 3

The role of family, school, and community partnerships in learning and development across the world. Strategies for mobilizing these partnerships.
### Family Centered Practice Approaches

**Course Code:** CYAF 844  
**Course Format:** Lecture 3  
**Course Delivery:** Web  
**Credit Hours:** 3  
**Prereqs:** Admission to CYAF graduate program or permission.

Material and course experiences prepare students for family centered practice regardless of discipline. The family as the unit of observation, programming, and intervention.

### Research in Leadership Education

**Course Code:** CYAF 845  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Crosslisted as:** ALEC 845  
**Prereqs:** Admission to CYAF graduate program or permission.

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.

### Resilience in Families

**Course Code:** CYAF 849  
**Course Format:** Lecture 3  
**Course Delivery:** Web  
**Credit Hours:** 3  
**Prereqs:** Admission to CYAF graduate program or permission.

**CYAF 849 (http://bulletin.unl.edu/courses/CYAF/849) is open to students in the Military Academic Advancement Program.**

Exploration of the evolution of a resilience approach to the study of families and human development. Using a lifespan approach, students will explore resilience across time as well as within special populations such as families experiencing crisis and trauma, culturally diverse families, and military families.

### Teaching Family and Consumer Sciences with Technology

**Course Code:** CYAF 850  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Prereqs:** Admission to the CYAF graduate program

**Distance education course delivered by South Dakota State University.**

Integration of technology in the family and consumer sciences classroom focusing on the National Education Technology Standards (NETS).

### Families in Crisis

**Course Code:** CYAF 853  
**Course Format:** Lecture 3  
**Course Delivery:** Web  
**Credit Hours:** 3  
**Prereqs:** Admission to CYAF graduate program or permission.

**CYAF 853 (http://bulletin.unl.edu/courses/CYAF/853) is open to students in the Military Academic Advancement Program.**

The purpose of this course is to examine the experiences of individuals and families when crises occur. The course is designed to introduce you to traumatic stress from both individual and systemic theoretical perspectives. It will introduce and review the theoretical and historical beginnings of the concept of trauma, which includes the acceptance of post-traumatic stress disorder (PTSD) as a diagnosis in the DSM IV. This course will discuss various
trauma reactions, effects of stressful events, as well as the treatment of trauma, stress and crises. Resilience and transcendence of trauma will be outlined, with an emphasis on the importance of self-care for helping professionals working in this area. A particular focus will be placed in understanding the common and unique experiences of individuals and families affected by grief and loss, addictions and substance abuse, violence, child abuse and neglect, and suicidal ideation based on various contextual factors. The course will include discussion of evidence-based prevention and treatment options as well as community resources for individuals and families affected by stress, trauma, and crises.

**Family Dynamics**

**Prereqs:**
- Admission to CYAF graduate program or permission.

CYAF 854 ([link](http://bulletin.unl.edu/courses/CYAF/854)) is open to students in the Military Academic Advancement Program.

The course will examine theories of family function and dysfunction, techniques of assessment, and models of family intervention.

**Psychology of Adolescence**

**Prereqs:**
- Admission to the CYAF graduate program and permission

Distance education course delivered by North Dakota State University.

Student differences and ways of adjusting teaching practice to meet individual needs. Application of learning theories to educate the whole child (cognitive, affective, social). Equitable treatment of students.

**Foundations and Principles in Family and Community Services**

**Prereqs:**
- Admission to CYAF graduate program or permission.

CYAF 856 ([link](http://bulletin.unl.edu/courses/CYAF/856)) is open to students in the Military Academic Advancement Program.

This course provides an introduction to the program of family and community services and professions that involve working with individuals and families in communities.

**Family Resource Management**

**Prereqs:**
- Admission to CYAF graduate program or permission.

CYAF 857 ([link](http://bulletin.unl.edu/courses/CYAF/857)) is open to students in the Military Academic Advancement Program.

Survey course of personal finance and family resource management literature to provide an overview of how individual and family members develop and exercise their capacity to obtain and manage resources to meet life needs. Resources include the self, other people, time, money, energy, material assets, space, and environment.
Interpersonal Relationships

Prereqs:
Admission to CYAF graduate program or permission.

CYAF 859 (http://bulletin.unl.edu/courses/CYAF/859) is open to students in the Military Academic Advancement Program.

This course will conduct an in-depth examination of interpersonal relationships, including theoretical perspectives, research methods, relationship forms, relationship processes, and how context affects relationships.

Foundations of Youth Development

Prereqs:
Admission to CYAF graduate program
Pass/No Pass only.

Fundamentals of youth development and the youth development profession. Ethical, professional and historical elements of youth development as it has evolved toward professionalization.

Case Studies: Strengths and Challenges of Families Across the World

Exploration of family strengths and challenges from multiple nations and cultures using case study methodology.

Youth Professionals as Consumers of Research

Prereqs:
Admission to CYAF graduate program

Distance education course delivered by the University of Nebraska–Lincoln and North Dakota State University.

Research report evaluation skills for youth development professionals. Fundamental quantitative and qualitative research principles guiding disciplined inquiry. Application of research results and theories to practice.

Community Youth Development

Prereqs:
Admission to CYAF graduate program
May be offered via distance education by Michigan State University.

National emphasis of strength–based or asset approach to community youth development, encompassing individual development and adolescent relationships with environments. Research, theory and practice applied in communities. Existing models, theoretical and applied literature, and current community efforts.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>CYAF 865</td>
<td>Qualitative and quantitative research designs and methods used in conducting research. Students develop a research proposal.</td>
<td>This course is a prerequisite for CYAF 867.</td>
<td>3</td>
<td></td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>CYAF 866</td>
<td>Elements of conducting and reporting research and various research designs. Quantitative and qualitative methodologies. Skills required to effectively evaluate the quality of research reports and how to apply findings to practices in education, counseling, and family policy.</td>
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<td>3</td>
<td>Lecture 3</td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>CYAF 867</td>
<td>Use developed proposal to conduct a pilot study and report results. Technical writing of research reports.</td>
<td>Prereqs: CYAF 865.</td>
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<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>CYAF 868</td>
<td>Adolescent development as related to and intertwined with family development. Reciprocal influences between adolescents and their families. Working with youth vis a vis the family system.</td>
<td>Admission to CYAF graduate program.</td>
<td>3</td>
<td></td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>CYAF 869</td>
<td>Introduction to the development, administration and management of youth-serving organizations.</td>
<td>Prereqs: Admission to CYAF graduate program.</td>
<td>3</td>
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<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>CYAF 872</td>
<td>Distance education course delivered by the University of Nebraska–Lincoln and the University of North Dakota.</td>
<td>Prereqs: 12 hours CYAF or social sciences.</td>
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<td>UNO</td>
<td>Classroom</td>
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</table>
Scientific literature concerning the interrelationship of the physiological, psychological and sociological aspects of the adolescent and young adulthood years. Understanding of individuals and their continuous adjustment within the family life cycle as they make the transition from childhood to adulthood.

**Program Design, Evaluation and Implementation**

- **Prereqs:** Admission to CYAF graduate program
- **Distance education course delivered by the University of Nebraska–Lincoln.**
- **Overview of program development process and outcome evaluation of community children and family programs. Theoretical, methodological and programmatic issues in conducting programs and scholarship.**

**Youth in Cultural Contexts**

- **Prereqs:** Admission to CYAF graduate program
- **Distance education course delivered by Michigan State University and the University of Missouri–Columbia.**
- **Cultural context factors that affect youth from a holistic perspective within and outside the family unit. The cultural heritage of differing family types. Social and educational processes.**

**Youth Policy**

- **Prereqs:** Admission to CYAF graduate program
- **Distance education course delivered by Michigan State University.**
- **Various federal and state policies designed specifically for youth. Existing state and national policies as to whether they contribute to, or act as barriers to, desired developmental outcomes.**

**Research Methods in Family Studies**

- **Scientific, holistic and innovative approaches to studying children and families across the globe. The influence of international, cross-cultural, and other multi-national social, religious, and political contexts that affect the study of families throughout the world will be explored.**

**Contemporary Youth Issues**

- **Issues faced by youth such as life skills, violence, and appearance. Topics vary.**
Family Systems

**Prereqs:**
Admission to CYAF graduate program or permission

Distance education course delivered by North Dakota State University.

Research and theory relative to family functioning throughout the life cycle, especially financial decision making during crisis and conflict. Factors that shape family values, attitudes, and behaviors from a multi-cultural perspective. New and emerging issues critical to family functioning.

Investing for the Family’s Future

**Prereqs:**
Admission to CYAF graduate program

Distance education course delivered by Iowa State University.

Investment options for families. Common stocks, fixed income securities, convertible securities, and related choices. The relationship between investment options and employee and/or employer benefit plan choices.

Foundations in Family Studies

Introduction to the trans-disciplinary field of Family Studies from global perspectives. Theoretical and research approaches to the study of the family in varied cultural and national contexts will be explored.

Families and Cultural Diversity

Critical understanding of the diversity of family forms in their cultural contexts. The impact of history, tradition and contemporary trends on families will be explored. Emphasis will be on recognizing, accepting, and working within a context of diversity of culture and family form.

Strengths and Challenges of Families Across the World

Theoretical, practical and experiential learning to enhance understanding of family strengths and challenges across the world. Principles for developing culturally sensitive strengths-enhancing programming for children and families throughout the world will be addressed.

International Perspective on Family Policy

Analysis of the systems, contexts and policies that affect individuals and families throughout the world.
Program Design, Implementation and Evaluation

Principles and methods of program design, implementation, and outcome evaluation of family programs in global contexts and across the globe.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Web

Special Topics in Human Sciences

Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891

Aspects of human sciences not covered elsewhere in the curriculum.

Credit Hours: 1-3
Max credits per degree: 12
Campus: Classroom
Course Delivery: Classroom

Professional Practicum Experiences

Prereqs: Admission to CYAF degree program

This course is a prerequisite for CYAF 451, CYAF 452, CYAF 894J

CYAF 894J is Pass/No Pass only. Must be taken for 1 credit concurrently with CYAF 851/852.

Family and Consumer Sciences Education

Student Teaching in Early Childhood Education

Prereqs: CYAF 270 and CYAF 270L with grades of 'C' or better; and permission.

CYAF 897A is Pass/No Pass only.

Integrating development theory into the planning, implementation, and evaluation of individual and group experiences for young children in the child development laboratory.

Practicum in Family Financial Planning

Prereqs: Admission to CYAF graduate program or permission

Pass/No Pass only.

Credit Hours: 3–6
Max credits per degree: 6
Campus: Classroom
Course Delivery: Classroom

Practicum in Family and Consumer Sciences Education
**Research Experience in Child, Youth and Family Studies**

Prereqs: Admission to CYAF degree program and permission

*Pass/No Pass only. Distance education course delivered by Central Washington State University.*

Development and implementation of teaching plans in supervised schools grades 7-12. Observation of the effectiveness of classroom management practices.

**Masters Thesis**

Prereqs: 18 hrs CYAF and/or social sciences

CYAF 898 requires a contract with a CYAF faculty member.

Participation in an ongoing research project in child development studies and/or early childhood education, family science, marriage and family therapy, family and financial management, or family and consumer sciences education.

**Philosophy of Child and Family Sciences**

Theory and modes of inquiry in child and family science, and how this theory and evidence is used to discover knowledge.

**Teaching Practicum**

Crosslisted as NUTR 920, TMFD 920

Prereqs: CYAF 918 or permission of department chair

Supervised classroom experiences designed to develop competencies in teaching at the college level.

**Family Law**

Crosslisted as LAW 630G

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.
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<th>Course Code</th>
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<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>CYAF 951</td>
<td>Theoretical Foundations of Marriage and Family Therapy</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences</td>
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<tr>
<td></td>
<td>This course is a prerequisite for CYAF 954 and CYAF 955A.</td>
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<tr>
<td></td>
<td>General systems theory, its derivations and application in family therapy. Family therapy’s history, contributions, current theorists, and approaches.</td>
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<tr>
<td>CYAF 952</td>
<td>Psychopathology and Dysfunctional Interactions</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences</td>
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<td></td>
<td>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.</td>
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<tr>
<td>CYAF 953</td>
<td>Issues and Ethics for Family Professionals</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences</td>
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<tr>
<td></td>
<td>Ethical and professional issues that family professionals confront as they assist families to cope with problems and strengthen family systems.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CYAF 954</td>
<td>Assessment in Family Therapy</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences; CYAF 951 and 952, or equivalent or permission</td>
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<tr>
<td></td>
<td>Assessment of family systems using objective and subjective measures for the purpose of clinical intervention and research.</td>
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<tr>
<td>CYAF 955A</td>
<td>Clinical Family Therapy I</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences; masters admission in CYAF</td>
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<tr>
<td></td>
<td>This course is a prerequisite for CYAF 955B and CYAF 997.</td>
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<tr>
<td></td>
<td>Didactic training and supervised laboratory/clinic-based experiences in marriage and family therapy.</td>
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<tr>
<td>CYAF 955B</td>
<td>Clinical Family Therapy II</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td><strong>Prereqs:</strong> 12 hrs CYAF and/or social sciences; masters admission in CYAF</td>
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</tr>
</tbody>
</table>
### Treatment of Human Sexual Dysfunction

**Prereqs:**
**Permission**

**CYAF 956**

*CYAF 956* 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. Assessment and treatments of sexual dysfunctions and other problematic sexual behavior will be examined from a theoretical and applied perspective.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>Campus:</td>
<td>Classroom</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</tbody>
</table>

### Seminar in Parent/Child Relationships

**Prereqs:**
18 hrs PSYC, EDPS, SOCI, or CYAF

Relationships between parents and children from the developmental, contextual, and life-span perspectives. Theoretical, methodological, and applied implications of research.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>Campus:</td>
<td>Classroom</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Advanced Early Childhood Education

**Prereqs:**
18 hrs PSYC, EDPS, SOCI, or CYAF

Advanced philosophy, procedures, and policies relating to early childhood education at the nursery school-kindergarten level and care of children outside the home.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Campus:</td>
<td>Classroom</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Seminar in Child Development

**Prereqs:**
18 hrs PSYC, EDPS, SOCI, or CYAF

Analysis of major studies and current literature in Child Development/Early Childhood Education.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
<td>Classroom</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Theories of Human Development and Family Relations

**Prereqs:**
18 hrs PSYC, and/or EDPS, and/or SOCI, and/or CYAF

Theoretical basis of child study and family analysis. Critical evaluation of methods and theories in child development, family relations, and human development from an integrative and holistic perspective.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Campus:</td>
<td>Classroom</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Social Processes in Children

**Prereqs:**

<p>| Campus: | Classroom |
| Course Delivery: | Classroom |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>973</td>
<td>Synthesis of current and historical perspectives in theory and research on children's social development including multiple contexts for socialization/individuation.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>974</td>
<td>The Infant in the Family</td>
<td>3</td>
<td>12 hrs in CYAF, or social sciences</td>
<td>Infant development within the context of the family.</td>
</tr>
<tr>
<td>98/498</td>
<td>UCARE, REU, Non-UCARE Research Experience in Child, Youth and Family Studies</td>
<td>1-6</td>
<td></td>
<td>Undergraduate Creative Research Experience (UCARE), Research Experience For Undergraduates (REU), and non-UCARE research and/or creative activity.</td>
</tr>
<tr>
<td>980</td>
<td>Comparative Family Systems</td>
<td>3</td>
<td></td>
<td>Structure and functioning of families in other cultures. Analysis of the interchanges between the family and larger society at different stages of the life cycle.</td>
</tr>
<tr>
<td>981</td>
<td>Readings in Family Life</td>
<td>3</td>
<td>18 hrs CYAF, PSYC, EDPS, or SOCI</td>
<td>Analysis and critical evaluation of major theories and current related literature in such phases of family life as development of personality, mate selection, and adjustment in marriage.</td>
</tr>
<tr>
<td>989</td>
<td>Collaborative Health Care</td>
<td>3</td>
<td></td>
<td>Conceptual models for collaborative care practices with an emphasis on care delivery systems in rural areas.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
<td>Max Credits</td>
<td>Prereqs</td>
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<tr>
<td>995</td>
<td>Doctoral Seminar</td>
<td>3</td>
<td>18</td>
<td>Permission</td>
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<tr>
<td></td>
<td>CYAF 995 (<a href="http://bulletin.unl.edu/courses/CYAF/995">http://bulletin.unl.edu/courses/CYAF/995</a>)</td>
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<tr>
<td></td>
<td>Develop, execute and report on one or more projects on</td>
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<td></td>
<td>one individual or small group basis. Immersion in</td>
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<td></td>
<td>outcome-based scholarly activities with a faculty</td>
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<tr>
<td></td>
<td>mentor. The interaction between research and practice.</td>
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<tr>
<td>996</td>
<td>Scholarly Practice and Discovery</td>
<td>1–6</td>
<td>6</td>
<td>Permission</td>
</tr>
<tr>
<td></td>
<td>CYAF 996 (<a href="http://bulletin.unl.edu/courses/CYAF/996">http://bulletin.unl.edu/courses/CYAF/996</a>)</td>
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<tr>
<td></td>
<td>Investigation related to family and consumer sciences.</td>
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<tr>
<td>997</td>
<td>Advanced Practicum in Family Therapy</td>
<td>1–6</td>
<td>6</td>
<td>CYAF 995A and permission</td>
</tr>
<tr>
<td></td>
<td>CYAF 997 (<a href="http://bulletin.unl.edu/courses/CYAF/997">http://bulletin.unl.edu/courses/CYAF/997</a>)</td>
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<tr>
<td></td>
<td>Supervised marital and family therapy in university</td>
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<tr>
<td></td>
<td>and community agencies.</td>
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</tr>
<tr>
<td>998</td>
<td>Special Topics in Human Sciences</td>
<td>1–3</td>
<td>6</td>
<td>Permission</td>
</tr>
<tr>
<td></td>
<td>CYAF 998 (<a href="http://bulletin.unl.edu/courses/CYAF/998">http://bulletin.unl.edu/courses/CYAF/998</a>)</td>
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<tr>
<td></td>
<td>Crosslisted as NUTR 998, TMFD 998</td>
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<tr>
<td>999</td>
<td>Doctoral Dissertation</td>
<td>1–24</td>
<td>55</td>
<td>Admission to doctoral degree</td>
</tr>
<tr>
<td></td>
<td>program and permission of supervisory committee chair</td>
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<tr>
<td>810</td>
<td>Transdisciplinary Obesity Prevention</td>
<td>3</td>
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<tr>
<td></td>
<td>CYAF 810 (<a href="http://bulletin.unl.edu/courses/NUTR/810">http://bulletin.unl.edu/courses/NUTR/810</a>)</td>
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<tr>
<td></td>
<td>Crosslisted as CYAF 810</td>
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</tbody>
</table>
Using a transdisciplinary team of faculty and guest lecturers, students will be introduced to the interrelationship of obesity and dietary components, behavior, exercise and sports science, physical activity, health promotion, genetics, nutrigenomics, child development, family dynamics, cultural issues, epidemiology, population disparity, educational leadership, public policy and other related topics.

**Research Methods in Childhood Obesity**
Crosslisted as **CYAF 910**

**Prereqs:**
Graduate standing.

The purpose of this course is to examine the philosophy, goals, and methodologies related within the concept of childhood obesity research. The class will include study design, survey development, evaluation and application of basic research tools. In addition, students will critically evaluate different types of research in relation to childhood obesity. Class discussion will focus on the multiple factors that impact childhood obesity and potential measurement of these factors in the outcome of childhood obesity prevention.

**Human Sexuality and Society**
Crosslisted as **SOCI 471/871, EDPS 471/871, CYAF 471/871**

**Prereqs:**
Junior standing and 12 hrs in one of the departments in which the course is listed.

Open to advanced students planning careers 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 the study of human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.

**Special Topics in Education**
Crosslisted as **EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892**

**Prereqs:**
EDPS 859 or parallel; EDPS 859 or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Sociological/Anthropological Research Methods in Education**
Crosslisted as **EDPS 930, CYAF 930, NUTR 930**

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.

A. Ethnographic Methods (1–3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
C. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
D. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/ChildYouthAndFamilyStudies]

Interim Department Chair: Richard Bischoff, Ph.D.

Graduate Committee: Associate Professor Torquati (chair); Professors Abbott, Bischoff, Edwards, Molfese, Raikes; Associate Professors Churchill, Dalla, deGuzman, Huddleston-Casas, Xia; Assistant Professors, Durden, Hollist, Hong, Reisbig, Springer; Associate Professor of Practice Rupiper, Lecturer Letkiewicz

Master of Science Degree

The master of science degree in Child, Youth and Family Studies has a central focus on the family or issues that relate to the family. Six areas of specialization are available: Child Development/Early Childhood Education, Family and Consumer Sciences Education, Family Financial Planning, Human and Family Services Administration, Marriage and Family Therapy, and Youth Development.

Family and Consumer Sciences Education, Family Financial Planning, and Youth Development are interinstitutional programs via distance education. The Child, Youth and Family Studies Masters Degree Handbook, available on the Web at [cehs.unl.edu/cyaf/grad], outlines the program requirements.

Candidates for the MS degree must hold a bachelors degree from an accredited college/university and have completed at least 18 hours in child, youth and family studies or the equivalent from related fields. A minimum 3.0 undergraduate GPA is required. Some specializations require the GRE and have their scores submitted as part of their application.

- Applications for the Child Development specialization will be considered on the deadlines of January 10, April 15, and October 15.
- Deadlines for Human and Family Services Administration; Family and Consumer Sciences Education; Family Financial Planning; and Youth Development specializations are on a continuing basis.
- Applicants interested in Marriage and Family Therapy will only be considered on the January 15 deadline or until available slots are filled.

Certificate Programs

- The Interdepartmental Certificate Program in Medical Family Therapy is a joint program between the UNMC Department of Family Medicine and the UNL Department of Child, Youth and Family Studies. The 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.
- Certificate programs in Family Financial Planning and Youth Development are also offered.
- A new certificate in Transdisciplinary Childhood Obesity Prevention (TOPS) is a joint program offered with the Nutrition department. This certificate is unique and would help provide expertise in a job market needing health professionals with this training.

For complete information, refer to [cehs.unl.edu/cyaf/grad]. Please contact the department for any additional information.

University of Nebraska–Lincoln
Department of Child, Youth and Family Studies
135 Mabel Lee Hall
Lincoln, NE 68583–0236
(402) 472–2957

Doctor of Philosophy Degree

Studies leading to a PhD in human sciences with specializations in Child, Youth and Family Studies, Gerontology, and Medical Family Therapy are available. This degree prepares scholars both in applied and basic aspects of Child, Youth and Family Studies. The focus is to prepare scholars for leadership roles in teaching, research and/or policy development and implementation. The Child, Youth and Family Studies PhD Handbook is available on the Web at [cehs.unl.edu/cyaf/grad], and outlines the program requirements.

Applications are considered January 10 for the upcoming academic year.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/ChildYouthAndFamilyStudies]

Retrieved from "[http://bulletin.unl.edu/graduate/Child_Youth_and_Family_Studies](http://bulletin.unl.edu/graduate/Child_Youth_and_Family_Studies)"

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Classics and Religious Studies

Subject Areas

- Classics (CLAS) (#CLAS)
- Greek (GREK) (#GREK)
- Hebrew (HEBR) (#HEBR)
### Topics in Old World Prehistory

**ANTH 438/838**

Crosslisted as CLAS 438/838

**Prereqs:**
ANTH 242 or equivalent.

Topics drawn from the wide breadth of Old World prehistory. Archaeological data relevant to selected theoretical or topical problems.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**Groups:** Archaeology

### Early Christianity

**CLAS 307/807**

Crosslisted as HIST 307/807, RELG 307

Pre-1800 content.

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. Includes the historical Jesus vis-à-vis the Christ of Faith, the impact of Paul's thought, the formation of Christian dogma, methods of interpreting canonical and extra-canonical Christian literature, the problem of heresy and orthodoxy.

**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom

### Religion of Late Western Antiquity

**CLAS 409/809**

Crosslisted as HIST 409/809, RELG 409

Pre-1800 content.

Examination of the religious institutions, philosophies, and lifeways of the Hellenistic Age from Alexander to Constantine. Includes civic religion of Greece and Rome, popular religion, mystery cults, Judaism, Christianity, popular and school philosophies (Platonism, Aristotelianism, Epicureanism, Cynicism, Stoicism), Gnosticism. History, interrelationships, emerging world view of these movements.

**Credit Hours:** 2-3  
**Course Format:** Lecture  
**Course Delivery:** Classroom

### Gnosticism

**CLAS 410/810**

Crosslisted as RELG 410

Examination of the nature, history, literature, ritual, and impact of the classical Gnostic religions, 100 BCE to 400 CE. 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 Simonians, Sethians, Valentinians, Hermetics, and Manichaean.

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Gender and Sexuality in the Ancient World

**CLAS 440/840**

Crosslisted as WMNS 440/840

Ancient Greek and Roman evidence pertaining to the fields of women’s studies, gender studies, and the study of sexuality.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom
**Classical Drama**

Crosslisted as ENGL 440/840

Prereqs:
Senior standing or permission.

Greek and Roman tragedy and comedy in translation.

---

**Democracy and Tyranny in Classical Athens**

Crosslisted as CLAS 412

Prereqs:
Junior standing or permission.

Pre-1800 content.

Development and influence of the Greek city-states, focusing on the establishment and transformation of the Athenian democracy in the 6th and 5th centuries BCE from popular sovereignty to the rule of written law. Including the three periods of tyranny, reaction to the Persian Invasions, and the impact of the Peloponnesian War.

---

**The Roman Revolution, 133 BC–68 AD**

Crosslisted as CLAS 417

Prereqs:
Junior standing or permission.

Pre-1800 content.

Critical period in Roman history when the republic was transformed into the rule by one man: Political and social functioning of the republic, causes for change, and factors influencing its final shape. Careers of the Gracchi, Marius, Sulla, Pompey, Caesar, Anthony, and Augustus.

---

**Augustan Rome**

Crosslisted as CLAS 418

Prereqs:

HIST 100 or 100H or 210.

Augustus' constitutional transformation of Rome, and enforcement of a national identity and values through religion, social legislation, provincial governance policies, and patronage of public works, display, and literature.

---

**Courses for GREK (GREK)**

**Topics in Greek Prose**

Repeatable

Readings from Greek prose masterpieces, Topics vary.

**Topics in Greek Poetry**
### Courses for GREK (GREK)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>896</td>
<td>Reading and Research</td>
<td>1-6</td>
<td>Permission</td>
<td>Classroom</td>
</tr>
<tr>
<td>899</td>
<td>Masters Thesis</td>
<td>6-10</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>Classroom</td>
</tr>
<tr>
<td>961</td>
<td>Seminar in Greek Literature</td>
<td>1-6</td>
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<td>Classroom</td>
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</tbody>
</table>

### Courses for HEBR (HEBR)

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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>896</td>
<td>Readings and Research</td>
<td>1-24</td>
<td>Permission</td>
<td>Classroom</td>
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</tbody>
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### Courses for LATN (LATN)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>456/856</td>
<td>Latin of the Middle Ages</td>
<td>3</td>
<td>LATN 302 or permission.</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Topics in Latin Prose</td>
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<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Description</td>
<td>Credit Hours</td>
<td>Max credits per semester</td>
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<tr>
<td>491/891</td>
<td>Repeatable</td>
<td>Courses for RELG (RELG)</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>492/892</td>
<td><strong>Topics in Latin Poetry</strong></td>
<td>Repeatable Courses for RELG (RELG)</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>896</td>
<td><strong>Reading and Research</strong></td>
<td>Pre-requisites: Permission</td>
<td>1-24</td>
<td>24</td>
</tr>
<tr>
<td>899</td>
<td><strong>Masters Thesis</strong></td>
<td>Pre-requisites: Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
<td>24</td>
</tr>
<tr>
<td>941</td>
<td><strong>Seminar in Latin Literature</strong></td>
<td>Pre-requisites: Permission</td>
<td>1-24</td>
<td>24</td>
</tr>
<tr>
<td>CLAS 307/807</td>
<td><strong>Early Christianity</strong></td>
<td>Crosslisted as HIST 307/807, RELG 307</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>CLAS 307/807</td>
<td><strong>Religion of Late Western Antiquity</strong></td>
<td>Pre-1800 content. 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. Includes the historical Jesus vis-à-vis the Christ of Faith, the impact of Paul's thought, the formation of Christian dogma, methods of interpreting canonical and extra-canonical Christian literature, the problem of heresy and orthodoxy.</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Course Description</td>
<td>Credit Hours</td>
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<tr>
<td>CLAS 409/809</td>
<td>Crosslisted as HIST 409/809, RELG 409</td>
<td>Examination of the religious institutions, philosophies, and lifeways of the Hellenistic Age from Alexander to Constantine. Includes civic religion of Greece and Rome, popular religion, mystery cults, Judaism, Christianity, popular and school philosophies (Platonism, Aristotelianism, Epicureanism, Cynicism, Stoicism), Gnosticism, History, interrelationships, emerging world view of these movements.</td>
<td>2-3</td>
<td>Lecture</td>
</tr>
<tr>
<td>CLAS 410/810</td>
<td>Crosslisted as RELG 410</td>
<td>Examination of the nature, history, literature, ritual, and impact of the classical Gnostic religions, 100 BCE to 400 CE. 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 Simonians, Sethians, Valentinians, Hermetics, and Manichaean.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ENGL 489/889</td>
<td>Crosslisted as RELG 489</td>
<td>The relationship between significant medieval theologies and primary medieval poets and prose masters.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>HIST 421/821</td>
<td>Crosslisted as RELG 421</td>
<td>The cultural and intellectual developments of the German Reformation against its social background. The religious and political events of the first half of the sixteenth century. Transition from medieval to modern Christianity. The transmission and revolutionary nature of evangelical doctrines. The gradual institutionalization of the new churches.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>RELG 406/806</td>
<td>Crosslisted as JUDS 406</td>
<td>An in-depth study of the literature, history and culture of Judea and the Jews in the Second Temple period, from 550 BCE to 70 CE. Readings include apocalyptic texts, Wisdom literature, and selections from the Dead Sea Scrolls.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
</tbody>
</table>
Communication Studies

Courses for COMM (COMM)

**COMM 400/800 Rhetorical Theory**

Prereqs: Junior standing, COMM 200 and 201, or permission.

Major writers, works, and concepts involved in the rhetorical approach to the study of human communication.

**COMM 427/827 Instructional Communication**

Crosslisted as TEAC 429/829

Prereqs: Junior/senior standing; College of Education and Human Sciences major; COMM 200, 201; or permission.

Advanced introductory course in instructional communication, focusing on understanding variables associated with the communication process in instructional settings and managing instructional communication more effectively. Provides an experimental and a cognitive understanding of the role of communication in the instructional process.

**COMM 485/885 Small Group Communication Theory**

Prereqs: Junior standing; COMM 200, 201 and 210; or permission.

Overview of small group communication theory and research centered on how groups and teams are formed and enacted in interaction.

**COMM 490/890 Internship in Communication Studies**

Prereqs: Junior standing and 12 to 15 hrs communication studies courses.

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.

**COMM 850 Seminar in Gender and Communication**
Relationship between gender and communication. Theories and research on gender and communication, serving as the basis for studying the interrelationships among language, social reality, sex role stereotypes, and cultural values.

**Media and Culture**

- **Course Code:** COMM 852
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
COMM 200 and 201; and permission

Theories of mass media, digital media, and culture as the basis for investigation of human communication in a variety of contexts and activities.

**Human Communication Theory**

- **Course Code:** COMM 859
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Evolution of human communication theory as a social science. Major writers, works, and concepts involved in the study of human communicative interaction.

**Interpersonal Communication Theory**

- **Course Code:** COMM 870
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

In-depth exploration of interpersonal communication theory and research across contexts. How people interact to create, maintain, and dissolve relationships.

**Organizational Communication**

- **Course Code:** COMM 886
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Principles and theories relevant to communication behavior within organizations which can be used to guide the way people communicate in organizations.

**Consulting and Training in Communication**

- **Course Code:** COMM 887
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Research on communication consulting and training. Design of consulting and training programs for use in organizational environments.

**Special Topics**

- **Course Code:** COMM 898
- **Credit Hours:** 1–3
- **Campus:**
- **Course Delivery:** Classroom

*Topic will be announced prior to registration.*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 899</td>
<td>Masters Thesis</td>
<td>24</td>
<td>Lecture</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: Admission to masters degree program and permission of major adviser</td>
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<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>COMM 900</td>
<td>Introduction to Graduate Studies in Communication</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td><strong>Will be required for all graduate students in communication studies.</strong></td>
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<td></td>
<td>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 research, surveys major research trends of the discipline, examines epistemology from a human communication perspective, and helps to develop writing and research skills.</td>
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<th>Course Code</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>COMM 911A</td>
<td>Classical Rhetoric</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Prereqs: Permission</td>
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<td></td>
<td>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.</td>
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<th>Course Format</th>
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<th>Course Delivery</th>
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<tbody>
<tr>
<td>COMM 911B</td>
<td>Modern Rhetoric</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Prereqs: Permission</td>
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<td></td>
<td>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.</td>
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<th>Course Code</th>
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<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>COMM 911D</td>
<td>Contemporary Rhetoric</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Prereqs: Permission</td>
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<td></td>
<td>In-depth study of the development of rhetorical theory in the twentieth century.</td>
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<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>COMM 927A</td>
<td>Seminar in Instructional Communication</td>
<td></td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
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<tr>
<td>COMM 927B</td>
<td>Seminar in Instructional Communication Research</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Review and analyze the seminal and current research related to communication in instructional contexts. Foundation for developing theory and generating original research.</td>
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<tr>
<td>COMM 927D</td>
<td>Current Issues in Instructional Communication</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>COMM 950D</td>
<td>Special Topics in Rhetoric and Public Culture</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Investigation of current topics in the research on the relationship between cultural processes and human communication.</td>
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<tr>
<td>COMM 953</td>
<td>Seminar in Political Communication</td>
<td>3</td>
<td>Lecture 3</td>
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<td></td>
<td>In-depth study of the influences of communication behavior on political events. Communication within political campaigns and governmental processes.</td>
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<tr>
<td>COMM 970A</td>
<td>Seminar in Interpersonal Communication</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Fundamental concepts, theories, and research in interpersonal communication. Selected problems and contemporary research.</td>
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<tr>
<td>COMM 970B</td>
<td>Seminar in Family Communication</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Course Code</td>
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<tr>
<td>COMM 970D</td>
<td><strong>Current Research in Interpersonal Communication</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Surveys current research in interpersonal communication. Issues, direction and methodology in interpersonal communication.</td>
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<tr>
<td>COMM 981</td>
<td><strong>Rhetorical Criticism</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Advanced course in rhetorical criticism and textual analysis. Designing and conducting an in-depth research project from a critical perspective.</td>
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<tr>
<td>COMM 983</td>
<td><strong>Advanced Experimental Research</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Experimental designs with an emphasis on assessing strengths and limitations of the various approaches. Individual research projects are planned, conducted, and reported.</td>
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<tr>
<td>COMM 984</td>
<td><strong>Interpretive Research Design</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Theory and practice of interpretive research methodologies and methods. Individual and/or group research projects are planned, conducted, and reported.</td>
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<tr>
<td>COMM 985</td>
<td><strong>Cultural Criticism</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>COMM 986A</td>
<td><strong>Perspectives in Organizational Communication</strong></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Description</td>
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<td>Course Format</td>
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<tr>
<td>986B</td>
<td>Problems and Issues in Organizational Communication</td>
<td>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.</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>986D</td>
<td>Current Research in Organizational Communication</td>
<td>Current research in organizational communication over a two-year period. Emphasis on issues studied, the focus organizational communication research takes, and the methodology employed.</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>996</td>
<td>Research Problems Other Than Thesis</td>
<td></td>
<td>1-6</td>
<td></td>
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<tr>
<td>998</td>
<td>Special Topics in Communication Studies</td>
<td>Special topics in communication studies.</td>
<td>1-24</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>999</td>
<td>Doctoral Dissertation</td>
<td>Prereqs: Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>1-24</td>
<td></td>
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<tr>
<td>430/830</td>
<td>Political Communication</td>
<td>Crosslisted as COMM 430/830</td>
<td>3</td>
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</table>

**Prereqs:**
12 hrs communication studies, including COMM 130
Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/CommunicationStudies).

Department Chair: Dawn O. Braithwaite, Ph.D.

The Department of Communication Studies offers the MA and PhD degrees in three areas of concentration: interpersonal and family communication; organizational communication; and rhetoric and culture. The department also offers an interdisciplinary MA specialization in marketing, communication studies, and advertising.

The department’s graduate degree programs are designed to provide an advanced understanding of the scholarly traditions in communication studies; to train students in both social-scientific and humanistic research approaches in order to create proficiency in historical/critical, quantitative, and interpretive/qualitative methods; to develop competent investigators capable of producing communication scholarship of the highest quality; and to foster the creation of teacher-scholars and practitioner-researchers who respect the discipline’s pluralism and follow the highest standards of ethical conduct.

Master of Arts Degree.

Students pursuing masters degrees with a major in communication studies must have completed an undergraduate major of at least 30 hours in communication studies, or have had equivalent preparation. The Department also offers a specialization in marketing, communication studies, and advertising. This is an Option III program. The program consists of a major--a minimum of 18 hours in communication studies and two minors of 9 hours—one in advertising and one in marketing. Eighteen hours of the program are specified courses which includes 6 hours from each of the following three departments: communication studies, marketing, and advertising. There is also an 8-hour comprehensive exam of which 5 hours can be waived if the student has a 3.25 GPA or higher in all courses taken in the specialization.

Doctor of Philosophy Degree.

Applicants for this degree have met the minimum requirements for the masters degree. The student must take such qualifying examinations as may be prescribed by the department. General requirements of the Graduate College also apply. Two research tools are required for the PhD degree. This requirement may be met by any combination of the methods described in this bulletin, see , and the department’s “Graduate Studies Handbook for the Doctor of Philosophy Degree” under Research Methodology Requirements.

Approved Specializations:

Great Plains Studies (MA and PhD); Marketing, Communication and Advertising (MA only); Women’s and Gender Studies (MA and PhD)

Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/CommunicationStudies).

Courses for CRPL (CRPL)

**Water Quality Strategy**

Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875

**Prereqs:**

Senior standing or permission.

**Capstone course.**

Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating
present strategies.

Urbanization of Rural Landscapes
Crosslisted as HORT 489/889, CRPL 489/889

Prereqs:
Senior standing, graduate standing, or permission.

Development converts rural landscapes into housing, roads, malls, parks, and commercial uses. This process fragments landscapes and changes ecosystem functions, drives up land prices, and pushes agriculture into more marginal areas. This multi-disciplinary, experiential course guides students in learning about the urbanization process, the impacts on landscapes, people, and the community, and the choices that are available to informed citizens.

Environmental Survey and Analysis
Crosslisted as CRPL 872

Prereqs:
Permission

This course is a prerequisite for ARCH 561.

Comprehensive review of contemporary methods and theories of environmental survey and analysis in the fields of landscape architecture, regional planning, conservation, and related areas, with emphasis on interrelationships between human and natural systems.

Introduction to Planning

Prereqs:
CRPL 400/800

This course is a prerequisite for CRPL 415.

Field of community and regional planning introduced and studied in relation to the history of cities, urbanization, and regionalization. Origins and evolution of American urban and regional planning practice. The planning process as a response to social, political, physical, and economic factors is analyzed. Introduces the community comprehensive planning process, plan implementation, and functional areas of planning.

Housing, Renewal, and Development

Prereqs:
CRPL 400

Comprehensive analysis of public policies and programs for housing, urban renewal, and large-scale development and a consideration of their social, political, and environmental implications at the neighborhood, community, and regional scale. Formulation of housing and renewal policy and programs as a part of the community and regional planning process and related regulation andstimulation efforts, and to the design, construction, and marketing processes as they affect or are affected by public housing policies and the private sector. The methodology, processes, results, problems, and changing nature of the federal urban renewal program considered in detail.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs:</th>
<th>Course Format:</th>
<th>Credit Hours:</th>
<th>Course Delivery:</th>
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</thead>
<tbody>
<tr>
<td>CRPL 431/831</td>
<td>Computer Graphics Applications in Physical and Environmental Planning</td>
<td>Senior standing.</td>
<td>Classroom</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>CRPL 450/850</td>
<td>Social Planning and Policy</td>
<td>Senior standing.</td>
<td>Lecture</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>CRPL 460/860</td>
<td>Planning and Design in the Built Environment</td>
<td>Senior standing.</td>
<td>Lecture</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>CRPL 470/870</td>
<td>Environmental Planning and Policy</td>
<td>Senior standing.</td>
<td>Lecture</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>CRPL 477/877</td>
<td>Recreation and Park Planning</td>
<td>Senior standing.</td>
<td>Classroom</td>
<td>3</td>
<td>Classroom</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
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<tr>
<td>CRPL 480/880</td>
<td>Economic Development Planning</td>
<td>Senior standing.</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>CRPL 495/895</td>
<td>Selected Topics in Community and Regional Planning</td>
<td>Senior standing.</td>
<td>1-9</td>
<td>Classroom</td>
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<tr>
<td>CRPL 496/896</td>
<td>Special Problems in Community and Regional Planning</td>
<td>Senior standing and permission.</td>
<td>1-6</td>
<td>Classroom</td>
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<tr>
<td>CRPL 802</td>
<td>Planning Theory</td>
<td>Senior standing or parallel: CRPL 800</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>CRPL 804</td>
<td>Legal Aspects of Planning</td>
<td>or parallel: CRPL 800 or permission</td>
<td>3</td>
<td>Classroom</td>
<td></td>
</tr>
</tbody>
</table>
well as in the planning, development, and delivery of public services and facilities. Legal theories, issues, cases, and applications relevant to professional planning practice, as well as the legal responsibilities of participants in the planning process.

**Qualitative Techniques for Planners**

CRPL 810

Applied qualitative research techniques. Interpret verbal data generated by the community. Organize, categorize, and analyze the words (data) into critical empirical comparable units of analysis. Optimize “active” listening skills; techniques to incorporate qualitative community concerns into the planning process; and epistemological insights on how to combine data obtained from divergent research methods into a single research project.

**Planning with GIS**

CRPL 830

Prereqs:
Admission to the MCRP program or permission

Theory and practice of geographic information systems use in planning. Selection and use of computer software and data for problem solving and decision making in community and regional planning. Specific planning-related applications of geographic information systems, spreadsheet modeling, and data base management.

**Planning Methods and Analysis**

CRPL 840

Prereqs:
Principles of statistics course; CRPL 800; CRPL 830; community and regional planning major

Analytical methods and techniques for research, problem solving, and decision making are studied and applied within the context of the planning process. Statistical analyses; forecasting methods; optimization techniques; models and simulation techniques; and methods of demographic, economic, land use, and policy analyses are studied in relation to community and regional planning.

**Planning in Developing Countries**

CRPL 881

Introduction to the comparative study of urbanization and planning in developing countries. Social, economic, and spatial organization of Third World cities, including international trends, theories of development, life in these cities, and how the people and governments of Third World countries attempt to cope with their problems and plan for a better future.

**Professional Seminar**

CRPL 890

Prereqs:
Community and regional planning major

Diverse issues relating to contemporary professional planning practice are studied through abbreviated case studies and presentations by visiting
specialists and participants in the planning process. Interrelated social, economic, political, and physical factors affecting specific planning situations. Current and emerging roles for professional planners.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRPL 897</td>
<td>Planning Internship</td>
<td>Community and regional planning major and permission</td>
<td>1-4</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Supervised practical experience in a planning-related organization.</td>
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<tr>
<td>CRPL 898</td>
<td>Professional Project</td>
<td>MCRP degree candidate and permission of department graduate committee</td>
<td>1-6</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professional project is a non-thesis culmination of the MCRP degree program.</td>
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<td></td>
<td></td>
<td>The professional project emulates professional planning practice and</td>
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<td></td>
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<td>is pursued individually by the student with supervision by a faculty advisory</td>
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<td>committee.</td>
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<tr>
<td>CRPL 899</td>
<td>Masters Thesis</td>
<td>Admission to MCRP degree program and permission of major adviser</td>
<td>6</td>
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<td>Classroom</td>
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<tr>
<td>CRPL 900</td>
<td>Professional Planning Practice</td>
<td>CRPL 800 or parallel: CRPL 800</td>
<td>3</td>
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<td>Lecture</td>
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<td></td>
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<td>Current concepts, ideas, and issues relating to professional planning practice</td>
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<td>Classroom</td>
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<tr>
<td></td>
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<td>are studied. Contexts of planning practice, the professional planner’s</td>
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<td>relationship to society, ethics in professional planning practice,</td>
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<td>and political and organizational behavior in planning and policy</td>
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<td></td>
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<td>implementation. Roles of citizens, client groups, and consultants in the</td>
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<td>planning process. Forms of collaborative problem solving, including</td>
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<td>mediation and negotiation. Planning office and project management issues and</td>
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<td>approaches, including personnel administration and project financing and</td>
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<td>budgeting.</td>
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<tr>
<td>CRPL 913</td>
<td>Planning and the Natural Environment</td>
<td>CRPL 800 or permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td></td>
<td>Occasional field trips and practical exercises. Interdisciplinary examinations</td>
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<td>of regional ecological problems and consideration of the theories, principles,</td>
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<td>techniques, and strategies utilized in planning for the conservation and</td>
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<tr>
<td></td>
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<td>development of the natural environment. Ecological emphasis with case</td>
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<tr>
<td></td>
<td></td>
<td>studies of environmental deterioration and suggested or implemented solutions.</td>
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</tbody>
</table>
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Program Director: Kim Wilson

Graduate Committee: Professors Scholz (chair), Mutunayagam; Associate Professor Cantarero; Assistant Professors Nam, Tang

Application for Admission.

Applications for admission to the MCRP degree program must include the following: 1) Application for Admission to the Graduate College form, submitted to the Office of Graduate Studies; 2) two official copies of all college transcripts, submitted to the Office of Graduate Studies; 3) official score report for the Graduate Record Exam General Test, submitted to the Office of Graduate Studies; 4) three letters of recommendation on standard Graduate Studies forms, submitted to the program office; and 5) an essay responding to program application questions, submitted to the program office.

Applications are accepted for admission in fall and spring semesters, as well as summer sessions.

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 plan and policy recommendations.

The MCRP degree program emphasizes 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 sound 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.

Students with diverse undergraduate, graduate, and professional backgrounds are encouraged to enter the MCRP degree program. No prior course work in planning is required.

The MCRP degree program requires completion of 48 graduate credit hours, 24 of which are in the following required core courses:

- CRPL 800. Introduction to Planning (3 cr)
- CRPL 802. Planning Theory (3 cr)
- CRPL 804. Legal Aspects of Planning (3 cr)
- CRPL 810. Qualitative Techniques for Planners (3 cr)
- CRPL 830. Planning with GIS (3 cr)
- CRPL 840. Planning Methods and Analysis (3 cr)
- CRPL 900. Professional Planning Practice (3 cr)
- CRPL 990. Planning Studio (3 cr)

Each student consults with a faculty adviser in the MCRP program to select elective courses within and outside the program that will help the student achieve his or her academic and professional goals. Students are encouraged to select at least 9 credit hours of course work in an area of concentration defined in consultation with their faculty advisors.

Each student must pursue one of three possible completion tracks for the MCRP degree: 1) 6-credit–hour masters thesis and oral examination; 2) 6-credit–hour professional project and oral examination; or 3) comprehensive written examination and oral examination. The program schedules the written comprehensive examination for track 3 typically no more than once each semester.
Dual Degree Programs.

The MCRP degree may be pursued within three dual degree programs at the University of Nebraska–Lincoln:

The MCRP/JD dual degree program is 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 MCRP/MArch dual degree program is offered in collaboration with the architecture program in the College 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 design (BSD) or equivalent undergraduate degree.

The MCRP/MS in civil engineering, with a transportation engineering emphasis, is intended for persons holding the bachelor of science in civil engineering degree.

Persons interested in the MCRP/JD, MCRP/MArch or MCRP/MS (transportation engineering) dual degree programs should inquire with the Community and Regional Planning program director.

Interdepartmental Programs.

The MCRP program cooperates with other disciplines in offering courses for the Environmental Studies Interdepartmental Area, the Great Plains Studies Interdepartmental Area, and the Water Resources Planning and Management Interdepartmental Area. See "Environmental Studies," "Great Plains Studies," and "Water Resources Planning and Management" sections for separate descriptions of these interdepartmental programs.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

[http://www.unl.edu/gradstudies/prospective/programs/CommunityAndRegionalPlanning](http://www.unl.edu/gradstudies/prospective/programs/CommunityAndRegionalPlanning)

Retrieved from "[http://bulletin.unl.edu/graduate/Community_and_Regional_Planning](http://bulletin.unl.edu/graduate/Community_and_Regional_Planning)"

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Computer and Electronics Engineering

Courses for CEEN (CEEN)

### Digital Signal Processing

*CEEN 424/824/4240*

**Prereqs:**

[CEEN 355](http://bulletin.unl.edu/courses/CEEN/355) or (UNO) [CEEN 3550](http://bulletin.unl.edu/courses/CEEN/3550).

This course is a prerequisite for: [CEEN 926](http://bulletin.unl.edu/courses/CEEN/926)

The temporal and spectral analysis of digital signals and systems, the design of digital filters and systems, and advanced systems including multi-rate digital signal processing techniques.

### Microprocessor System Design

*CEEN 433/833/4330/8336*

**Prereqs:**

[CEEN 310](http://bulletin.unl.edu/courses/CEEN/310) or (UNO) 3100; [CEEN 328](http://bulletin.unl.edu/courses/CEEN/328) or (UNO) [CEEN 3280](http://bulletin.unl.edu/courses/CEEN/3280), or parallel.

This course is a prerequisite for: [CEEN 436](http://bulletin.unl.edu/courses/CEEN/436)

Microprocessor based systems: architecture; design; and interfacing. Hardware topics: memory design; input/output ports; serial communications; and interrupts. Software topics: generating assembly ROM code; assembly/C firmware generation; and designing device drivers.

### Embedded Microcontroller Design

**Prereqs:**

[CEEN 436](http://bulletin.unl.edu/courses/CEEN/436)

This course is a prerequisite for: [CEEN 436](http://bulletin.unl.edu/courses/CEEN/436)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 436/836/4360/8366</td>
<td>Microcontroller architecture: design, programming, and interfacing for embedded systems. Timing issues, memory interfaces, serial and parallel interfacing, and functions for common microcontrollers.</td>
<td>CEEN 433 or (UNO) CEEN 4330 or (UNO) CEEN 4336 or (UNO) CEEN 836 or (UNO) CEEN 8360 or (UNO) STAT/MATH 380 or (UNO) STAT 3800 or (UNO) STAT 3800; CSCE 451 or (UNO) CSCE 4510; (UNO) CSCI 4500 or (UNO) CSCI 4500; (UNO) CSCE 451 or (UNO) CSCE 4510; or parallel.</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>CEEN 437/837/4370</td>
<td>Parallel and Distributed Processing</td>
<td>CEEN 436/836/4360/8366; or (UNO) CEEN 436/836/4360/8366.</td>
<td>3</td>
<td>Lecture 3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>CEEN 451/851/4510</td>
<td>Introduction to VLSI System Design</td>
<td>CEEN 310 or (UNO) CEEN 3100.</td>
<td>3</td>
<td>Lecture 3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>CEEN 452/852/4520</td>
<td>Introduction to Computer-Aided Digital Design</td>
<td>CEEN 310 or (UNO) CEEN 3100.</td>
<td>3</td>
<td>Lecture 3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>CEEN 466/866/4660</td>
<td>Telecommunications Engineering I</td>
<td>CEEN 361 or (UNO) CEEN 3610 or (UNO) CEEN 3610 or (UNO) CEEN 463 or (UNO) CEEN 4630 or (UNO) CEEN 4630 or (UNO) CEEN 863 or (UNO) CEEN 8630 or (UNO) CEEN 8630.</td>
<td>4</td>
<td>Lecture 3, Lab 3</td>
<td>UNO</td>
<td>Classroom</td>
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</tbody>
</table>

**Computer Communication Networks**

**CEEN 471/871/4710**

**Prereqs:**
[CEEN 325](http://bulletin.unl.edu/courses/CEEN/325) or (UNO) [CEEN 3250](http://bulletin.unl.edu/courses/CEEN/3250).

High-speed access control protocols, routing protocols, traffic management, and network topologies. Giga-bit Ethernet, ATM, and TCP/IP. Performance modeling and simulation techniques.

**Credit Hours:** 4
**Course Format:** Lecture 3, Lab 3
**Campus:** UNO
**Course Delivery:** Classroom

**Mobile and Personal Communications**

**CEEN 473/873/4730**

**Prereqs:**
[CEEN 325](http://bulletin.unl.edu/courses/CEEN/325) or (UNO) [CEEN 3250](http://bulletin.unl.edu/courses/CEEN/3250).

Concepts on mobile and personal communications. Modulation techniques for mobile radio, equalization, diversity, channel coding, and speech coding.

**Credit Hours:** 4
**Course Format:** Lecture 3, Lab 3
**Campus:** UNO
**Course Delivery:** Classroom

**Satellite Communications**

**CEEN 475/875/4750**

**Prereqs:**
[CEEN 325](http://bulletin.unl.edu/courses/CEEN/325) OR (UNO) [CEEN 3250](http://bulletin.unl.edu/courses/CEEN/3250).

The fundamental concepts of satellite communications. Orbits, launching satellites, modulation and multiplexing, multiple access, earth stations, coding, interference and special problems in satellite communications.

**Credit Hours:** 4
**Course Format:** Lecture 3, Lab 3
**Campus:** UNO
**Course Delivery:** Classroom

**Wireless Communications**

**CEEN 476/876/4760**

**Prereqs:**
Permission.

This course is a prerequisite for: [CEEN 926](http://bulletin.unl.edu/courses/CEEN/926), [CEEN 977](http://bulletin.unl.edu/courses/CEEN/977).

The fundamental concepts of wireless communications. Basic communications concepts such as multiple access and spectrum. Propagation, radio standards and internetworking. Current issues in wireless communications.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:** UNO
**Course Delivery:** Classroom

**Optical Fiber Communications**

**CEEN 479/879/4790**

**Prereqs:**
[CEEN 463](http://bulletin.unl.edu/courses/CEEN/463) or (UNO) [CEEN 4630](http://bulletin.unl.edu/courses/CEEN/4630)

The fundamental concepts of fiber communications. Basic communications concepts such as multiple access and spectrum. Propagation, radio standards and internetworking. Current issues in fiber communications.

**Credit Hours:** 4
**Course Format:** Lecture 3, Lab 3
### Fundamentals of Lightwave Communication

**Antennas and Radio Propagation for Wireless Communications**

- **Prereqs:** CEEN 328 or (UNO) 3280.
- **Course Description:**
  - Fundamental theory of antennas and radio propagation for wireless communications. Basic antenna characteristics and various antennas and antenna arrays. Basic propagation mechanisms and various channel models, such as Friis free space model, Hata model, lognormal distribution, and multipath model. Includes practical antenna design for high radio frequency (RF) with modeling software tools such as Numerical Electromagnetic Code (NEC) and Advanced Design System (ADS). Design projects will be assigned as the main part of course.

### Network Security

**Network Security**

- **Prereqs:** CEEN 325 or (UNO) 3250.
- **Course Description:** Network security and cryptographic protocols. Classical encryption techniques, block ciphers and stream ciphers, public-key cryptography, authentications digital signatures, key management and distributions, network vulnerabilities, transport-level security, IP security.

### Wireless Security

**Wireless Security**

- **Prereqs:** CEEN 325 or (UNO) 3250.
- **Course Description:** A comprehensive overview on the recent advances in wireless network and system security. Security issues and solutions in emerging wireless access networks and systems as well as multihop wireless networks.

### Special Topics in Computer and Electronics Engineering IV

**Special Topics in Computer and Electronics Engineering IV**

- **Prereqs:** Senior standing.
- **Course Description:** Special topics in the emerging areas of computer and electronics engineering which may not be covered in other courses in the computer and electronics engineering curriculum.

### Individual Study in Computer and Electronics Engineering IV

**Individual Study in Computer and Electronics Engineering IV**

- **Prereqs:**
- **Course Description:**
  - Special topics in the emerging areas of computer and electronics engineering which may not be covered in other courses in the computer and electronics engineering curriculum.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
<th>Prereqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEEN 492</td>
<td>Digital Communications Media</td>
<td>1-3</td>
<td>Independent Study</td>
<td>UNO</td>
<td>Classroom</td>
<td>CEEN 492, requires a CEEN departmentally approved proposal.</td>
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<td></td>
<td>Individual study in selected computer and electronics engineering area under the supervision and guidance of a computer and electronics engineering faculty member.</td>
</tr>
<tr>
<td>CEEN 863</td>
<td>Statistical Signal Processing for Wireless Communications</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td></td>
<td>Classroom</td>
<td>CEEN 3610 (offered on Omaha Campus. Transport of bit streams from one geographical location to another over various physical media such as wire pairs, coaxial cable, optical fiber, and radio waves. Transmission characteristics, media interfacing, delay, distortion, noise, and error detection and correction techniques.</td>
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<td>Statistical signal processing and applications for wireless communications: the characteristics of random signals; optimum linear filters; statistical parameter estimation using maximum likelihood (ML) and minimum mean-square error (MMSE) methods; adaptive signal processing using least-mean-square (LMS) and recursive least-square (RLS) approaches; Kalman filtering; and eigenanalysis.</td>
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<tr>
<td>CEEN 926</td>
<td>Space-time Wireless Communications</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
<td>CEEN 463, CEEN 476, CEEN 880 (theory of space-time (ST) wireless communication systems. Spatial diversity, smart antenna systems, MIMO capacity of multi-antenna fading channels, space-time signaling, space-time receivers, and interference mitigation. Overview of more advanced topics such as MIMO-OFDM. Current trends in research and in the industry.</td>
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<tr>
<td>CEEN 998</td>
<td>Advanced Special Topics</td>
<td>1-3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
<td>Permission</td>
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<td>Advanced topics in computer and electronics engineering.</td>
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</tbody>
</table>
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Bing Chen, Ph.D.

The Computer and Electronics Engineering Department (CEEN) at the University of Nebraska–Lincoln offers graduate programs in Telecommunications and Computer Engineering leading to master's and doctoral degrees. The graduate program prepares students for professional and research careers in industry and academia through providing strong breadth of knowledge and depth of expertise in telecommunications engineering and computer engineering.

Graduate students have the opportunity to experience and contribute to innovative engineering research in areas of wireless communications, wireless sensor networks, multimedia processing, network security, optical communications, biomedical communications engineering, and other related research areas. Students are able to participate in interdisciplinary studies with other departments and programs at the University of Nebraska including the University of Nebraska Medical Center.

The CEEN Department has extensive state-of-the-art research and computing facilities for all areas of active research including access to the Holland Computing Center which has over 5,600 processors and is capable of a sustainable computation rate of more than 20 trillion floating point operations per second (20 TFlops).

The CEEN Department is a University of Nebraska-Lincoln program located in the Peter Kiewit Institute in Omaha. The Peter Kiewit Institute was established to support high quality research by faculty and students coupled with business and economic development initiatives to generate unity-of-effort among academic, industry and local, state and federal government organizations in solving local, regional and national problems.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

Faculty

Computer Science and Engineering

Courses for CSCE (CSCE)

Numerical Analysis I

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 340/840</td>
<td>Numerical Analysis I</td>
<td>Crosslisted as MATH 340/840</td>
<td>3</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</table>

Prereqs:

CSCE 155A (http://bulletin.unl.edu/courses/CSCE/155A), CSCE 155E (http://bulletin.unl.edu/courses/CSCE/155E), CSCE 155H (http://bulletin.unl.edu/courses/CSCE/155H), CSCE 155N (http://bulletin.unl.edu/courses/CSCE/155N), or CSCE 155T (http://bulletin.unl.edu/courses/CSCE/155T); Math 107.

Credit toward the degree may be earned in only one of the following:

CSCE/MATH 340 (http://bulletin.unl.edu/courses/MATH/340/840) and ENGM 480 (http://bulletin.unl.edu/courses/ENGM/480/880).


Information Retrieval Systems

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 410/810</td>
<td>Information Retrieval Systems</td>
<td>CSCE 310 (<a href="http://bulletin.unl.edu/courses/CSCE/310">http://bulletin.unl.edu/courses/CSCE/310</a>) or CSCE 311</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</table>

Prereqs:

CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311

### Database Systems

#### CSCE 413/813

**Prereqs:**
- CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311 (http://bulletin.unl.edu/courses/CSCE/311).

CSCE 413 (http://bulletin.unl.edu/courses/CSCE/413)/813 involves practical experience with a working database system.

Data and storage models for database systems; entity/relationship, relational, and constraint models; relational databases; relational algebra and calculus; structured query language; Logical database design: normalization; integrity; distributed data storage; concurrency; security issues. Spatial databases and geographic information systems.

### Foundations of Constraint Processing

#### CSCE 421/821

**Prereqs:**
- CSCE 235 (http://bulletin.unl.edu/courses/CSCE/235); CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311 (http://bulletin.unl.edu/courses/CSCE/311).

Constraint processing for articulating and solving industrial problems such as design, scheduling, and resource allocation. The 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 for symmetry identification.

### Design and Analysis of Algorithms

#### CSCE 423/823

**Prereqs:**
- CSCE 235 (http://bulletin.unl.edu/courses/CSCE/235); CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311 (http://bulletin.unl.edu/courses/CSCE/311).

Mathematical preliminaries. Strategies for algorithm design, including divide-and-conquer, greedy, dynamic programming and backtracking. Mathematical analysis of algorithms. Introduction to NP-Completeness theory, including the classes P and NP, polynomial transformations and NP-complete problems.

### Computational Complexity Theory

#### CSCE 424/824

**Prereqs:**
- CSCE 235 (http://bulletin.unl.edu/courses/CSCE/235); CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311.
Course Delivery: Classroom


### Compiler Construction

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<th>Course Code</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 425</td>
<td>Compiler Construction</td>
<td>CSCE 235, CSCE 310 or CSCE 311</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

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.

### Automata, Computation, and Formal Languages

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CSCE 428</td>
<td>Automata, Computation, and Formal Languages</td>
<td>CSCE 235, CSCE 310 or CSCE 311</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</table>

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.

### Computer Architecture

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<tr>
<th>Course Code</th>
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<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CSCE 430</td>
<td>Computer Architecture</td>
<td>CSCE 230, CSCE 310 or CSCE 311; Prereq or Coreq: MATH/STAT 380 or ELEC 305</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</table>

Architecture of single-processor (Von Neumann or SISD) computer systems. Evolution, design, implementation, and evaluation of state-of-the-art systems. Memory Systems, including interleaving, 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.

### High-Performance Processor Architectures

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<tr>
<th>Course Code</th>
<th>Title</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CSCE 432</td>
<td>High-Performance Processor Architectures</td>
<td></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</tbody>
</table>
CSCE 432 (http://bulletin.unl.edu/courses/CSCE/432) assumes knowledge of computer architecture, pipelining, memory hierarchy, instruction level parallelism, and compiler principles.


### VLSI Design

#### Prereqs:
- CSCE 430 (http://bulletin.unl.edu/courses/CSCE/430); MATH 314 (http://bulletin.unl.edu/courses/MATH/314); MATH/STAT 380 (http://bulletin.unl.edu/courses/STAT/380) or ELEC 305 (http://bulletin.unl.edu/courses/ELEC/305).

Introduction to VLSI design using metal-oxide semiconductor (MOS) devices primarily aimed at computer science majors with little or no background in the physics or circuitry of such devices. Includes design of nMOS and CMOS logic, data-path, control unit, and highly concurrent systems as well as topics in design automation.

### Cluster and Grid Computing

#### Prereqs:
- CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311 (http://bulletin.unl.edu/courses/CSCE/311) or equivalent programming experience.

CSCE 435 (http://bulletin.unl.edu/courses/CSCE/435)/835 (http://bulletin.unl.edu/courses/CSCE/835) is designed for CSCE and non-CSCE students who have an interest in building or programming clusters to enhance their computationally-intensive research.

Build and program clusters. Cluster construction, cluster administration, cluster programming, and grid computing.

### Advanced Embedded Systems

#### Prereqs:
- CSCE 236 (http://bulletin.unl.edu/courses/CSCE/236); CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or equivalent; senior/graduate standing.

Embedded hardware design techniques; transceiver design and low-power communication techniques; sensors and distributed sampling techniques; embedded software design and embedded operating systems; driver development; embedded debugging techniques; hardware and software architectures of embedded systems; and design, development, and implementation of embedded applications.

### File and Storage Systems
CSCE 437 requires the designing and implementation of a real-life file and storage system.

System-level and device-level topics in the design, implementation, and use of file and storage systems. Components and organization of storage systems, disk drive hardware and firmware, multi-disk systems, RAID’s, local distributed and P2P file systems, and low-power design.

**Sensor Networks**

**Prereqs:**
CSCE 351 or 451; CSCE 430; CSCE 437

**Basics of sensor networks; theoretical and practical insight into wireless sensor networks, including low-power hardware and wireless communication principles; networking in wireless sensor networks; and applications of sensor networks, such as multimedia, underwater, and underground. A group project that provides hands-on interaction with a wireless sensor network testbed.**

**Robotics**

**Prereqs:**
CSCE236 or ELEC222 and CSCE 310

**Fundamental theory and algorithms for real world robot systems. Design and build a robot platform and implement algorithms in C++ or other high level languages. Topics include: open and closed loop control, reactive control, localization, navigation, path planning, obstacle avoidance, dynamics, kinematics, manipulation and grasping, sensing, robot vision processing, and data fusion.**

**Approximation of Functions**

**Prereqs:**
A programming language, MATH 221 and 314

**Polynomial interpolation, uniform approximation, orthogonal polynomials, least–first–power approximation, polynomial and spline interpolation, approximation and interpolation by rational functions.**

**Numerical Analysis II**

**Prereqs:**

**Crosslisted as MATH 447/847**

**Polynomial interpolation, uniform approximation, orthogonal polynomials, least–first–power approximation, polynomial and spline interpolation, approximation and interpolation by rational functions.**
### Operating Systems Principles

**Course Code:** CSCE 451/851  
**Link:** [CSCE 451](http://bulletin.unl.edu/courses/CSCE/451) / [CSCE 851](http://bulletin.unl.edu/courses/CSCE/851)

**Prerequisites:**  
- CSCE 230  
- CSCE 230L  
- CSCE 310  
- CSCE 311

This course is a prerequisite for CEEN 436, CSCE 455.

Credit will not count towards a graduate degree in computer science and computer engineering.


### Distributed Operating Systems

**Course Code:** CSCE 455/855  
**Link:** [CSCE 455](http://bulletin.unl.edu/courses/CSCE/455) / [CSCE 855](http://bulletin.unl.edu/courses/CSCE/855)

This course is a prerequisite for CHME 896.

**Course Code:** CSCE 455  
**Link:** [CSCE 455](http://bulletin.unl.edu/courses/CSCE/455) / [CSCE 855](http://bulletin.unl.edu/courses/CSCE/855)

This course requires a substantial programming project in distributed systems.

Organization and structure of distributed operating systems. Control, communication and synchronization of concurrent processes in the context of distributed systems. Processor allocation and scheduling. Deadlock avoidance, detection, recovery in distributed systems. Fault tolerance. Distributed file system concepts and structure.

### Parallel Programming

**Course Code:** CSCE 456/856  
**Link:** [CSCE 456](http://bulletin.unl.edu/courses/CSCE/456) / [CSCE 856](http://bulletin.unl.edu/courses/CSCE/856)

**Prerequisites:**  
- CSCE 310  
- CSCE 311

Introduction to the fundamentals of parallel computation and applied algorithm design. Methods and models of modern parallel computation; general techniques for designing efficient parallel algorithms for distributed and shared memory multiprocessor machines; principles and practice in programming an existing parallel machine.

### Systems Administration

**Course Code:** CSCE 457/857  
**Link:** [CSCE 457](http://bulletin.unl.edu/courses/CSCE/457)

Numberical matrix methods and numerical solutions of ordinary differential equations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Prereqs</th>
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<tbody>
<tr>
<td>CSCE 310</td>
<td>Communication Networks</td>
<td>3</td>
<td>CSCE 310 [link] or CSCE 311 [link] or equivalent programming experience</td>
</tr>
<tr>
<td>CSCE 230</td>
<td>Internet Systems and Programming</td>
<td>3</td>
<td>CSCE 230 [link]; CSCE 230L [link]; CSCE 310 [link] or CSCE 311 [link]; MATH/STAT 380 [link] or ELEC 305 [link]</td>
</tr>
<tr>
<td>CSCE 310</td>
<td>Software Quality</td>
<td>3</td>
<td>CSCE 310 [link] or CSCE 311 [link] or equivalent programming experience</td>
</tr>
<tr>
<td>CSCE 470</td>
<td>Computer Graphics</td>
<td>3</td>
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</table>
Display and recording devices; incremental plotters; point, vector, and character generation; grey scale displays, digitizers and scanners, digital image storage; interactive and passive graphics; pattern recognition; data structures and graphics software; the mathematics of three dimensions; homogeneous coordinates; projections and the hidden-line problem.

Introduction to Bioinformatics

Prereqs: CSCE 310 or CSCE 311; MATH/STAT 380.

This course is a prerequisite for CSCE 971.

Fundamentals and trends in bioinformatics. Scoring matrices and pairwise sequence alignments via dynamic programming, BLAST, and other heuristics. Multiple sequence alignments. Applications of machine learning methods such as hidden Markov models and support vector machines to biological problems such as family modeling and phylogeny.

Digital Image Processing

Prereqs: CSCE 156 or CSCE 311 or equivalent programming experience.

Digital imaging systems, digital image processing, and low-level computer vision. Data structures, algorithms, and system analysis and modeling. Digital image formation and presentation, image statistics and descriptions, operations and transforms, and system simulation. Applications include system design, restoration and enhancement, reconstruction and geometric manipulation, compression, and low-level analysis for computer vision.

Computer Vision

Prereqs: CSCE 156 or CSCE 311 or equivalent programming experience.

High-level processing for image understanding and high-level vision. Data structures, algorithms, and modeling. Low-level representation, basic pattern-recognition and image-analysis techniques, segmentation, color, texture and motion analysis, and representation of 2-D and 3-D shape. Applications for content-based image retrieval, digital libraries, and interpretation of satellite imagery.

Introduction to Data Mining

Prereqs: CSCE 310 or CSCE 311; MATH/STAT 380.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom
### CSCE 474 / 874

**Course Delivery:** Classroom

Data mining and knowledge discovery methods and their application to real-world problems. Algorithmic and systems issues. Statistical foundations, association discovery, classification, prediction, clustering, spatial data mining and advanced techniques.

### Multiagent Systems

**Course Code:** CSCE 475 / 875

**Prereqs:**
- [CSCE 156](http://bulletin.unl.edu/courses/CSCE/156)
- [CSCE 311](http://bulletin.unl.edu/courses/CSCE/311)

**Course Description:**
Distributed problem solving and planning, search algorithms for agents, distributed rational decision making, learning multiagent systems, computational organization theory, formal methods in Distributed Artificial Intelligence, multiagent negotiations, emergent behaviors (such as ants and swarms), and Robocup technologies and real-time coalition formation.

### Introduction to Artificial Intelligence

**Course Code:** CSCE 476 / 876

**Prereqs:**
- [CSCE 310](http://bulletin.unl.edu/courses/CSCE/310)
- [CSCE 311](http://bulletin.unl.edu/courses/CSCE/311)

**Course Description:**
Introduction to basic principles, techniques, and tools now being used in the area of machine intelligence. Languages for AI programming introduced with emphasis on LISP. Lecture topics include problem solving, search, game playing, knowledge representation, expert systems, and applications.

### Cryptography and Computer Security

**Course Code:** CSCE 477 / 877

**Prereqs:**
- [CSCE 310](http://bulletin.unl.edu/courses/CSCE/310)
- [CSCE 311](http://bulletin.unl.edu/courses/CSCE/311)
- [MATH 314](http://bulletin.unl.edu/courses/MATH/314)

**Course Description:**
Introductory course on cryptography and computer security. Topics: classical cryptography (substitution, Vigenere, Hill and permutation ciphers, and the one–time pad); Block ciphers and stream ciphers; The Data Encryption Standard; Public–key cryptography, including RSA and El–Gamal systems; Signature schemes, including the Digital Signature Standard; Key exchange, key management and identification protocols.

### Introduction to Machine Learning

**Course Code:** CSCE 478 / 878

**Prereqs:**
- [CSCE 310](http://bulletin.unl.edu/courses/CSCE/310)
- [CSCE 311](http://bulletin.unl.edu/courses/CSCE/311)
- [MATH/STAT 380](http://bulletin.unl.edu/courses/STAT/380) or [ELEC 305](http://bulletin.unl.edu/courses/ELEC/305) recommended.

**Course Description:**
Introduction to the fundamentals and current trends in machine learning. Possible applications for game playing, text categorization, speech
recognition, automatic system control, date mining, computational biology, and robotics. Theoretical and empirical analyses of decision trees, artificial neural networks, Bayesian classifiers, genetic algorithms, instance-based classifiers and reinforcement learning.

### Introduction to Neural Networks

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:**  
CSCE 310 or CSCE 311

Introduction to the concepts, design and application of connection-based computing begins by simulating neural networks, focusing on competing alternative network architectures, including sparse distributed memories, Hopfield networks, and the multilayered feed-forward systems. Construction and improvement of algorithms used for training of neural networks addressed to reduce training time and improve generalization. Algorithms for training and synthesizing effective networks implemented in high level language programs running on conventional computers. Emphasis on methods for synthesizing and simplifying network architectures for improved generalization. Application areas include: pattern recognition, computer vision, robotics medical diagnosis, weather and economic forecasting.

### Special Topics in Computer Science

**Credit Hours:** 1–3  
**Max credits per degree:** 6  
**Course Format:** Lecture  
**Course Delivery:** Classroom

**Prereqs:**  
Permission.

CSCE 490/890 will not count toward a major or minor in Computer Science and Computer Engineering.

Aspects of computers and computing for non–Computer Science and Computer Engineering majors and/or minors. Topics vary.

### Special Topics in Computer Science

**Credit Hours:** 1–3  
**Max credits per degree:** 6  
**Course Format:** Lecture  
**Course Delivery:** Classroom

**Prereqs:**  
Senior or graduate standing.

Aspects of computers and computing not covered elsewhere in the curriculum presented as the need arises.

### Computer Problems

**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Format:** Independent Study  
**Course Delivery:** Classroom, Web

**Prereqs:**  
Senior or graduate standing.

Independent project executed under the guidance of a member of the faculty of the Department of Computer Science. Solution and documentation of a computer problem demanding a thorough knowledge of either the numerical or nonnumerical aspects of computer science.

### Internship in Computer Practice

**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Format:** Independent Study  
**Course Delivery:** Classroom, Web
### Masters Project

**CSCE 897**

**Prereqs:**
- Permission of adviser

Experiential learning in conjunction with an approved industrial or governmental agency under the joint supervision of an outside sponsor and a faculty member.

### Masters Thesis

**CSCE 899**

**Prereqs:**
- Admission to masters degree program and permission of major adviser

### Information Organization and Retrieval

**CSCE 910**

**Prereqs:**
- CSCE 810


### Advanced Topics in Database Systems

**CSCE 913**

**Prereqs:**
- CSCE 813

Database system topics, coverage varying from year to year. Examples: Normalization theory; statistical databases; distributed databases; failure recovery; implementation issues. Readings in the current literature.

### Constraint Database Systems

**CSCE 914**

**Prereqs:**
- CSCE 813 or 913

Introduction to constraint database systems. Constraint data model, constraint query languages, query optimization and evaluation, constraint data storage and applications. Assignments in both use and the...
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<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
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</thead>
<tbody>
<tr>
<td>CSCE 923</td>
<td>Development and Analysis of Efficient Algorithms</td>
<td>CSCE 820 and 827</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>CSCE 924</td>
<td>Graph Algorithms</td>
<td>CSCE 827, MATH 852</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>CSCE 925</td>
<td>Scheduling Theory</td>
<td>Permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>CSCE 930</td>
<td>Advanced Computer Architecture</td>
<td>CSCE 830</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>CSCE 932</td>
<td>Fault-Tolerance: Testing and Testable Design</td>
<td>CSCE 834</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Fault-Tolerance: System Design and Analysis

Prereqs: CSCE 830 or permission

Theory and practice of creating extremely dependable digital systems through online fault-tolerance. Emphasizes modular redundancy in hardware and software to permit detection, masking, and removal of faulty components. Case studies from aerospace, banking, and other disciplines. Fault classification, error detection and diagnosis, dependability metrics, Byzantine Agreement, design trade-offs, and system simulation and modeling (esp. Markov).

Numerical Analysis III

Prereqs: CSCE/MATH 840 or 841 or 847 or permission

Advanced topics in numerical analysis.

Advanced Computer Networks

Prereqs: CSCE 862


Optical Communication Networks

Prereqs: CSCE 462 or 862

State-of-the-art optical communication networks, encompassing traditional networks operating on optical fiber and next-generation networks such as wavelength division multiplexed (WDM) and optical time division multiplexed (OTDM) networks. Fundamentals of optical network design, control, and management. Optical network design and modeling, routing and wavelength assignment algorithms, optical network simulation tools and techniques.

Coding Theory

Prereqs: MATH 817 desirable

Channels, introduction to information theory, Shannon's fundamental
### Theorem, Linear codes, Hamming codes, Reed-Muller codes, cyclic codes, idempotents, BCH codes, Reed-Solomon codes, Quadratic residue codes, perfect single-error correcting codes, Sphere packings, the Golay codes, Lloyds theorem, nonexistence theorems, weight enumerators, the MacWilliams equation, association schemes, quasi-symmetric designs, polarities of designs, extension of graphs, self-orthogonal codes and designs.

### Advanced Software Engineering

**CSCE 962**

**Prereqs:**
[CSCE 361](http://bulletin.unl.edu/courses/CSCE/361)

Recent advances in the field of software engineering. Software reuse, artificial intelligence approaches to software design, usability and requirements engineering, and design environments. Computer tools for the design of software products. Readings from current software engineering literature discussed and evaluated. Students will participate in a group project which investigates specific software engineering research topics.

### Software Process Engineering

**CSCE 963**

**Prereqs:**
[CSCE 361](http://bulletin.unl.edu/courses/CSCE/361) or permission

Engineering of the software development process including software life-cycle, maturity models, process programming, and process management. Both theory and practice of engineering large, long-lived software systems. Process analysis, modeling, workflows, standards, process environments and tools, automation, and organizational context. Case studies illuminate the application of software process theory to engineering practice. Teams analyze and develop software management plans and tools.

### Software Architecture and Frameworks

**CSCE 966**

**Prereqs:**
[CSCE 866](http://bulletin.unl.edu/courses/CSCE/866) or permission

Architectural aspects of software development including design patterns, frameworks, standardization of architectures and components, and development environments. Methodologies for creating reusable solutions for common problems in a variety of application areas. Experience in the development and use pattern catalogs and design standards.

### Pattern Recognition

**CSCE 970**

**Prereqs:**
[CSCE 310](http://bulletin.unl.edu/courses/CSCE/310) or [CSCE 311](http://bulletin.unl.edu/courses/CSCE/311); [MATH 314](http://bulletin.unl.edu/courses/MATH/314); [MATH/STAT 380](http://bulletin.unl.edu/courses/MATH/814) or [STAT 880](http://bulletin.unl.edu/courses/STAT/880) or [ELEC 305](http://bulletin.unl.edu/courses/ELEC/305)

Introduction to statistical decision theory, adaptive classifiers, supervised and nonsupervised training. Pattern recognition systems: transducers, feature extractors, decision units. Applications to optical character recognition, speech processing, remote sensing.
Advanced Bioinformatics

Prereqs:
CSCE 471 (http://bulletin.unl.edu/courses/CSCE/471/871)

Advanced algorithmic techniques for bioinformatics. Development and analysis of string matching, graph theoretic and dynamic programming techniques applied to systems and computational biology problems such as multiple sequence alignment, alignment of DNA and protein sequences, genome rearrangements, and phylogeny and haplotypes.

Support Vector Machines

Prereqs:
CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) or CSCE 311 (http://bulletin.unl.edu/courses/CSCE/311); MATH 314 (http://bulletin.unl.edu/courses/MATH/314) or MATH/STAT 380 (http://bulletin.unl.edu/courses/MATH/380) or STAT 880 (http://bulletin.unl.edu/courses/STAT/880); ELEC 305 (http://bulletin.unl.edu/courses/ELEC/305)

Core theory of the machine learning technique called support vector machines. Margin, kernels, and the formulation of a machine learning problem as an optimization problem that can be solved optimally. Implementation issues, kernel design, the appropriateness of various kernels for different applications, and regularization.

Genetic Algorithms

Prereqs:
CSCE 310 (http://bulletin.unl.edu/courses/CSCE/310) and 876 (http://bulletin.unl.edu/courses/CSCE/876)

For students taking CSCE 974 (http://bulletin.unl.edu/courses/CSCE/974), no biological sciences background is needed. However, a knowledge of genetic principles may help student to improve current algorithms.

Introduction of the motivation and current implementations of advanced genetic algorithms. These algorithms are built on basic principles borrowed from biology. Illustrates how a novel, implicitly-parallel search is implemented to obtain solutions for combinatorically-difficult problems.

Advanced Artificial Intelligence

Prereqs:
CSCE 876 (http://bulletin.unl.edu/courses/CSCE/876)

For students with some sophistication and considerable interest in exploring methods of designing and using algorithms useful for finding adequate answers to combinatorially large problems that require largely symbolic rather than numeric computing.

Study, analyze and critique basic and current research papers and to engage in artificial intelligence projects and experiments either alone or in small groups. Artificial intelligence environments, tools and expert system building. Class participation will be encouraged for the review of the more recent AI literature.
Data Encryption

**Prereqs:**
STAT 880, CSCE 235 or MATH 817 or permission

History of public cryptology; elements of statistics, combinatorics, number theory, group theory; symmetric and asymmetric cryptosystems, "trap door" functions; public key cryptosystems; RSA and knapsack; levels of cryptographic security; computational complexity of algorithms; National Bureau of Standards--DES (Standard); block and stream cyphers; cypher key management; protection of proprietary software and data.

Advances in Neural Networks and Genetic Algorithms

CSCE 979 requires reading, research, and programming selected to address the open problems of improving the speed and robustness of algorithms for learning in networks and other self-organizing systems.


Seminar

**Prereqs:**
Permission

Frontiers of an area of computer science.

Research Problems Other Than Thesis

Investigation of minor research problems to introduce graduate students to the methods of research in computer science by assigning a problem which is of research interest but within the capacity of a graduate student to complete within a semester.

Doctoral Dissertation

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair
**Description**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/ComputerScience).

**Department Chair:** Steve Goddard, Ph.D.

**Graduate Committee Chair:** Byrav Ramamurthy, Ph.D.

The Computer Science and Engineering (CSE) Department hosts advanced research programs in the general areas of
- Computer Science
- Computer Engineering
- Bioinformatics

Graduate students participate in research projects funded by major funding agencies and commercial companies.

The following graduate degree programs are available:
- Master of Science in Computer Science
- Master of Science in Computer Science with a Computer Engineering Specialization
- Master of Computer Science with a Bioinformatics Specialization
- Doctor of Philosophy in Computer Science
- Doctor of Philosophy in Engineering with a Computer Engineering Specialization
- Doctor of Philosophy in Computer Science with a Bioinformatics Specialization
- Joint Doctor of Philosophy in Computer Science and Mathematics

Specific information about Computer Science and Engineering graduate degree programs is available online at [www.cse.unl.edu](http://www.cse.unl.edu).

The CSE Department offers teaching assistantships and research assistantships to highly qualified students.

**Master of Science.**

Applicants for admission to the master of science degree program are required to submit scores for the general Graduate Record Examination and satisfy the general admission requirements of the Graduate College. Admission to full graduate standing in the MS program requires the equivalent of the undergraduate major in computer science. A TOEFL score of at least 600 (paper-based) and 250 (computer-based) is required for students whose native language is not English and who have not earned a baccalaureate in the US. Recommendation for admission to provisional standing in the MS program may be made in exceptional cases by the Computer Science Graduate Committee. Provisional admissions are limited by available space.

The master of science program may be carried out under Option I or Option III 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.

**Doctor of Philosophy.**

Students applying for admission to the doctor of philosophy program in computer science must satisfy the general requirements for full graduate standing in the MS program as stated above. Admission to full graduate standing in the PhD program requires the successful completion of a qualifying examination. Admission to Candidacy for the PhD degree requires: the successful completion of a written comprehensive examination and the submission of an acceptable written proposal for the dissertation research to the student’s PhD Supervisory Committee.

Cooperative doctor of philosophy programs are also offered in conjunction with the Department of Mathematics and the College of Engineering.

**Faculty**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/ComputerScience).

Retrieved from "http://bulletin.unl.edu/graduate/Computer_Science_and_Engineering (http://bulletin.unl.edu/graduate/Computer_Science_and_Engineering)"

**Criminal Justice**

**Interim Department Director:** John Crank, Ph.D.

The criminal justice program is administered through the University of Nebraska at Omaha and criminal justice graduate courses are primarily taken on the Omaha campus. Certain option courses, however, could be completed on the Lincoln campus in consultation with the student’s graduate adviser.

The Department of Criminal Justice offers the student a choice of either a master of science or a master of arts degree in criminal justice and a doctor of philosophy in criminal justice. All degree programs emphasize criminal justice research, theory, planning, and administration.

**Master of Arts.**

The master of arts degree is a 30-credit–hour program, including thesis. The program is 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 or a master of science with an option in counseling.

Doctor of Philosophy
The PhD in criminal justice requires a minimum of 93 credit hours, including credit for 30 hours earned in a master’s degree program. The 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 on 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 also is required.

Additional information may be obtained from the: Department of Criminal Justice
University of Nebraska at Omaha
Omaha, NE 68182–0149
(402) 554–2610

or

Department of Criminal Justice
University of Nebraska–Lincoln
1100 Neihardt
540 N 16th Street
P O Box 880633
Lincoln, NE 68588–0630
(402) 472–3677

Faculty
- Anderson, Amy L. –2003; Assistant Professor; BA 1997 Ohio State; MA 2000, PhD 2003, Penn State
- Batton Smith, Candice –1999; Assistant Professor; BA 1991 Nebraska (Lincoln); MA 1993 Kansas State; PhD 1999 Vanderbilt
- Brennan, Pauline K. – 2004; Assistant Professor; MA 1989, PhD 1999 SUNY (Albany)
- Crank, John –2006; Professor; MA 1974 Tucson; MPA 1976 Springfield (Illinois); PhD 1987 Colorado
- DeLone, Gregory J. – 2003; Assistant Professor; BS 1986 Florida State; MPA 1996, PhD 2002 Nebraska (Lincoln)
- DeLone, Miriam –1992; Associate Professor; BS 1987, MS 1989, PhD 1992 Florida State
- Eskridge, Chris –1978; Professor; BS 1975 Brigham Young; MA 1976, PhD 1978 Ohio State
- Hoffman, Dennis –1980; Professor; BA 1971 Northern Iowa; MA 1974 Drake; PhD 1979 Portland State
- Hughes, Lorine A. – 2004; Assistant Professor; MA 1998, PhD 2003 Washington State
- Jacobs, Susan –1990; Associate Professor; PhD 1971 Nebraska (Lincoln)
- Kadleck, Colleen –2001; Assistant Professor; BS 1994 Bowling Green State; MS 1995, PhD 2001 Cincinnati
- Marshall, Christopher E. –1990; Associate Professor; BA 1971, MA 1975, Bowling Green; PhD 1978 Iowa State
- Meier, Robert –1998; Professor and Chair; PhD 1974 Wisconsin (Madison)
- Ogle, Robbin –1995; Associate Professor; BS 1982 Central Missouri State; MS 1990 Missouri (Columbia); PhD 1995 Penn State
- Sample, Lisa – Assistant Professor; MA 1998, PhD 2001 Missouri (St. Louis)
- Simi, Peter – Assistant Professor; MA 1999, PhD 2003 Nevada (Las Vegas)
- Wakefield, William –1974; Professor; BA 1965, MA 1970 Nebraska (Omaha); PhD 1976 South Dakota State
- Walker, Samuel –1974; Professor; BA 1965 Michigan; MA 1970 Nebraska (Omaha); PhD 1973 Ohio State
- Zhao, Jihong –1995; Associate Professor; MA 1990, PhD 1994 Washington State

Retrieved from "http://bulletin.unl.edu/graduate/Criminal_Justice" (http://bulletin.unl.edu/graduate/Criminal_Justice)

Earth and Atmospheric Sciences

Subject Areas
- Colloquium and Research (GEOS) (#GEOS)
- Geology (GEOL) (#GEOL)
- Meteorology–Climatology (METR) (#METR)

Courses for GEOS (GEOS)

<table>
<thead>
<tr>
<th>GEOS 810</th>
<th>Teaching &amp; Learning in Post–Secondary Science Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preqs:</strong> One semester of teaching a college level science, technology, engineering, or mathematics course.</td>
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</tr>
</tbody>
</table>

This course is designed for graduate students, postdoctoral researchers, and others who teach at the college level. Students may seek permission from instructor to enroll in the course concurrent with their first semester of teaching.

Integrate learning theories, pedagogy, and evidence–based practices to promote student learning in science, technology, engineering, and
### Special Problems in Geosciences

**Code:** GEOS 898  
**Credit Hours:** 1-6  
**Max credits per degree:** 24  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** 12 hours geosciences

### Masters Thesis

**Code:** GEOS 899  
**Credit Hours:** 6-10  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Admission to masters degree program and permission of major adviser

### Professional Development in Geosciences

**Code:** GEOS 900  
**Credit Hours:** 1  
**Course Format:** Lecture 1  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Professional skills. Time management, laboratory and field safety, abstract writing, proposal writing, grantsmanship, and presentations. The philosophy and ethical conduct of science.

### Seminar and Colloquium

**Code:** GEOS 99  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Graduate standing  
**Notes:** All GEOS graduate students in residence must register for GEOS 099 (http://bulletin.unl.edu/courses/GEOS/99) each semester. GEOS 099 (http://bulletin.unl.edu/courses/GEOS/99) is P/N only.

### Research Other than Thesis

**Code:** GEOS 996  
**Credit Hours:** 1-24  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Permission

### Doctoral Dissertation

**Code:** GEOS 999  
**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair
## Courses for GEOL (GEOL)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs and Notes</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 475/875</td>
<td>Water Quality Strategy</td>
<td>Senior standing or permission.</td>
<td>Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875.</td>
</tr>
<tr>
<td>BIOS 444/844</td>
<td>Geomicrobiology</td>
<td>3 hours biological sciences and 3 hours chemistry.</td>
<td>Crosslisted as GEOL 444/844.</td>
</tr>
<tr>
<td>BIOS 457/857</td>
<td>Ecosystem Ecology</td>
<td>BIOS 207 or 220, CHEM 110, and MATH 107.</td>
<td>Crosslisted as GEOL 457/857.</td>
</tr>
<tr>
<td>GEOG 419/819</td>
<td>Applications of Remote Sensing in Agriculture and Natural Resources</td>
<td>GEOG/NRES 418.</td>
<td>Crosslisted as GEOL 419/819, AGRO 419/819, NRES 420/820.</td>
</tr>
<tr>
<td>GEOL 414/814</td>
<td>Clay Mineralogy</td>
<td>GEOL 210, CHEM 113 or equivalent.</td>
<td>Crosslisted as GEOL 414/814.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
<td>Credit Hours</td>
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<tr>
<td>GEOL 417/817</td>
<td>Organic Geochemistry</td>
<td>Prereqs: GEOL 410 and CHEM 251</td>
<td>3</td>
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<tr>
<td></td>
<td>Origin, preservation and transport of organic compounds found in the rock record. Applications of organic geochemistry to paleoclimatic and paleoenviromental interpretations as well as discerning the origins of coal, oil and natural gas.</td>
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</tr>
<tr>
<td>GEOL 418/818</td>
<td>Chemistry of Natural Waters</td>
<td>Crosslisted as NRES 419/819, WATS 418</td>
<td>3</td>
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<td></td>
<td>Principles of water chemistry and their use in precipitation, surface water, and groundwater studies. Groundwater applications used to determine the time and source of groundwater recharge, estimate groundwater residence time, identify aquifer mineralogy, examine the degree of mixing between waters of various sources and evaluate what types of biological and chemical processes have occurred during the water’s journey through the aquifer system.</td>
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<tr>
<td>GEOL 418L/818L</td>
<td>Chemistry of Natural Waters Laboratory</td>
<td>Crosslisted as NRES 419L/819L, WATS 418L</td>
<td>1</td>
</tr>
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<td></td>
<td>Basic laboratory techniques used to perform water analysis including various wet chemical techniques, instrument use (AA, IC, UV-Visible) and computer modeling. Techniques for sample collection and preservation, parameter estimation and chemical analysis.</td>
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</tr>
<tr>
<td>GEOL 420/820</td>
<td>Siliciclastic Sedimentology</td>
<td>Prereqs: GEOL 310</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Depositional processes, environments of deposition, and facies models. Description, classification, and analysis of modern and ancient siliciclastic sediment and sedimentary rocks.</td>
<td></td>
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</tr>
<tr>
<td>GEOL 421/821</td>
<td>Carbonate Petrology</td>
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</tbody>
</table>
### Quaternary Paleoclimatology and Paleoecology

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3  
**Course Delivery:** Classroom  

**Prereqs:**  
GEOL 310  

Lab focuses on field, petrographic and geochemical methods.  

Depositional settings and processes, petrography, geochemistry, diagenesis and geological significance of modern and ancient carbonate rocks and sediments.

**Crosslisted as:** BIOS 436/836  

**Analysis and interpretation of the Quaternary period's paleoecological data. Patterns of long-term climate variation. Distribution patterns and responses of organisms and ecosystems to Quaternary environmental change.**

### Biogeochemical Cycles

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  

**Prereqs:**  
CHEM 109 or 113; 12 hrs geology or biological sciences.

Chemical cycling at or near the earth's surface, emphasizing interactions among the atmosphere, biosphere, geosphere and hydrosphere. Modern processes, the geological record, and human impacts on elemental cycles.

### Quantitative Methods in Paleontology

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  

**Prereqs:**  
GEOL 310.

Numerical and statistical analysis of paleontological data including biometry, syn-ecology, and quantitative biostratigraphy.

### Micro-paleontology

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3  
**Course Delivery:** Classroom  

**Prereqs:**  
GEOL 310.

GEOL 431 is open to BIOS majors by permission only.

Morphology, classification, ecology and geological application of common fossil and extant marine, brackish, and freshwater microfossils.

### Vertebrate Paleontology

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3  
**Course Delivery:** Classroom  

**Prereqs:**  
Permission or graduate standing.

Survey of the evolution of the vertebrates, including the geological and biological factors that influence the pattern of evolution, and laboratory
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Prerequisites Details</th>
<th>Course Description</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 436/836</td>
<td>Evolution of Cenozoic Mammals</td>
<td>GEOL 103</td>
<td><a href="http://bulletin.unl.edu/courses/GEOL/436">Link</a></td>
<td>Survey of mammalian evolution with emphasis on the origin, radiation, and phylogenetic relationships of Cenozoic fossil mammals. Overview of climatic and ecological changes affecting mammalian adaptations and hands on experience with specimens.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>GEOL 439/839</td>
<td>Marine Ecology and Paleoecology</td>
<td>BIOS/NRES 220</td>
<td><a href="http://bulletin.unl.edu/courses/NRES/220">Link</a></td>
<td>Geology majors should register for GEOL 439L <a href="http://bulletin.unl.edu/courses/GEOL/439L">Link</a></td>
<td>2</td>
<td>Lecture 2</td>
<td>Classroom</td>
</tr>
<tr>
<td>GEOL 439L/839L</td>
<td>Marine Ecology and Paleoecology Lab</td>
<td>Parallel GEOL 439 <a href="http://bulletin.unl.edu/courses/GEOL/439">Link</a></td>
<td>Lab includes several field trips.</td>
<td>Introduction to the fundamentals of marine ecology and their application to paleoecology.</td>
<td>1</td>
<td>Lab 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>GEOL 440/840</td>
<td>Tectonics</td>
<td>GEOL 340</td>
<td><a href="http://bulletin.unl.edu/courses/GEOL/340">Link</a></td>
<td>Theory of plate tectonics; tectonic controls on rock assemblages; interpretation of regional structure and tectonic history; origin and tectonic evolution of terrestrial planets.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>GEOL 442/842</td>
<td>Environmental Geophysics I</td>
<td>MATH 107, PHYS 211, GEOL 101</td>
<td><a href="http://bulletin.unl.edu/courses/PHYS/211">Link</a>, <a href="http://bulletin.unl.edu/courses/GEOL/101">Link</a></td>
<td>Introduction to the principles of seismic, ground-penetrating radar, and bore-hole geophysical methods and their application to groundwater,</td>
<td>4</td>
<td>Lecture 3, Lab 3</td>
<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
<td>Course Delivery</td>
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<tr>
<td>GEOL 443/843</td>
<td>Environmental Geophysics II</td>
<td>MATH 107, PHYS 211, GEOL 101, or equivalent or permission.</td>
<td>4</td>
<td>Lecture 3, Lab 3</td>
<td>Classroom</td>
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<td></td>
<td>Introduction to principles of magnetic, electromagnetic, resistivity, and gravity methods and their application to ground water, engineering, environmental, and archaeological investigations.</td>
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<tr>
<td>GEOL 450/850</td>
<td>Surficial Processes and Landscape Evolution</td>
<td>GEOL 310 or permission.</td>
<td>3</td>
<td>Lecture 2, Lab 3</td>
<td>Classroom</td>
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<td>Two or three half-day field trips to local sites of interest and a five-day field trip to Colorado and Wyoming are required.</td>
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<td></td>
<td>Fluvial, glacial, eolian, and coastal processes and landforms. Roles of tectonics, climate, and climate change in landscape evolution. Lab stresses description and interpretation of landforms from remotely-sensed, cartographic, and field data.</td>
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<tr>
<td>GEOL 465/865</td>
<td>Soil Geomorphology and Paleopedology</td>
<td>GEOL 450/850 and NRES 477/877; or permission.</td>
<td>3</td>
<td>Lecture 2, Lab 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Two field trips required.</td>
<td>Soils and paleosols as evidence in reconstruction landscape evolution and paleoenvironments. Role of paleosols in stratigraphy.</td>
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<tr>
<td>GEOL 470/870</td>
<td>Field Techniques in Hydrogeology</td>
<td>GEOL 488, GEOL 470; or permission.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Basic techniques, field procedures, instruments, and software for data interpretation, and characterization of groundwater flow and contaminant transport.</td>
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<tr>
<td>GEOL 472</td>
<td>Water in Geosciences</td>
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</tr>
</tbody>
</table>
**Economic Geology of the Metals**

**Prereqs:**
- MATH 106 and 107
- PHYS 141
- One of the following: GEOL 101 or 106 or METR 200

Quantitative approach to water in geological media, earth surface and atmosphere. Understanding and analysis of physical processes involved in groundwater-surface-atmosphere interactions.

**Fossil Fuel Geology and Exploration**

**Prereqs:**
- 12 hrs geology

Geology of coal, oil and gas, and methods of exploration.

**Economic and Exploration Geology**

**Prereqs:**
- GEOL 310 and GEOL 320

Field trips are required and supported by alumni endowment. Course content will vary on a 3-year rotational basis. Combined lectures, seminars, weekend short courses, and field trips. Field trips may be scheduled during semester breaks.


**Advanced Mineralogy**

**Prereqs:**
- 12 hrs geology including GEOL 210

This course is a prerequisite for GEOL 495.
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>GEOL 816</td>
<td>Isotope Geochemistry</td>
<td>GEOL 410</td>
<td>3</td>
<td>Lecture 3</td>
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<td></td>
<td></td>
<td>Behavior of stable and radiogenic isotopes in geological and cosmochemical systems. Application of isotope geochemistry to determining the age of rocks, as well as the sources of the chemical components in the rocks.</td>
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<tr>
<td>GEOL 825</td>
<td>Geostatistics</td>
<td>MATH 106 and STAT 218</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Crosslisted as NRES 825</td>
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<td></td>
<td>Offered fall semester of odd-numbered calendar years. Practical methods for solving spatial interpolation and related estimation problems with emphasis on geostatistical methods. Introduction to applied statistical simulation and prediction in geology, hydrogeology and environmental studies.</td>
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<tr>
<td>GEOL 828</td>
<td>Stratigraphic Architecture and Sequence Stratigraphy</td>
<td>GEOL 310</td>
<td>3</td>
<td>Lab 3, Lecture 2</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Analysis of stratigraphic stacking patterns in sedimentary basins and sequence stratigraphic methods.</td>
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<tr>
<td>GEOL 846</td>
<td>Palynology</td>
<td>GEOL 846</td>
<td>3</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Pollen and spore morphology, taxonomy, and pollination ecology as a basic tool for geologists, biologists, and archaeologists interested in environmental reconstruction. Techniques of environmental reconstruction through pollen analysis. Aspects of medical and forensic palynology.</td>
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<tr>
<td>GEOL 869</td>
<td>Regional Field Geology</td>
<td>GEOL 103</td>
<td>1</td>
<td>Field</td>
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<td>Weekend field trips. Field investigation of classic areas of Midcontinent Geology, emphasizing principles of stratigraphy, geomorphology, sedimentology, and paleontology.</td>
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</tr>
</tbody>
</table>
Hydrogeology
Crosslisted as NRES 887

Prereqs:
GEOL 888 and MATH 208

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.

Environmental Isotope Hydrology
Crosslisted as NRES 917

Prereqs:
NRES 819 or equivalent or permission

Theory and use of stable, radiogenic and radioactive isotopes in hydrologic studies. Abundance and variation of the stable isotopes of oxygen, hydrogen, carbon, sulphur, chlorine, nitrogen, and strontium. Application of the isotopes to determine water origin, movement, geochemical history, recharge age and residence time, and to delineate contaminant sources and solute migration.

Seminar in Geochemistry

Prereqs:

Seminar in Mineralogy

Max credits per degree: 6

See also GEOL 953.

Seminar in Stratigraphy

See also GEOL 953.

Seminar in Sedimentary Environments
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>GEOL 925</td>
<td>Seminar in Sedimentology</td>
<td></td>
<td>1–2</td>
<td>Classroom</td>
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<tr>
<td>GEOL 926</td>
<td>Marine Geology and Paleoceanography</td>
<td>Geology of the oceanic realm, formation of oceanic crust, circulation,</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>geochemistry, pelagic sediments and their diagensis, correlation, and</td>
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<td></td>
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<td>oceanic history.</td>
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<tr>
<td>GEOL 929</td>
<td>Mesozoic and Cenozoic Stratigraphy</td>
<td>Application of stratigraphic principles and methods to the solution of</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td></td>
<td>Mesozoic and Cenozoic problems.</td>
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<tr>
<td>GEOL 931</td>
<td>Taphonomy</td>
<td>Processes in fossil preservation and how they affect information in the</td>
<td>2</td>
<td>Lab 3, Lecture 1</td>
<td></td>
<td>Classroom</td>
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<td></td>
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<td>fossil record of vertebrates.</td>
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<tr>
<td>GEOL 934</td>
<td>Site Analysis in Vertebrate Paleontology</td>
<td>Integrated approach to the excavation and collection of fossil vertebrate</td>
<td>2</td>
<td>Lecture 2</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td></td>
<td>sites in a global framework, with consideration of tectonic, depositional,</td>
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<td>and taphonomic factors in interpretation of fossil vertebrate concentrations.</td>
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<tr>
<td>GEOL 935</td>
<td>Cenozoic Vertebrate Paleocology</td>
<td>Terrestrial vertebrate history during the Cenozoic Era with emphasis on</td>
<td>2</td>
<td>Lab 1, Lecture 1</td>
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<td>Classroom</td>
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<tr>
<td></td>
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<td>the fossil record of Great Plains mammalian communities within the last</td>
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<td>fifteen million years.</td>
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<tr>
<td>GEOL 936</td>
<td>Siliceous Phytoplankton Paleontology</td>
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<tr>
<td>Code</td>
<td>Course Title</td>
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<tr>
<td>936</td>
<td>Biostratigraphy, paleoecology, and paleobiogeography of fossil diatoms, silicoflagellates and ebridians.</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>GEOL 937</td>
<td><strong>Mesozoic Calcareous Nannofossil Paleontology</strong></td>
<td>Biostratigraphy, paleoecology, and paleobiogeography of Mesozoic calcareous nannofossils.</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>Classroom</td>
<td></td>
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<tr>
<td>GEOL 938</td>
<td><strong>Cenozoic Calcareous Microfossil Paleontology</strong></td>
<td>Biostratigraphy, paleoecology, and paleobiogeography of Cenozoic calcareous nannofossils.</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>GEOL 939</td>
<td><strong>Seminar in Paleontology</strong></td>
<td></td>
<td>1-2</td>
<td>Classroom</td>
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<tr>
<td>GEOL 940</td>
<td><strong>Advanced Structural Geology</strong></td>
<td></td>
<td>1-24</td>
<td>Classroom</td>
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<tr>
<td>GEOL 941</td>
<td><strong>Advanced Tectonics</strong></td>
<td><strong>Prereqs:</strong> GEOL 840 or permission</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>GEOL 945</td>
<td><strong>Seminar in Structural Geology and Tectonics</strong></td>
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<td>Course Code</td>
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<tr>
<td>GEOL 953</td>
<td><strong>Glacial Geology</strong></td>
<td>1-2</td>
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<td>Classroom</td>
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<td><strong>Prereqs:</strong> GEOL 850 or permission</td>
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<td></td>
<td>Deposits made by the continental ice sheets of the Pleistocene and the environments that existed around them. Lab includes interpretation of topographic maps, air photos, soil maps, and field studies.</td>
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<tr>
<td>GEOL 955</td>
<td><strong>Seminar in Geomorphology</strong></td>
<td>2-3</td>
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<td>Classroom</td>
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<td><strong>Prereqs:</strong> GEOL 850</td>
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<tr>
<td>GEOL 956</td>
<td><strong>Seminar in Quaternary Geology</strong></td>
<td>1-2</td>
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<td>Classroom</td>
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<td></td>
<td>See also GEOL 881, 827</td>
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<tr>
<td>GEOL 985</td>
<td><strong>Solute Movement in Soils</strong></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Crosslisted as CIVE 955, AGRO 955, AGEN 955</td>
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<td></td>
<td><strong>Prereqs:</strong> MATH 208, AGRO 861, GEOL 888, MSYM 852, CIVE 858</td>
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<td></td>
<td>Knowledge of a programming language. MATH 821 recommended. Offered even-numbered calendar years.</td>
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<td>Examination of the theory and experimental evidence available to characterize the movement of chemicals in soil. Both saturated and unsaturated flow conditions examined. Initial presentation of basic theoretical concepts. Remainder of class a discussion of the literature.</td>
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<tr>
<td>GEOL 986</td>
<td><strong>Contaminant Hydrogeology</strong></td>
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<td></td>
<td><strong>Prereqs:</strong> GEOL 888, MATH 208, or equivalent, or permission</td>
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<td>Occurrence, behavior and remediation of contamination in geological media. Fundamentals of physical, mathematical, chemical, and engineering processes affecting movement of contaminants in the hydrogeological context.</td>
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</tbody>
</table>
environment and their applications. Teamwork, projects, seminar presentations, field trips and invited lectures.

**Seminar in Hydrogeology**

**Credit Hours:** 1-2  
**Campus:**  
**Course Delivery:** Classroom

**Introduction to Groundwater Modeling**

Prereqs:  
GEOL *889, MATH 208 or equivalent, programming language, or permission  

Application of fundamentals of modeling techniques (analytical, semi-analytical, finite-difference and finite elements) to the solution of hydrogeological problems. Emphasis on 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.

**Research Other Than Thesis**

Prereqs: Permission

**Soil Physics**

Crosslisted as GEOL 461/861, AGRO 461/861, SOIL 461, WATS 461  

Prereqs: AGRO/SOIL 153 or equivalent, one semester of calculus. Recommended: Parallel AGRO/NRES/SOIL 458


**Water Resources Seminar**

Crosslisted as GEOG 484/884, GEOL 484/884, AGRO 484/884, WATS 484

Prereqs: Junior or above standing, or permission.

Seminar on current water resources research and issues in Nebraska and the region.
Crosslisted as GEOL 488/888

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

Prereqs: GEOL 100-level course; MATH 106 or equivalent.

This course is a prerequisite for GEOL 889, NRES 918.

Occurrence, movement, and development of water in the geologic environment.

Courses for METR (METR)

AGRO 907 Agricultural Climatology
Crosslisted as METR 907, HORT 907, NRES 907

Credit Hours: 3  
Course Format: Lab 2, Lecture 2  
Campus:  
Course Delivery: Classroom

Prereqs: NRES 808; STAT 801 or equivalent

Offered spring semester of odd-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.

AGRO 908 Solar Radiation Interactions at the Earth's Surface
Crosslisted as METR 908, HORT 908, NRES 908

Credit Hours: 3  
Course Delivery: Classroom

Prereqs: MATH 208; NRES 808 or equivalent or permission

Offered spring semester of even-numbered calendar years. Quantitative study of radiative transfer to the earth’s surface and subsequent interactions of radiation with vegetative components and underlying surfaces. Applications of canopy radiative modeling and remote sensing techniques, particularly in understanding land-surface processes, are discussed.

METR 415/815 General Circulation of the Atmosphere

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

Prereqs: Junior standing; MATH 106 or 108H; METR 205 or 475/875; PHYS 211 or 211H or 221

Development of the atmospheric circulation regimes, from planetary scale (e.g., the planetary waves) to synoptic scale (e.g., the cyclones and anticyclones) and mesoscale, their seasonal variations, and their roles in horizontal and vertical energy and water transports and budgets in the Earth system.

METR 428/828 Air Pollution

Credit Hours: 3  
Course Delivery: Classroom

Prereqs: MATH 106 or 108H; METR 205 or 475/875; PHYS 211 or 211H or 221

Applications of canopy radiative modeling and remote sensing techniques, particularly in understanding land-surface processes, are discussed.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>ACE Outcomes</th>
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</thead>
<tbody>
<tr>
<td>METR 442/842</td>
<td><strong>Advanced Synoptic Meteorology–Climatology</strong></td>
<td>Prereqs: 6 hrs. METR and CHEM 109 [link]</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Basic processes (e.g., emission, transport, first–order chemical reaction, and deposition) associated with air pollution and their combination with meteorology for air quality forecasting. Environmental topics: acid rain; smog; air pollution; ozone hole; greenhouse gases; aerosols; long–range transport; civic regulations and international treaties on air pollution; and climate change.</td>
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<tr>
<td>METR 443/843</td>
<td><strong>Severe Storms Meteorology–Climatology</strong></td>
<td>Prereqs: METR 205 [link]</td>
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<td>Lecture 3</td>
<td>Classroom</td>
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<td>Dynamics of various types of severe weather (blizzards, flash floods, lightning, thunderstorms and winter and summer tornado outbreaks). Interpretation of the numerical and statistical models utilized to forecast these phenomena. Synoptic case studies of severe weather occurrences. Recent research on severe weather.</td>
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<tr>
<td>METR 454/854</td>
<td><strong>Statistical Analysis of Atmospheric Data</strong></td>
<td>Prereqs: 6 hrs METR and MATH 107 (link) / MATH 107H (link)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Application of univariate statistics, hypothesis testing, statistical forecasting, forecast verification, time–series analysis, principal component analysis, and cluster/multivariate analysis to atmospheric data for different applications in the atmospheric sciences (from short–term weather forecast to long–term climate prediction).</td>
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<tr>
<td>METR 463/863</td>
<td><strong>Radar Meteorology</strong></td>
<td>Prereqs: METR 323 [link]</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
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<td>The fundamental principles of weather radars and the basic application of these principles.</td>
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<tr>
<td>METR 464/864</td>
<td><strong>Satellite Meteorology</strong></td>
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</tbody>
</table>
Prereqs:
METR 205 (http://bulletin.unl.edu/courses/METR/205).

Concepts and principles related to meteorological observations from satellites. Applications for weather analysis and forecasting.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
METR 323 (http://bulletin.unl.edu/courses/METR/323).

Principles of atmospheric radiation and techniques for satellite image processing. Application of data calibration, image registration and enhancement, noise filtering and multi-spectral classification of satellite imageries. Survey of various satellite sensors used for monitoring different atmospheric processes and constituents.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
METR 205 (http://bulletin.unl.edu/courses/METR/205).

This course is a prerequisite for METR 483 (http://bulletin.unl.edu/courses/METR/483).

Global energy and water balance regimes of the earth and its atmosphere. Utilization of physical laws to reveal causes and effects of interrelationships in the climatic system.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
Junior standing; MATH 106 (http://bulletin.unl.edu/courses/MATH/106)
MATH 106B (http://bulletin.unl.edu/courses/MATH/106B)/106H (http://bulletin.unl.edu/courses/MATH/106H); 5 hrs PHYS; METR 475 (http://bulletin.unl.edu/courses/METR/475); 875 (http://bulletin.unl.edu/courses/METR/875). METR 483 (http://bulletin.unl.edu/courses/METR/483)/883 (http://bulletin.unl.edu/courses/METR/883)/NRES 467 (http://bulletin.unl.edu/courses/NRES/467)/867 (http://bulletin.unl.edu/courses/NRES/867) is offered fall semester of even-numbered calendar years.

Elements of climate systems, El Nino/La Nina cycle and monsoons, natural variability of climate on interannual and interdecadal scales. Paleoclimate, and future climate, developed climate change scenarios and climate change impacts on natural resources and the environment.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>METR 487/887</td>
<td>Earth's Climate: Past, Present, Future</td>
<td>6 hrs METR or 6 hrs GEOL.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>How the Earth's climate has varied and the forcing mechanisms related to those changes. Themes that reappear through Earth's climate history and into the future; causes of climate change; the natural response times of the multiple components; and the role of greenhouse gases within the climate system at differing time scales.</td>
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<tr>
<td>METR 495/895</td>
<td>Internship in Meteorology–Climatology</td>
<td>Permission.</td>
<td>1–6</td>
<td>Field</td>
<td>Classroom</td>
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<td></td>
<td>Application of meteorology–climatology learning with on–the–job training.</td>
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<tr>
<td>METR 811</td>
<td>Dynamic Meteorology I</td>
<td>CSCE 150E</td>
<td>MATH 208</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Equations of thermodynamics, momentum, and continuity are derived and applied to atmospheric motion. Energy conservation, flows, and conversions.</td>
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<tr>
<td>METR 812</td>
<td>Dynamic Meteorology II</td>
<td>CSCE 150E</td>
<td>MATH 221</td>
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<td>Lecture 3</td>
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<td>Applications of the principles of dynamic meteorology to the problems of forecasting and meteorological problems.</td>
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<tr>
<td>METR 823</td>
<td>Physical Meteorology</td>
<td>CSCE 150E</td>
<td>MATH 205</td>
<td>4</td>
<td>Lecture 4</td>
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<td>Physical principles that provide the foundation for meteorology. Absorption,</td>
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</table>
scattering, and transmission of radiation in the atmosphere, cloud physics, precipitation process, atmospheric optics, atmospheric electricity, and lightning.

### Synoptic Meteorology

**METR 841**

- **Prereqs:** [METR 205](http://bulletin.unl.edu/courses/METR/205)

Dynamic and thermodynamic concepts and principles applied to synoptic-scale weather forecasting. Dynamics, energetics, structure, evolution, and motion of extra-tropical cyclones. Meteorological communications, interpretation and analysis of weather maps, and thermodynamic diagrams.

### Theory of Climate

**METR 880**

- **Prereqs:** [MATH 221](http://bulletin.unl.edu/courses/MATH/221) or [MATH 221H](http://bulletin.unl.edu/courses/MATH/221H) or equivalent

Foundation and maintenance of earth’s climate system and its variation over time. Climate modeling.

### Special Topics in Meteorology–Climatology

**METR 898**

- **Prereqs:** Permission

Theory of scattering by atmospheric particles (e.g., clouds, aerosols, and molecules), atmospheric radiative transfer equations, and techniques for solving these equations. Atmospheric transfer of both solar and terrestrial radiation. Numerical experiments with radiative transfer models and

### Seminar in Meteorology and Climatology

**METR 903**

- **Topic varies.**

### Atmospheric Radiative Transfer

**METR 924**

- **Prereqs:** [METR 423](http://bulletin.unl.edu/courses/METR/423) or [METR 823](http://bulletin.unl.edu/courses/METR/823) or [MATH 221](http://bulletin.unl.edu/courses/MATH/221) or [MATH 221H](http://bulletin.unl.edu/courses/MATH/221H) or [MATH 821](http://bulletin.unl.edu/courses/MATH/821) or equivalent

Numerical experiments with radiative transfer models and
<table>
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<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>METR 943</td>
<td>Dynamics of Severe Convective Storms</td>
<td><a href="http://bulletin.unl.edu/courses/METR/943">LINK</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>Prereqs:</td>
<td>METR 411 <a href="http://bulletin.unl.edu/courses/METR/411">LINK</a> (811) and 412 <a href="http://bulletin.unl.edu/courses/METR/412">LINK</a> (812), or equivalent</td>
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<tr>
<td>Course Description:</td>
<td>Advanced concepts related to severe convective storms. Tornado-genesis, super-cell formation, rotation, movement, morphology, quasi-linear convective systems, deep convective initiation, hail, mesoscale convective systems, and RKW (Rotunno-Klemp-Weisman) theory.</td>
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<tr>
<td>METR 987</td>
<td>Seminar in Climatic Change</td>
<td><a href="http://bulletin.unl.edu/courses/METR/987">LINK</a></td>
<td>3</td>
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<tr>
<td>Course Description:</td>
<td>Climates of the past emphasizing the Quaternary period. Paleogeographic changes in response to climatic fluctuations. Techniques for recording and reconstructing past climatic variations. Modeling the changing climate. Climatic changes and human affairs.</td>
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<tr>
<td>NRES 408/808</td>
<td>Microclimate: The Biological Environment</td>
<td><a href="http://bulletin.unl.edu/courses/NRES/408">LINK</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Prereqs:</td>
<td>Junior standing, MATH 106 <a href="http://bulletin.unl.edu/courses/MATH/106">LINK</a> or equivalent, 5 hrs physics, major in any of the physical or biological sciences or engineering; or permission.</td>
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<td>Course Description:</td>
<td>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. Control 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.</td>
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<tr>
<td>NRES 452/852</td>
<td>Climate and Society</td>
<td><a href="http://bulletin.unl.edu/courses/NRES/452">LINK</a></td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>Prereqs:</td>
<td>METR 200 <a href="http://bulletin.unl.edu/courses/METR/200">LINK</a> or 351 <a href="http://bulletin.unl.edu/courses/METR/351">LINK</a>, or equivalent.</td>
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<tr>
<td>Course Description:</td>
<td>Offered spring semester of even-numbered calendar years. Impact of climate and extreme climatic events on society and societal responses to those events. Global in scope and interdisciplinary.</td>
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<tr>
<td>NRES 469/869</td>
<td>Bio-Atmospheric Instrumentation</td>
<td><a href="http://bulletin.unl.edu/courses/NRES/469">LINK</a></td>
<td>3</td>
<td>Lecture 2, Lab 1</td>
<td>Classroom</td>
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<tr>
<td>Prereqs:</td>
<td>Junior standing; MATH 106 <a href="http://bulletin.unl.edu/courses/MATH/106">LINK</a>; 4 hrs physics; physical or biological science major.</td>
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<tr>
<td>Course Description:</td>
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</table>
Offered fall semester of odd-numbered calendar years.

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 are discussed and evaluated.

**Regional Climatology**

**NRES 478/878**

Crosslisted as METR 478/878

**Prereqs:**
NRES/METR 370

Regional differentiation of the climates of the earth on both a descriptive and dynamic basis. The chief systems of climatic classification.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

**Hydroclimatology**

**NRES 479/879**

Crosslisted as METR 479/879, WATS 479

**Prereqs:**
NRES 208 or METR 200 or METR/NRES 370.


**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

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**Description**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EarthAndAtmosphericSci).

**Department Chairperson:** David K. Watkins, Ph.D.

**Graduate Committee:** Professor Oglesby (chair); Professors Goble, R. M. Joeckel; Assistant Professor Houston

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.

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 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 certain required undergraduate courses 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
- Meteorology–Climatology
- Water Resources Planning and Management

**Specializations available at the doctoral level:**

- Environmental Studies
- Geology
- Great Plains Studies
- Hydrogeology
- Meteorology–Climatology

**Faculty**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EarthAndAtmosphericSci).

Retrieved from "[http://bulletin.unl.edu/graduate/Earth_and_Aerospheric_Sciences](http://bulletin.unl.edu/graduate/Earth_and_Aerospheric_Sciences)"
# Economics Courses for ECON (ECON)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>AECN 815</td>
<td>Analytical Methods in Economics and Business</td>
<td>MATH 104 or 106</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>AECN 873</td>
<td>Microeconomic Models and Applications</td>
<td>ECON 211, 212, and 215</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>This course is intended for MA Option II students and others who do not plan to proceed to PhD studies. Analysis of microeconomic decision-making by individuals and firms with emphasis on consumer demand, production, cost and profit, market structure and the economics of games, uncertainty, and information.</td>
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<tr>
<td>AECN 921</td>
<td>Seminar in International Trade and Finance</td>
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<td>3</td>
<td>Classroom</td>
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<tr>
<td>ECON 403/803</td>
<td>Money and the Financial System</td>
<td>ECON 210 or both ECON 211 and ECON 212</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
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<td>Basic policy implications of monetary economics with special reference to the role of money in the determination of income, employment, and prices. Includes demand for and supply of money, commercial and central banking system, monetary policy-making, nonbank financial system, and other issues in monetary economics.</td>
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<tr>
<td>ECON 404/804</td>
<td>Current Issues in Monetary Economics</td>
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</table>
Applied Public Policy Analysis

Money as developed by classical and modern economists. Emphasis on origins of money, interest rates, inflation, unemployment, business cycles, rational expectations, fiscal policy, international aspects of monetary policy, and other related topics in monetary economics.

Social Insurance

Experience with 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.

Statistics for Decision Making

Decision making under conditions of uncertainty. Introduction to Bayesian methods including the main methods of traditional statistics. Both prior knowledge and consequences of decision error are explicitly taken into account in the analysis.

Introductory Econometrics

Designed to give undergraduate and master's level economics students an introduction to basic econometric methods including economic model estimation and analyses of economic data. Hypothesis formulation and testing, economic prediction and problems in analyzing economic cross-section and time series data are considered.
### Topics in Applied Research

**ECON 419/819**

**Prereqs:**
ECON 416 ([link](http://bulletin.unl.edu/courses/ECON/416))

Selected topics involving the use of quantitative methods in applied research.

**Credit Hours:** 3
**Course Delivery:** Classroom
**Groups:** Quantitative Economics

### International Trade

**ECON 421/821**

**Prereqs:**
ECON 210 ([link](http://bulletin.unl.edu/courses/ECON/210)) or both ECON 211 ([link](http://bulletin.unl.edu/courses/ECON/211)) and ECON 212 ([link](http://bulletin.unl.edu/courses/ECON/212)); ECON 312 ([link](http://bulletin.unl.edu/courses/ECON/312)).

Determinants of the volume, prices, and commodity composition of trade. Effects of trade, international resource movements, trade restrictions on resource allocation, income distribution, and social welfare.

**Credit Hours:** 3
**Course Delivery:** Classroom
**Groups:** International Trade and Finance

### International Finance

**ECON 422/822**

**Prereqs:**
ECON 210 ([link](http://bulletin.unl.edu/courses/ECON/210)) or both ECON 211 ([link](http://bulletin.unl.edu/courses/ECON/211)) and ECON 212 ([link](http://bulletin.unl.edu/courses/ECON/212)).

Determinants of exchange rates, international payments, 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.

**Credit Hours:** 3
**Course Delivery:** Classroom
**Groups:** International Trade and Finance

### Economics of the Less Developed Countries

**ECON 423/823**

**Prereqs:**
ECON 210 ([link](http://bulletin.unl.edu/courses/ECON/210)) or both ECON 211 ([link](http://bulletin.unl.edu/courses/ECON/211)) and ECON 212 ([link](http://bulletin.unl.edu/courses/ECON/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. Theories and strategies relating to international trade and economic development.

**Credit Hours:** 3
**Course Delivery:** Classroom
**Groups:** Comparative International and Regional Development

### Government Intervention in Markets

**ECON 426/826**

**Prereqs:**
ECON 212 ([link](http://bulletin.unl.edu/courses/ECON/212)).

Traces the economic and legal incentives for government involvement in the marketplace. Examines why various forms of intervention make sense in
certain situations. Defining the limits of allowable competition, and to replacing free market forces with regulation. Includes analysis of utilities and their evolving regulation.

**ECON 433/833**

**History of Economic Thought**

[LINK](http://bulletin.unl.edu/courses/ECON/433)

- Credit Hours: 3
- Course Delivery: Classroom
- Groups: General Economics and Theory

Development and evolution of economic ideas, including diverse mainstream and dissenting schools of thought from ancient Greece to contemporary texts. Consideration of selected influential economists’ writings, relation between economic conditions and ideas and the antecedents of current economic controversies.

**ECON 435/835**

**Market Competition**

[LINK](http://bulletin.unl.edu/courses/ECON/435)

- Credit Hours: 3
- Course Delivery: Classroom
- Groups: Industrial Organization and Regulation

Prereqs: [ECON 212](http://bulletin.unl.edu/courses/ECON/212).

Examination of differing schools of thought about how well a market economy performs. Includes economic analysis and extensive reviews of rivalry among corporations in various sectors of the US economy.

**ECON 440/840**

**Regional Development**

[LINK](http://bulletin.unl.edu/courses/ECON/440)

- Credit Hours: 3
- Course Delivery: Classroom
- Groups: Comparative International and Regional Development

Prereqs: [ECON 210](http://bulletin.unl.edu/courses/ECON/210), or both [ECON 211](http://bulletin.unl.edu/courses/ECON/211) and [ECON 212](http://bulletin.unl.edu/courses/ECON/212).

This course is a prerequisite for: [ECON 442](http://bulletin.unl.edu/courses/ECON/442).

Advanced analysis of regional growth and development. Emphasis on the relationship between national and regional growth as well as local attributes influencing development patterns. Comparisons between developed and developing countries used to highlight similarities and differences in development patterns and policies. Empirical applicability of regional economic models stressed.

**ECON 442/842**

**Regional Analysis**

[LINK](http://bulletin.unl.edu/courses/ECON/442)

- Credit Hours: 3
- Course Delivery: Classroom
- Groups: Comparative International and Regional Development

Prereqs: [ECON 440](http://bulletin.unl.edu/courses/ECON/440)/840

Advanced study of techniques for regional analysis. Includes indexes of spatial dispersion and concentration, shift-share analysis, export base, and input-output analysis. Special emphasis on input-output analysis. Objective is to equip students with the basic analytical tools of regional economic analysis.

**ECON 445/845**

**Gender, Economics, and Social Provisioning**

Crosslisted as WMNS 445/845

[LINK](http://bulletin.unl.edu/courses/ECON/445)

- Credit Hours: 3
- Course Delivery: Classroom
- Groups: Comparative International and Regional Development

Prereqs: [ECON 211](http://bulletin.unl.edu/courses/ECON/211) or [ECON 212]
Introduction to the field of feminist economics. Critiques of economic theory and methodology along with gender and household decision-making, the care economy, international migration, development, globalization, the feminization of labor markets, and macroeconomics.

**ECON Economics for Teachers**

*Lecture 3*

*Course Delivery: Classroom*

*Groups: General Economics and Theory*

**Introduction to the field of feminist economics.**

**ECON Economics Issues for Teachers**

*Credit Hours: 2–6*

*Course Format: Lecture*

*Course Delivery: Classroom*

*Groups: Economic Education*

**Structure and function of the economic system and problems in achieving goals of efficient allocation of resources, full employment, stable prices, economic growth, and security. Emphasis on teaching of economics at the pre–college level.**

**ECON 19th Century United States Economic History**

*Course Delivery: Classroom*

*Groups: Economic History*

**Prereqs:**

- ECON 211
- ECON 212
- ECON 210

**Crosslisted as HIST 457/857**

**Transformation of the United States economy from an agrarian to an industrial society and the impact of that transformation on people’s lives and livelihoods. The economics of slavery, the impact of the railroads, immigration, and the collective response of business and labor to industrialization.**

**ECON 20th Century United States Economic History**

*Course Delivery: Classroom*

*Groups: Economic History*

**Prereqs:**

- ECON 211
- ECON 212
- ECON 210

**Crosslisted as HIST 458/858**

**Transformation of the United States economy in the twentieth century. Attention to the 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.**

**ECON Public Finance**

*Credit Hours: 3*

*Course Format: Lecture 3*

*Course Delivery: Classroom*

*Groups: Economic History*

**Crosslisted as HIST 471/871**

**Introduction to the field of feminist economics. Critiques of economic theory and methodology along with gender and household decision-making, the care economy, international migration, development, globalization, the feminization of labor markets, and macroeconomics.**
Microeconomic analysis of policy issues in public finance, emphasizing taxation. Includes public goods and externalities; analysis of tax incidence, efficiency, and equity; and fiscal federalism.

**Efficiency in Government**

- **Prereqs:** ECON 210, or both ECON 211 and ECON 212.
- **Credit Hours:** 3
- **Course Format:** Lecture
- **Course Delivery:** Classroom
- **Groups:** Public Finance

Prepares students to conduct social and economic planning, program evaluation, and budgeting. Analysis of the delivery of government goods and services consistent with values and societal goals. Includes: philosophy of government, budget theory, social indicators, social fabric matrix, cost effective analysis, technology assessment, evaluation of the natural environment, and time analysis.

**Theory and Analysis of Institutional Economics**

- **Prereqs:** ECON 210, or both ECON 211 and ECON 212.
- **Credit Hours:** 3
- **Course Delivery:** Classroom
- **Groups:** Institutional Economics

Survey of the basic ideas of Veblen, Polanyi, Commons, Ayres, Galbraith, and Myrdal. Applications of institutional analysis to major economic problems and policies. Examination of the economic system as part of the holistic human culture, a complex of many evolving institutions.

**Economics of the Labor Market**

- **Prereqs:** ECON 210, or ECON 211 and ECON 212.
- **Credit Hours:** 3
- **Course Delivery:** Classroom
- **Groups:** Labor Economics

Microeconomics of wages and employment; determinants of labor demand and supply; marginal productivity; bargaining theories of wages; labor mobility and allocation among employers; and the impact of unions, government policy, investment in human capital; and discrimination in labor markets.

**Labor in the National Economy**

- **Prereqs:** ECON 210, or 211 and 212.
- **Credit Hours:** 3
- **Course Delivery:** Classroom
- **Groups:** Labor Economics

Macroeconomics aspects of labor economics; how the labor sector of the economy and the economy's overall performance are interrelated; analysis of the general level of wages, employment, unemployment, business cycles, and inflation.
Economies in Transition

**Prereqs:**
ECON 210 (URL), or both ECON 211 (URL) and ECON 212 (URL).

Evolution of formally centrally planned economies (Soviet Union, central and eastern Europe, China) toward more market-oriented and decentralized economies. Includes comparisons of the speed and pattern of institutional changes, performance outcomes and implications for economic development strategies.

Insurance Law

Crosslisted as LAW 783G

Principles of insurance law. Focuses on features of common insurance contracts and the legislative, judicial and administrative supervision of both insurance contracts and the insurance industry.

Land Use Planning

Crosslisted as LAW 699G

Legal and administrative aspects of the regulation of land use and development, the problems and techniques of urban planning at the various levels of government, and the relationship of private owners and builders to the government policies involved in shaping the physical environment.

Antitrust and Trade Regulation

Crosslisted as LAW 628G

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.

Unfair Competition

Crosslisted as LAW 645G

Federal and state statutory provisions and common law doctrines restricting unfair methods of competition. Includes the law of trademarks, trade secrets, misappropriation, false advertising, disparagement, and the role of the FTC in regulating deceptive practices, together with brief introductions to copyright and patent law.

Products Liability Seminar

Crosslisted as LAW 793G

Selected problems in products liability, with emphasis on research and writing projects analyzing the problems.
ECON 852  Teaching College Economics and Business
Organization and planning, instructional strategies, assessment methods, and related topics for teaching economics and business courses in colleges and universities.

ECON 853  Economics of Education
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.

ECON 854  Economic Education Research
Survey of research studies in the field of economic education. Research questions, data sources, theoretical models, experimental designs, statistical procedures, and research findings.

ECON 874  Macroeconomic Models and Applications
Prereqs: ECON 211, 212, and 215
This course is intended for MA Option II students and others who do not plan to proceed to PhD studies. Analysis of the performance of a market economy developing applications of macroeconomic models with emphasis on imperfect information, expectations, business cycles, growth and stabilization, and policymaking in a stochastic environment.

ECON 880  Labor Law
Crosslisted as LAW 753G
Legislative and judicial patterns of the modern labor movement; the objectives of labor combinations; the forms of pressure employed for their realization and prevention; strikes, boycotts, picketing, and lockouts; the legal devices utilized in carving out the permissible bounds of damage suits involving labor activity; the labor injunction; the National Labor Relations Board; the nature of collective bargaining agreements; extra legal procedure for settling labor disputes—the techniques of mediation, conciliation, and arbitration.

ECON 886  Administrative Law
Crosslisted as LAW 633G
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 state administrative tribunals, their powers and 
functions, and problems of administrative procedure, judicial and other 
controls upon the administrative process.

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<th>Course Delivery:</th>
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<tr>
<th>Course</th>
<th>Prereqs:</th>
<th>Credit Hours:</th>
<th>Max credits per degree:</th>
<th>Campus:</th>
<th>Course Delivery:</th>
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<tr>
<td><strong>899</strong> Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
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<th>Credit Hours:</th>
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<th>Course Delivery:</th>
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<tr>
<td><strong>900</strong> Seminar in Economic Theory and Policy</td>
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<tr>
<td><strong>903</strong> Seminar in Monetary Economics</td>
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<tr>
<td><strong>919</strong> Seminar in Research Methods</td>
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<tr>
<td><strong>923</strong> Seminar in Development Economics</td>
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<tr>
<td><strong>927</strong> Seminar in Industrial Organization</td>
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<tr>
<td><strong>954</strong> Seminar in Economic Education Research</td>
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</table>
Econometrics I

Prereqs: ECON 815 or equivalent; STAT 880 or equivalent

This course is a prerequisite for: ECON 958

Matrix-based approach to the construction of statistical economic models, estimation of model parameters, and econometric inference. Multiple hypothesis tests, prediction, and general error structures.

Econometrics II

Prereqs: ECON 957

This course is a prerequisite for: ECON 959, ECON 960

Continuation of Econometrics I involving a more advanced treatment of statistical economics models. Identification problem and alternative methods of estimating parameters.

Advanced Topics in Econometrics I

Prereqs: ECON 958 with a grade of "B" or better

Advanced Topics in Econometrics II

Prereqs: ECON 958 with a grade of "B" or better

Public Expenditure, Taxation, and Fiscal Incidence

Prereqs: ECON 871 or permission

This course is a prerequisite for: ECON 972, ECON 977

Administration and organization of the public sector, bureaucracy, and
microeconomic theories of taxation. Public goods, externalities, uncertainty, and income redistribution as sources of market failure; private market and collective choice models as possible correcting mechanisms.

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**Fiscal Theory and Its Applications**

**ECON 972**

Prereqs:  
[ECON 971](http://bulletin.unl.edu/courses/ECON/971)


Credit Hours: 3  
Campus:  
Course Delivery: Classroom

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**Advanced Microeconomic Theory I**

**ECON 973**

Prereqs:  
[ECON 312](http://bulletin.unl.edu/courses/ECON/312) or equivalent

This course is a prerequisite for:  
[AECN 901A](http://bulletin.unl.edu/courses/AECN/901A),  
[AECN 901E](http://bulletin.unl.edu/courses/AECN/901E),  
[ECON 983](http://bulletin.unl.edu/courses/ECON/983)

Survey of the theory of individual choice; demand, supply, production, price formation. Theory of market structure.

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

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**Advanced Macroeconomic Theory I**

**ECON 974**

Advanced topics in aggregate dynamics and growth.

Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom

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**Seminar in Economic and Business History**

**ECON 975**

Credit Hours: 2–3  
Campus:  
Course Delivery: Classroom

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**Seminar in Public Finance**

**ECON 977**

Prereqs:  
[ECON 971](http://bulletin.unl.edu/courses/ECON/971) and 972  
(http://bulletin.unl.edu/courses/ECON/972)

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

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**Seminar in Labor Economics**

**ECON 981**

Credit Hours: 3
Advanced Microeconomic Theory II

Course Code: ECON 983

Credit Hours: 3

Prerequisites: ECON 973

Survey of general equilibrium and welfare theory; proof of the existence and stability of equilibrium allocations, their welfare interpretation, welfare functions, externalities, the possibility theorem, the theory of clubs.

Advanced Macroeconomic Theory II

Course Code: ECON 984

Credit Hours: 3

Advanced topics in macroeconomic fluctuations.

Directed Reading or Research

Course Code: ECON 996

Credit Hours: 1-3

Prerequisites: Admission to doctoral degree program and permission of supervisory committee chair

Doctoral Dissertation

Course Code: ECON 999

Credit Hours: 1-24

Max credits per degree: 55

The Regulatory Environment for Employment and Labor

Course Code: MNGT 466

Credit Hours: 3

Prerequisites: Junior Standing; MNGT 360 and 361 (departmental permission is required if MNGT 360 and/or MNGT 361 have not been completed); ECON 381 FOR ECON students.

Government regulation of employment and labor relations. Includes laws and agencies relating to employment practices, pay, hours, equal employment opportunity, labor relations, safety, health, pensions, and benefits. Social and economic implications of governmental regulation considered.

Pro-seminar in International Relations I

Course Code: POLS 466

Credit Hours: 3

Course Format: Lecture 3

Course Delivery: Classroom
## Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Economics).

**Department Chair:** Scott M. Fuess, Jr., Ph.D.

**Graduate Committee Chair:** Matthew J. Cushing, Ph.D.

[http://www.cba.unl.edu/departments/economics](http://www.cba.unl.edu/departments/economics)

The Department of Economics offers a doctor of philosophy degree and a master of arts degree.

### Master of Arts Degree

Three options are available to MA students: Option I is a 30-hour program that provides the opportunity to write a masters thesis; Option II is a 36-hour applied degree program that includes an outside area of concentration; and Option III is a 36-hour PhD-leading track that provides the opportunity to continue directly into the doctoral program.

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. MA candidates are required to undergo a comprehensive examination in their field of specialization.

### Doctor of Philosophy Degree

All doctoral students must pass a 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 macro economic theory to help prepare students for the Qualifying Examination. In addition to advanced economic theory, PhD students are required to pass two econometrics courses with a B or better grade in each course. Furthermore, doctoral candidates choose two major areas of specialization. Six hours of work at the 900 level constitute the formal minimum requirement in a major field. Every doctoral aspirant must undergo comprehensive written and oral examinations covering his/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. There is no formal language requirement for the PhD degree.

### Admission

The minimum general requirement for admission to the economics graduate program is an undergraduate degree from an accredited American or foreign college.
or university. PhD applicants are required to provide GRE aptitude test scores. MA applicants may substitute GMAT scores.

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 strongly advised to have additional background in calculus 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.

Joint Programs

Joint Statistics and Economics Ph.D.

For additional information, please see the description on the Department of Statistics (http://www.unl.edu/gradstudies/prospective/programs/Statistics) Web page.

Program Overview

This program is designed to allow a student to earn an interdisciplinary PhD in the fields of Statistics and Economics. Students obtaining this degree are expected to make meaningful research contributions to both fields.

The program will be overseen by a four-person committee (Oversight Committee), comprised of 2 faculty members from each department. The 2 members from each department will be chosen by the relevant departmental Graduate Advisory Committee with input from the relevant departmental Chair. The committee is a subcommittee of the Graduate Advisory Committees of the two Departments.

Entrance to the Program

A student may apply to the program by request, either as a new student or as a current student. Admission must be approved by the Graduate Chairs of both Departments. As a general guide, students considered for the program should demonstrate backgrounds of sufficient strength to warrant entrance into the PhD program of both departments.

Students entering the joint Statistics/Economics PhD program are expected to have intermediate level training in economics (both macroeconomics and microeconomics) and adequate mathematical background including 3 semesters of calculus, a course in linear algebra and a course in mathematical statistics.

Qualifying Examinations

Students are required to pass the PhD qualifying exams of both departments. The Statistics qualifying exam is over STAT 882, 883, 970, 971. The Economics qualifying exam is over ECON 973, 974, 983, 984.

Supervisory Committee

The graduate chairs of each department shall jointly appoint a supervisory committee: thus both graduate committee chairs must sign the Appointment of Supervisory Committee form. The committee must consist of equal numbers of faculty from each department. The committee will be co-chaired by a faculty member from each department and two readers with one reader from each department. A faculty member cannot serve as both a reader and a co-chair on the committee. The committee must approve the program of study and special details of the program.

Program of Study

The program of study must consist of at least 90 hours. In addition, the program of study must include 30 hours in Statistics courses and 30 hours of Economics courses. The following courses must be included in the program of study, unless credit has been granted for equivalent courses taken elsewhere:

- **Statistics**: Stat 802, 882, 883, 970, 971 (Statistical Modeling), STAT 980; (Advanced Probability) and STAT 982 and 983 (Advanced Inference I and II) and 6 additional hours of 900 level classes, excluding STAT 970, STAT 997 and STAT 999.
- **Economics**: ECON 973, 974, 983, 984 (Core Theory), ECON 957, 958, 959, 960 (Econometric Theory) and at least two 900 level economics courses in an economics field other than econometrics.

Research tool requirement

The Statistics research tool requirement will be met by considering Economics to be a ‘collateral field’. Students are expected to be proficient in at least one statistical computing language such as SAS, S-Plus, R, Statistica, SPSS, IMSL, Gauss etc.

Comprehensive Examination

The student's PhD Supervisory Committee will determine the timing and the content of the PhD comprehensive exam in Statistics. In addition, the students will take a comprehensive examination in a field of economics other than Econometrics. The written comprehensive exam will not be a repetition of course materials but an investigation of the student’s breadth of understanding of the fields of knowledge. Upon completion of the written comprehensive examinations, the student’s supervisory committee will meet and administer an oral examination.
Dissertation

The PhD dissertation will be developed under the supervision of the co-advisors on a topic approved by the student’s PhD graduate committee and is expected to make an original contribution to both areas. See the Graduate Studies Bulletin for further requirements for the PhD dissertation.

Final Oral Exam

After the dissertation is completed, the student takes a final oral exam. This exam, also called a "thesis defense," is open to the public. Complete details of the final examination procedure are in the Graduate Studies Bulletin.

Masters of Education with a Focus on Economic Education

please see the brochure at http://cba.unl.edu/about/centers/cee/documents/focus_brochure.pdf

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Economics (http://bulletin.unl.edu/graduate/Economics)"

Education

Subject Areas

- Education (EDUC) (#EDUC)
- Education and Human Sciences (CEHS) (#CEHS)
- Educational Administration (EDAD) (#EDAD)
- Educational Psychology (EDPS) (#EDPS)
- Special Education (SPED) (#SPED)
- Speech-Language Pathology and Audiology (SLPA) (#SLPA)
- Teaching, Learning and Teacher Education (TEAC) (#TEAC)

Courses for EDUC (EDUC)

<table>
<thead>
<tr>
<th>SPED 892</th>
<th>Special Topics in Education</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/SPED/892">http://bulletin.unl.edu/courses/SPED/892</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours:</td>
<td>1-3</td>
<td>Max credits per degree:</td>
</tr>
<tr>
<td>Course Format:</td>
<td>Lecture</td>
<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
<td></td>
</tr>
</tbody>
</table>

Prereqs: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel; EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

Courses for CEHS (CEHS)

<table>
<thead>
<tr>
<th>CEHS 467/867</th>
<th>International Cultures Experience in the Local Community</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/CEHS/467">http://bulletin.unl.edu/courses/CEHS/467</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours:</td>
<td>3</td>
<td>Course Format:</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom, Web</td>
<td></td>
</tr>
</tbody>
</table>

Lecture and discussion will be required as part of the field discussion. Field hours will be assigned at the rate of three hours per week.

An international cultural experience in the local community by providing field-based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.
International Experience in Communities, Schools, and Families

Lecture and discussion will be required as part of the field experience. Field hours will be assigned at the rate of two hours per week per student credit hour.

Instructor-guided experiences of a culture in another nation in order to critically examine individual and cross-cultural differences in values, lifestyles, education, history and culture of international families, schools, and communities.

Credit Hours: 1-6
Max credits per semester: 3
Max credits per degree: 6
Course Format: Field 2
Course Delivery: Classroom

Courses for EDAD (EDAD)

**EDAD 421/821 Foundations of Human Resource Development**

Lays the foundation for further study of Human Resource Development (HRD) by examining the knowledge of HRD professionals, the roles they play, and the organizational settings in which HRD occurs. The design and development of education and training programs, how change occurs in organizations, how career development can optimize the match between individual and organizational goals and needs, and how to improve performance in organizations by analyzing performance opportunities and designing employee training to address these opportunities.

Credit Hours: 3
Course Delivery: Classroom

**EDAD 422/822 Instructional Design in Human Resource Development**

Examines the role of instruction for enhancing human learning and performance in organizations. The analysis of performance problems/opportunities and design of interventions for learning and performance improvement. The essential components of instruction, selecting 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.

Credit Hours: 3
Course Delivery: Classroom

**EDAD 801 Cross-Cultural Leadership Studies**

Prereqs: Permission

For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their 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 through the comparison of cultural viewpoints. Native American understanding of leadership.

Credit Hours: 3
Campus:
Course Delivery: Classroom

**EDAD 811 Practicum in Educational Administration and Supervision**

Prereqs: Permission

Credit Hours: 3-4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAD 813</td>
<td>Administration in Physical Education and Athletics</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Organization and administration of physical education and athletic programs in colleges and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/813]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAD 814</td>
<td>Risk Management for Sport Facilities</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Legal and risk management aspects of construction, supervision, and management of sport, athletic, and recreation indoor and outdoor facilities.</td>
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<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/814]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAD 830</td>
<td>Administrative Theory in Educational Organizations</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Introduction to classic and contemporary administrative theory as applied to educational organizations. The theoretical nature of the course content is relevant to those with an interest in a broad variety of educational institutions. General organizational theory, organizational models, historical schools of administrative theory, authority, power, motivation, and leadership. Frequently students are involved in studying problems of practice as a means of testing theory.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/830]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAD 833</td>
<td>Educational Finance</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>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.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/833]</td>
<td></td>
<td></td>
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<tr>
<td>EDAD 835</td>
<td>Business Management of Schools</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Allocation and management of fiscal resources including aspects of financial planning and reporting, budgeting and accounting procedures, purchasing, risk management and insurance, investing and bond issues, and auxiliary service.</td>
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<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/835]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAD 836</td>
<td>Planning for Change</td>
<td>2-3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Rationale for planning in a changing environment will be explored; the theoretical base for planning presented; strategic, futuristic planning and operational planning explored; the development of planning strategies, techniques and procedures; the process of evaluation, feedback and</td>
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<tr>
<td></td>
<td>LINK [bulletin.unl.edu/courses/EDAD/836]</td>
<td></td>
<td></td>
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<tr>
<td>Courses</td>
<td>Description</td>
<td>Credit Hours</td>
<td>Course Delivery</td>
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</tr>
<tr>
<td><strong>Education Law (EDAD 837)</strong></td>
<td>Evolution, principles, and practice of education law in relation to local, state, and national units of organization. Education law of Nebraska.</td>
<td>1-4</td>
<td>Classroom</td>
</tr>
<tr>
<td><strong>Educational Surveys (EDAD 838)</strong></td>
<td>School systems and its educational program in terms of needs of attendance area served. Organization and interpretation of pertinent data and formulation of recommendations for improvement of educational systems. Long-range planning.</td>
<td>2-3</td>
<td>Classroom</td>
</tr>
<tr>
<td><strong>Educational Facilities (EDAD 839)</strong></td>
<td>Techniques for planning educational facilities through use of surveys, educational specifications, and standards. Function of the school administrator in school facilities planning, construction, and utilization.</td>
<td>2-3</td>
<td>Classroom</td>
</tr>
<tr>
<td><strong>College Students in America (EDAD 842)</strong></td>
<td>This course is designed to provide students an understanding of a broad range of facts and issues pertaining to undergraduate college students in America.</td>
<td>3</td>
<td>Lecture 2.33</td>
</tr>
<tr>
<td><strong>Counseling Principles for Educational Administrators (EDAD 843)</strong></td>
<td>This is an introductory level counseling course designed specifically for educational administrators. It is not intended to prepare individuals to become professional counseling practitioners. It offers a broad overview of counsel principles. This is a theory-to-practice course.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td><strong>Faculty and Staff Appraisal (EDAD 851)</strong></td>
<td>Faculty and support staff in P-12 schools: appraisal, professional learning communities, high standards/high performance and accountability.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td><strong>School Culture and Student Behavior (EDAD 852)</strong></td>
<td>School culture and student behavior in P-12 schools. Personalized teaching</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Crosslisted as</td>
<td>Credit Hours</td>
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</tr>
<tr>
<td>EDAD 855</td>
<td>Teaching Learners to Learn</td>
<td>EDPS 855, NUTR 855, SPED 855, TEAC 855</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
<td></td>
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</tr>
<tr>
<td>EDAD 856</td>
<td>Supervising Special Education</td>
<td>SPED 856</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.</td>
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</tr>
<tr>
<td>EDAD 857</td>
<td>Special Education Administration</td>
<td>SPED 857</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.</td>
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</tr>
<tr>
<td>EDAD 858</td>
<td>Special Education Law</td>
<td>SPED 858</td>
<td>3</td>
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<td>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 states and school districts that are grounded in state and federal law.</td>
<td></td>
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</tr>
<tr>
<td>EDAD 870</td>
<td>Constitutional Law I</td>
<td>LAW 609G</td>
<td>1-4</td>
</tr>
<tr>
<td></td>
<td>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.</td>
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</tr>
<tr>
<td>EDAD 871</td>
<td>Constitutional Law II</td>
<td>LAW 732G</td>
<td>1-4</td>
</tr>
<tr>
<td></td>
<td>Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom</td>
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</tr>
</tbody>
</table>
### Introduction to Law, Legal Process, and Legislation

**EDAD 872**

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
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<tbody>
<tr>
<td>Campus:</td>
<td>Classroom</td>
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</tbody>
</table>

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.

### Torts I

**EDAD 874**

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–6</th>
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</thead>
<tbody>
<tr>
<td>Max credits per degree:</td>
<td>6</td>
</tr>
<tr>
<td>Campus:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

Crosslisted as LAW 503G

### Torts II

**EDAD 875**

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max credits per degree:</td>
<td>6</td>
</tr>
<tr>
<td>Campus:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

### Designing Instructional Technology K–12

**EDAD 880B**

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max credits per degree:</td>
<td>3</td>
</tr>
</tbody>
</table>

### Workshop Seminar

**EDAD 890**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Workshop Seminar

**EDAD 893**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Independent Study

**EDAD**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAD 896</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/896">http://bulletin.unl.edu/courses/EDAD/896</a>)</td>
<td>Permission Selected topic with the direction and guidance of a staff member.</td>
<td>1–6</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 899</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/899">http://bulletin.unl.edu/courses/EDAD/899</a>)</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6–10</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 901</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/901">http://bulletin.unl.edu/courses/EDAD/901</a>)</td>
<td>This course is a prerequisite for: EDAD 902 (<a href="http://bulletin.unl.edu/courses/EDAD/902">http://bulletin.unl.edu/courses/EDAD/902</a>)</td>
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<tr>
<td>EDAD 902</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/902">http://bulletin.unl.edu/courses/EDAD/902</a>)</td>
<td>Prereqs: EDAD 901 (<a href="http://bulletin.unl.edu/courses/EDAD/901">http://bulletin.unl.edu/courses/EDAD/901</a>). EDAD 902 (<a href="http://bulletin.unl.edu/courses/EDAD/902">http://bulletin.unl.edu/courses/EDAD/902</a>) requires developing an initial school improvement plan.</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
</tr>
<tr>
<td>EDAD 903</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/903">http://bulletin.unl.edu/courses/EDAD/903</a>)</td>
<td>This course is a prerequisite for: EDAD 904 (<a href="http://bulletin.unl.edu/courses/EDAD/904">http://bulletin.unl.edu/courses/EDAD/904</a>)</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>EDAD 904</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/904">http://bulletin.unl.edu/courses/EDAD/904</a>)</td>
<td>Prereqs: EDAD 903 (<a href="http://bulletin.unl.edu/courses/EDAD/903">http://bulletin.unl.edu/courses/EDAD/903</a>). EDAD 904 (<a href="http://bulletin.unl.edu/courses/EDAD/904">http://bulletin.unl.edu/courses/EDAD/904</a>) requires generating recommendations for proceeding into the next cycle of school improvement and conducting a personal self-analysis of improvement process skills and obtain information from supervisors and/or colleagues regarding abilities as</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
</tr>
</tbody>
</table>
Analyze how staff attitudes and behaviors are impacted through the improvement process.

EDAD 905  **Issues in Governance of Educational Institutions**  [LINK](http://bulletin.unl.edu/courses/EDAD/905)

Issues in the governance of K–12 schools including administrator–school board roles and relationships.

- **Credit Hours:** 1–3
- **Max credits per degree:** 3
- **Campus:**
- **Course Delivery:** Classroom

EDAD 906  **Issues in System Level Administration**  [LINK](http://bulletin.unl.edu/courses/EDAD/906)

- **Prereqs:** Masters degree or equivalent.
- Selected system level issues faced by pre-K to grade 12 school administrators.

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

EDAD 907  **Issues in Educational Politics and Policies**  [LINK](http://bulletin.unl.edu/courses/EDAD/907)

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 institutional structures with competing interests; understand people as the actors in roles they occupy in the political system.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

EDAD 908/929  **Seminar in Adult and Continuing Education**  [LINK](http://bulletin.unl.edu/courses/EDAD/908)

Crosslisted as EDPS 929

- **Credit Hours:** 1–6
- **Campus:**
- **Course Delivery:** Classroom

EDAD 909  **Seminar in Human Resource Development**  [LINK](http://bulletin.unl.edu/courses/EDAD/909)

- **Prereqs:** EDAD 821 [LINK](http://bulletin.unl.edu/courses/EDAD/821) or 822 [LINK](http://bulletin.unl.edu/courses/EDAD/822)
- Current research and theory within the field of human resource development, broadly defined. Stresses key problems affecting the training, development, and education of human resources within organizational settings.

- **Credit Hours:** 1–3
- **Campus:**
- **Course Delivery:** Classroom

EDAD 910  **The Higher Education Environment**  [LINK](http://bulletin.unl.edu/courses/EDAD/910)
Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutions. Environment concepts, components and structures are studied together with analysis techniques and methodological approaches to future study.

**EDAD 912A Educational Leadership in Higher Education**

Strategic thinking, application of leadership theories in the educational setting. Develop a clear personal philosophy of leadership and engage in collaborative active-learning. Multi-media simulations and/or scenarios and role playing to examine options, consequences, and leadership effectiveness in decision-making.

**EDAD 912B Educational Leadership in Community Colleges**

Issues facing community college leaders and the knowledge, skills, and competencies necessary to provide effective leadership in the community college setting. Case studies of community colleges, combined with the literature on community college leadership, and active learning opportunities to examine current practices and develop a personal philosophy of leadership.

**EDAD 921 Administrative Issues in Higher Education**

Introduction to contemporary issues in the administration of higher education with a focus on the scholarly literature, a comparative analysis of administration in types of institutions, leadership and planning, institutional and environmental issues, and selected topics.

**EDAD 922 Finance in Higher Education**

Federal and state government funding, institutional planning, technological and community influences, human resources finance, budgeting, and sources of financial support as they relate to higher education institutions and agencies.

**EDAD 923 The Community/Junior College**

Designed particularly for those interested in upper secondary and college levels. Junior college movement; relationship of movement to provisions 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.

**EDAD 924 Administration of Higher Education Instructional Programs**

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAD 925</td>
<td>Law and Higher Education</td>
<td>Administration of higher education instructional programs. Exploration of curricular issues including an assessment of program quality and reputation, program reallocations, retrenchments, and expansions.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 926</td>
<td>The American Professoriate: An Administrative Perspective</td>
<td>Examination of legal principles applicable to higher education institutions. Overview of the legal system, higher education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights and responsibilities, institutional and personal liability, and other selected issues.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 931</td>
<td>Higher Education Information Systems</td>
<td>Foundation in management information systems. Issues in information systems, current research and writings, key terms, and how information systems impacts organizational culture, business processes, work-flow, and overall operations of an institution. The roles in the application, analysis, and management of higher education administration technology.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 932</td>
<td>Global Issues in Higher Education</td>
<td>Selected issues affecting global educational policies and practices.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 933</td>
<td>Strategic Planning</td>
<td>Strategic Planning requires the student to analyze their respective institution’s planning process and plan, and to participate in a simulation activity that reinforces the principles and practices of strategic planning. System theory, practice and problem solving. The strategic planning process in higher education. Models of strategic planning.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDAD 934</td>
<td>Teaching and Learning in the Community College</td>
<td></td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Develop comprehensive understanding of five aspects of the community college: curricular missions in general education, transfer education, career education, remedial/developmental education and community education; faculty and student populations; exemplary teaching and assessment of student learning outcomes; program and curriculum development; and human resources aspects related to instructional programs in hiring faculty and providing faculty development programs.

**EDAD 935**  
**Workforce, Economic, and Community Development**  
[LINK](http://bulletin.unl.edu/courses/EDAD/935)  
Workforce, economic and community development role of higher education within the broader context of recent economic, social, and technological changes in communities, society, and the economy. Applicable to higher education in general with an emphasis on the example of two-year community colleges.

**EDAD 948**  
**Instructional Leadership: Emerging Trends and Practices**  
Crosslisted as **TEAC 948**  
[LINK](http://bulletin.unl.edu/courses/EDAD/948)  
Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**EDAD 956**  
**Employment Law Seminar**  
Crosslisted as **LAW 759G**  
[LINK](http://bulletin.unl.edu/courses/EDAD/956)  
Selected current national and state legal issues pertaining to private and public employment.

**EDAD 959**  
**Law and Educational Administration**  
Crosslisted as **LAW 695G**  
[LINK](http://bulletin.unl.edu/courses/EDAD/959)  
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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.

**EDAD 960**  
**Public Employment Law**  
[LINK](http://bulletin.unl.edu/courses/EDAD/960)  
Legal issues relating to public employment with particular emphasis on public schools and colleges; collective bargaining by public employees, impasse, and 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, wage and hour laws, retirement plans, and public records.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAD 961</td>
<td>Trial Advocacy</td>
<td>LAW 646G</td>
<td>1–4</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Students perform weekly exercises which are videotaped and critiqued and will try a case. Fundamentals of trial practice. Emphasis on questioning witnesses, selecting and addressing the jury, and admitting items into evidence.</td>
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<tr>
<td>EDAD 963</td>
<td>Legislation Seminar</td>
<td>Crosslisted as LAW 777G</td>
<td>1–4</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDAD 964</td>
<td>Local Government Law</td>
<td>Crosslisted as LAW 788G</td>
<td>1–4</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Law of local government units with emphasis on current problems in the operation and administration of local government, models and theories of local government.</td>
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<tr>
<td>EDAD 966</td>
<td>Seminar in Educational Administration</td>
<td>Permission</td>
<td>1–3</td>
<td>Max credits per degree: 6</td>
<td>Classroom</td>
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<td></td>
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<tr>
<td></td>
<td>Education administration problems with an analysis of research and literature pertaining to these problems.</td>
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<tr>
<td>EDAD 968</td>
<td>Education Law Seminar</td>
<td>Crosslisted as LAW 621G</td>
<td>1–4</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Selected current national and state legal issues pertaining to education.</td>
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<tr>
<td>EDAD 970</td>
<td>Criminal Law</td>
<td>Crosslisted as LAW 508G</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDAD</td>
<td>Evidence</td>
<td>LAW 646G</td>
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</tbody>
</table>
971

Credit Hours: 1–4
Campus:
Course Delivery: Classroom

Relevancy and admission of evidence, including hearsay, opinions, privileges, other exclusionary rules, examination of witnesses, judicial notice, and physical evidence.

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EDAD 973

Jurisprudence
Crosslisted as LAW 672G

What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.

Credit Hours: 3
Campus:
Course Delivery: Classroom

LINK (http://bulletin.unl.edu/courses/EDAD/973)

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EDAD 976

Legal Control of Discrimination
Crosslisted as LAW 680G

Selected legal issues pertaining to the legal control of discrimination.

Credit Hours: 1–4
Campus:
Course Delivery: Classroom

LINK (http://bulletin.unl.edu/courses/EDAD/976)

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EDAD 977

Constitutional History
Crosslisted as LAW 619/619G

American constitutional history with a focus on "transformative" moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.

Credit Hours: 1–4
Course Format: Lecture
Campus:
Course Delivery: Classroom

LINK (http://bulletin.unl.edu/courses/EDAD/977)

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EDAD 978

Mass Communications Law
Crosslisted as LAW 649G

In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.

Credit Hours: 1–4
Campus:
Course Delivery: Classroom

LINK (http://bulletin.unl.edu/courses/EDAD/978)

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EDAD 979

Seminar in College Student Personnel Work
Crosslisted as EDPS 979

Current professional issues 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.

Credit Hours: 2–3
Max credits per degree: 6
Campus:
Course Delivery: Classroom

LINK (http://bulletin.unl.edu/courses/EDAD/979)

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EDAD 981

Introduction to Research

A written report is required. Investigation and analysis of current problems

Credit Hours: 1–6

LINK (http://bulletin.unl.edu/courses/EDAD/981)
Dissertation Proposal Development

**Prereqs:**
Admission to a doctoral program

Intended for students who are working on the development of their dissertation proposal. Component parts of the dissertation proposal. Students from all areas of Teachers College and the University of Nebraska who are in the process of developing their proposal will find this course to be of use. Typically the course should be taken after the research tools have been completed.

**Survey of Administrative Research**

Intended primarily for students of education who are candidates for doctoral degrees. Readings, discussions, and an analysis of educational problems and research.

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Field Studies in Education**

Crosslisted as NUTR 991, TEAC 991

**Prereqs:**
Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Doctoral Seminar**

Prereqs:
Permission

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. Intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

<table>
<thead>
<tr>
<th>EDAD 998</th>
<th>Seminar: Internship in Educational Administration</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/998">http://bulletin.unl.edu/courses/EDAD/998</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>Permission</td>
<td></td>
</tr>
<tr>
<td>Opportunity for educational administrators to gain an understanding of administering changes or innovations, and to obtain supervised field experience. Consideration will be given antecedents of change, change models, the role of government, forces that restrict or stimulate change, tools to implement change, and evaluation.</td>
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</table>

<table>
<thead>
<tr>
<th>EDAD 999</th>
<th>Doctoral Dissertation</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/999">http://bulletin.unl.edu/courses/EDAD/999</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EDPS 900J</th>
<th>Historical Methods in Educational Research</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/900J">http://bulletin.unl.edu/courses/EDPS/900J</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>EDPS 800 or equivalent; EDPS 459 (<a href="http://bulletin.unl.edu/courses/EDPS/459)/859">http://bulletin.unl.edu/courses/EDPS/459)/859</a> (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
<td></td>
</tr>
<tr>
<td>Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.</td>
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<thead>
<tr>
<th>EDPS 977</th>
<th>Seminar in College Student Development</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/977">http://bulletin.unl.edu/courses/EDPS/977</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td></td>
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<tr>
<td>Special field experiences and research projects are available to students for additional credit.</td>
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<tr>
<td>Current knowledge, theories, and practices, and related issues in the area of college student development.</td>
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</table>

<table>
<thead>
<tr>
<th>SPED 892</th>
<th>Special Topics in Education</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/SPED/892">http://bulletin.unl.edu/courses/SPED/892</a>)</th>
</tr>
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<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or parallel; EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
<td></td>
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<tr>
<td>Aspects of education not covered elsewhere in the curriculum.</td>
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</tbody>
</table>
### Coordination in Occupational Training Programs
Crosslisted as EDAD 825

Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.

<table>
<thead>
<tr>
<th>Courses for EDPS (EDPS)</th>
</tr>
</thead>
</table>
| **ANTH**
| **478/878**
| **Pro-seminar in Latin American Studies**
| Crosslisted as HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878

**Prereqs:**
Junior standing and permission.

Topical seminar required for all Latin American Studies majors.

An interdisciplinary analysis of topical issues in Latin American Studies.

| **EDAD**
| **855**
| **Teaching Learners to Learn**
| Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

| **EDAD**
| **908/929**
| **Seminar in Adult and Continuing Education**
| Crosslisted as EDPS 929

| **EDAD**
| **979**
| **Seminar in College Student Personnel Work**
| Crosslisted as EDPS 979

Current professional issues 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.

| **EDPS**
| **451/851**
| **Psychology of Adolescence**
| Link: [http://bulletin.unl.edu/courses/EDPS/451](http://bulletin.unl.edu/courses/EDPS/451)
<table>
<thead>
<tr>
<th>Course Title</th>
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<th>Credits</th>
<th>Delivery</th>
<th>Prerequisites</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Human Cognition and Instruction</strong></td>
<td>EDPS 454/854</td>
<td>3</td>
<td>Classroom</td>
<td></td>
<td>Cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.</td>
</tr>
<tr>
<td><strong>Statistical Methods</strong></td>
<td>EDPS 459/859</td>
<td>3</td>
<td>Classroom</td>
<td></td>
<td>Computation and interpretation of measures of central position, variability, and correlation; introduction to sampling, probability, and tests of significance.</td>
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<tr>
<td><strong>Psychology of Disability</strong></td>
<td>EDPS 462/862</td>
<td>3</td>
<td>Classroom</td>
<td></td>
<td>Research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.</td>
</tr>
<tr>
<td><strong>Introduction to Applied Behavior Analysis</strong></td>
<td>EDPS 463/863</td>
<td>3</td>
<td>Classroom</td>
<td></td>
<td>Research methods and findings, concepts, and principles of operant conditioning as related to the experimental analysis of human behavioral events and to the development of behavior engineering technologies.</td>
</tr>
<tr>
<td><strong>Practices in Counseling and Personnel Services</strong></td>
<td>EDPS 465/865</td>
<td>1-8</td>
<td>Classroom</td>
<td></td>
<td>Basic practices and related research in counseling and helping practices in educational or other youth-serving agencies. Specialized applications to populations presenting unique problems are offered in sections B through L. B. Special Practices for Handicapped Children and Youth (1 cr) Prereq or parallel: EDPS 465A. D. Special Practices for Exceptionally Talented and Gifted (1 cr) Prereq or parallel: EDPS 465A. E. Special Practices in the Elementary School (1 cr) Prereq or parallel: EDPS 465A. K. Special Practices for</td>
</tr>
</tbody>
</table>
### Vocational Education/Development Programs (1 cr)

Prereq or parallel: EDPS 465A ([Link](http://bulletin.unl.edu/courses/EDPS/465A)) / 865A ([Link](http://bulletin.unl.edu/courses/EDPS/865A)).

### Community Helpers Working with Adults (1 cr)

Prereq or parallel: EDPS 465A ([Link](http://bulletin.unl.edu/courses/EDPS/465A)) / 865A ([Link](http://bulletin.unl.edu/courses/EDPS/865A)).

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDPS 469/869</td>
<td>Psychopathological Disorders of Childhood and Adolescence</td>
<td>Investigation of the genesis, course, classification, and treatment of function and organic pathologies found in children and adolescents.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 470/870</td>
<td>Introduction to Educational and Psychological Measurement</td>
<td>Introduction to the construction, 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.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 496/896</td>
<td>Directed Field Experience</td>
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<td>1-24</td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 498/898</td>
<td>Special Topics</td>
<td>Seminar on current issues or topics in educational psychology. Topics vary.</td>
<td>1-6</td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 800</td>
<td>Foundations of Educational Research</td>
<td>Purposes 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.</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>EDPS 845</td>
<td>Computer-Assisted Research Data Analysis</td>
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</table>
EDPS 846 Foundations of Health Behavior
Crosslisted as NUTR 846
The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education.

EDPS 847 Theoretical Models of Health Behavior Change
Crosslisted as NUTR 847
Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks.

EDPS 850 Child Psychology
Advanced study of the behavior and development of preschool and elementary school children.

EDPS 853 Psychological Assessment I
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.

EDPS 860 Applications of Selected Advanced Statistics
Variety of parametric and nonparametric 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. Appropriate mainframe and microcomputer statistical packages utilized to assist in the numerical analysis of data.

**EDPS 866 Counseling Pre-Practicum**
Counseling skills required for basic, entry-level clinical work. Practicing skills, receiving peer/instructor performance feedback, and role-playing clinical situations.

**EDPS 867 Roles and Functions in School Psychological Services**
Foundations, models, and practices of contemporary school psychology and an exploration of transitions and future developments in the profession. Investigations of the major legal and ethical systems affecting specialists in the schools and the application of standards for ethical professional practice.

**EDPS 868 Multicultural Counseling**
Prereqs: EDPS *866 or comparable course or permission
Ethnic subcultures in the US, cross-cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity in the counseling relationship.

**EDPS 890 Workshop Seminar**
Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**EDPS 893 Workshop Seminar**
Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**EDPS 897J Gifted/Talented**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
<td>Classroom</td>
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<tr>
<td>EDPS 900A</td>
<td>Correlational and Experimental Methods in Educational Research</td>
<td>EDPS 459 or EDPS 859 or equivalent; EDPS 800 or equivalent</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>EDPS 900B</td>
<td>Single Case/Small N Methods in Educational Research</td>
<td>EDPS 459 or EDPS 859 or equivalent; EDPS 800 or equivalent</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>EDPS 900D</td>
<td>Survey Methods in Educational Research</td>
<td>EDPS 459 or EDPS 859 or equivalent; EDPS 800 or equivalent</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>EDPS 900J</td>
<td>Historical Methods in Educational Research</td>
<td>EDPS 800 or equivalent; EDPS 459 or equivalent</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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</table>

Prerequisites for Historical Methods in Educational Research:
- EDPS 800 or equivalent
- EDPS 459 or equivalent

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the
methods used by historical researchers. The methodology of historical research.

### Qualitative Approaches to Educational Research

**Course Code:** EDPS 900K  
**Prereqs:**  
[EDPS 459](http://bulletin.unl.edu/courses/EDPS/459) or [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859), or equivalent; EDPS *800 or equivalent

Uses of qualitative research methods in education. The theoretical premises of research using qualitative methods and the application of this information through critique and planning research. Qualitative methods for data collection.

### Research and Evaluation Literature on Health Promotion

**Course Code:** EDPS 905  
**Crosslisted as:** NUTR 905

Philosophical and empirical review and critique of contemporary literature on school, community, workplace, and health care–based health promotion and education programs.

### Seminar in Qualitative Research

**Course Code:** EDPS 935  
**Crosslisted as:** TEAC 935

Prereqs:  
[EDUC 900K](http://bulletin.unl.edu/courses/EDUC/900K) or permission

Seminar intended for doctoral–level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

### Mixed Methods Research

**Course Code:** EDPS 936

Prereqs:  
[EDUC 800](http://bulletin.unl.edu/courses/EDUC/800) or equivalent, and [EDUC 900K](http://bulletin.unl.edu/courses/EDUC/900K)

EDPS 936 is for students already familiar with quantitative and qualitative research. An introduction to mixed methods research as a distinct methodology in social science research. Topics include the value and use of this approach, philosophical assumptions, various types of design, and approaches to designing and conducting mixed methods research.

### Intermediate Statistics: Experimental Methods

**Course Code:** EDPS 941  
**Crosslisted as:** SRAM 941

Prereqs:  
[EDPS 859](http://bulletin.unl.edu/courses/EDPS/859)

Computation, interpretation, and application of analysis of variance techniques, including factorial and mixed model designs. Computer and microcomputer software accessed.
EDPS 942 Intermediate Statistics: Correlational Methods
Crosslisted as SRAM 942

Prereqs: EDPS 859 or equivalent

Various correlational-based statistical procedures presented, including linear and nonlinear regression, multiple regression, statistical control, analysis of interactions, the general linear model, factor analysis, and discriminant analysis.

EDPS 948 Multicultural Issues in School Psychological Service Delivery

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.

EDPS 949 Cognitive and Behavioral Therapy with Children and Adolescents

Prereqs: Permission

This course is a prerequisite for: EDPS 955

Cognitive and behavioral techniques. Theoretical issues, application and evaluation of major empirically-validated therapeutic treatments that represent best practices in child and adolescent therapy.

EDPS 950 Intellectual Assessment

Prereqs: or coreq: EDPS 859, 870, and permission

This course is a prerequisite for: EDPS 951

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.

EDPS 951 Academic and Behavioral Assessment

Prereqs: EDPS 950 and permission

This course is a prerequisite for: EDPS 954

Advanced study of the theory and practice in the assessment of educational and psychological problems of children and youth to include assessment of systems that impact on the behavior of children and youth. Assessment techniques include environmental observation, interviewing, standardized assessment procedures for academic skills, adaptive behavior, social and emotional problems, curriculum based assessment, and functional analysis and assessment. Ecological-behavioral basis of assessment is explored. A complete psychological and educational evaluation is conducted in a school or other relevant setting.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 952</td>
<td>Systems of Consultation in School Psychology</td>
<td>EDPS 863</td>
<td>3</td>
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<td></td>
<td>Intensive analysis of the theory and practice of various systems of mental health consultation in the schools with special emphasis and practicum with mental health service models other than conventional clinical, psychometric, and direct psychoeducational remediation models.</td>
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<tr>
<td>EDPS 953</td>
<td>Psychological Assessment II</td>
<td>EDPS *853 or equivalent</td>
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<td>Classroom</td>
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<td>Advanced assessment and testing skills. Selection, administration and interpretation of a battery of psychological tests and integration and synthesis of relevant test and non-test data into an accessible report writing format. Development of effective consultation and test interpretation feedback skills.</td>
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<tr>
<td>EDPS 954</td>
<td>Interventions in School Psychology</td>
<td>EDPS 463, EDPS 863, EDPS 951, EDPS 953, and permission</td>
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<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Prepares school psychologists to plan and provide evidence–based psychoeducational interventions for children, youth, families and schools. Application of ecobehavioral theory, models of school mental health, the scientist–practitioner model, the practice of psychotherapy, and empirical evidence of the effectiveness of interventions for culturally and linguistically diverse students.</td>
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<tr>
<td>EDPS 955</td>
<td>Child Therapy</td>
<td>EDPS 949</td>
<td>4</td>
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<td>Lecture 3</td>
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<td>Classroom</td>
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<td>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.</td>
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<td>EDPS 956</td>
<td>Projective Psychological Assessment</td>
<td>EDPS 853, EDPS 953</td>
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<td>Lecture</td>
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<td>Permission may be granted</td>
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The primary goal of this course is to assist doctoral students in developing their ability to utilize projective assessment techniques to integrate information from a variety of sources about a person (an adult or older adolescent) into an integrated, useful psychological report. The broad array of data will include not only the results of formal tests (e.g., the Rorschach), but also personal and family history, and behavioral observations.

### Practicum in School Psychology Consultation Techniques

**Prerequisites:**
- EDPS 863
- 952
- 997D

Practicum experience in ecological/behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/feedback sessions each week.

### Problem Solving and Concept Learning in Humans

**Prerequisites:**
- EDPS 850 or 851
- 854

Critical examination of the non-Piagetian research literature and theory which examines higher mental processes in humans through the lifespan.

### Cognitive Development

**Prerequisites:**
- EDPS 850 or 851

Critical examination of theories and research on cognitive development throughout the lifespan, including Piagetian and alternative perspectives.

### Research Literature in Personality and Social Development

**Prerequisites:**
- EDPS 850 or 851

Critical examination of the concepts and principles derived from the study of personality and social development with special emphasis on the research literature.

### Developmental Psychobiology

**Prerequisites:**

Critical examination of the concepts and principles derived from the study of personality and social development with special emphasis on the research literature.
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<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 850</td>
<td>Biological foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.</td>
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<td>EDPS 851</td>
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<td>Classroom</td>
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<tr>
<td>EDPS 964</td>
<td>Counseling Theories and Intervention Techniques</td>
<td>EDPS *866</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>EDPS 965A</td>
<td>Group Counseling: Social Psychological Aspects</td>
<td>EDPS *866</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>EDPS 966</td>
<td>Psychology of Learning</td>
<td>EDPS 854, 870</td>
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<td>Classroom</td>
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<tr>
<td>EDPS 967</td>
<td>Psychology of Motivation in Education</td>
<td>Graduate standing, EDPS 854</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>EDPS 968</td>
<td>Gender and Counseling Psychology</td>
<td>Admitted as a graduate student in the Counseling Psychology program.</td>
<td>3</td>
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<td>Classroom</td>
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</table>
issues within the field of counseling psychology from a multicultural and feminist perspective and to gain the essential knowledge and techniques in working with gender issues in diverse settings.

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<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
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<th>Course Delivery</th>
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<tr>
<td>EDPS 969</td>
<td>Nonparametric Statistical Methods</td>
<td>EDPS 859 or equivalent</td>
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<td>Classroom</td>
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<td></td>
<td>Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi Square tests, rank tests of location (Wilcoxon, Mann Whitney, Kruskal-Wallis, Friedman), tests of goodness of fit (Chi Square, Kolmogorov-Smirnoff), tests of randomness (Runs).</td>
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<tr>
<td>EDPS 97</td>
<td>College Major Forum</td>
<td>EDPS 973B, EDPS 978, EDPS 97</td>
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<td>Lecture</td>
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<td>This course is a prerequisite for EDPS 973B, EDPS 978, EDPS 97. EDPS 97 is Pass/No Pass only.</td>
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<td>This is an eight week seminar course for first semester students in the General Studies Learning Community. Students will complete activities to identify interests, research majors that match their interests and complete a &quot;Guided Professional Shadowing&quot; experience to gain first-hand knowledge about a career of their choice.</td>
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<tr>
<td>EDPS 970</td>
<td>Theory and Methods of Educational Measurement</td>
<td>EDPS 859 and 870, EDPS 941 or equivalent</td>
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<td>Classroom</td>
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<td>Presentation of various measurement theories and concepts, including classical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion-referenced tests.</td>
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<tr>
<td>EDPS 971</td>
<td>Structural Equation Modeling</td>
<td>EDPS 942 and 970 or equivalent</td>
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<td>Classroom</td>
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<td>Introduction to the techniques of path analysis, confirmatory factor analysis, and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.</td>
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<tr>
<td>EDPS 972</td>
<td>Multivariate Analysis</td>
<td>EDPS 941 and 942 or equivalent</td>
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<td>Crosslisted as SRAM 972</td>
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<td>Crosslisted as SRAM 971</td>
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Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
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<td>EDPS 973A</td>
<td>Evaluation Theory and Practice</td>
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<td>This course is a prerequisite for:</td>
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<td>EDPS 973B</td>
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<td>Theories and strategies of evaluation examined</td>
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<td>within the context of society at large and</td>
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<td>educational and human service programs in</td>
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<td>particular. Key evaluation models examined as</td>
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<td>they relate to judgments and decisions</td>
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<td>about programs. Methodological, social, and</td>
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<td>political issues in evaluation which pertain</td>
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<td>equally to an educational program or a human</td>
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<td>service agency.</td>
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<td>EDPS 973B</td>
<td>Evaluation Practicum</td>
<td>2-3</td>
<td>Classroom</td>
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<td>Prereqs: EDPS 973A or permission</td>
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<td>Actual supervised evaluation of a program or</td>
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<td>project.</td>
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<td>EDPS 974</td>
<td>Guidance and Counseling in Schools</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
<td>Survey of elementary, middle and secondary</td>
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<td>school comprehensive models of guidance.</td>
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<td>Ingredients of effective helping relationships</td>
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<td>with students in schools. Analysis of school</td>
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<td>violence, risk assessment models, multicultural</td>
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<td>influences, prevention models, and guidance</td>
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<td>EDPS 975</td>
<td>Occupations and Vocational Psychology</td>
<td>3</td>
<td>Classroom</td>
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<td>Evaluation and uses of occupational and</td>
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<td>educational information; job analysis;</td>
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<td>psychological and behavioral attributes relating</td>
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<td>to work and life-styes; occupational</td>
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<td>taxonomies; career–development theories;</td>
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<td>impact of accelerating changes on personal and</td>
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<td>social planning; investigations of value–</td>
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<td>oriented expectations as sources of work</td>
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<td>satisfaction and dissatisfaction; critical</td>
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<td>assessment of the concept of vocational choice.</td>
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<td>For counselors and educators.</td>
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<tr>
<td>EDPS 976</td>
<td>Advanced Counseling Psychology I: Counseling</td>
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<td>Classroom</td>
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<td>Theory and Practice</td>
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<td>Prereqs: Doctoral level counseling students and</td>
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<td>others by permission</td>
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<td>EDPS 978</td>
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<td>Counseling methodology in relationship to</td>
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<td>personality theory and research. Consideration</td>
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<td>of various theories and research in relation to</td>
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<td></td>
<td>counseling practice.</td>
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**EDPS 977**  
**Seminar in College Student Development**  
Crosslisted as **EDAD 980**

Special field experiences and research projects are available to students for additional credit.

Current knowledge, theories, and practices, and related issues in the area of college student development.

**EDPS 978**  
**Advanced Counseling Psychology II: Research in Counseling**

**Prereqs:**  
[EDPS 976](http://bulletin.unl.edu/courses/EDPS/976); [EDUC 900A](http://bulletin.unl.edu/courses/EDUC/900A) and either [EDUC 900B](http://bulletin.unl.edu/courses/EDUC/900B) or [900K](http://bulletin.unl.edu/courses/EDUC/900K)

Research strategies appropriate for counseling psychology. Identification of researchable problem and completion of research proposal including literature review, design, and proposed data analysis procedures.

**EDPS 980**  
**Item Response Theory**

**Prereqs:**  
[EDPS 870](http://bulletin.unl.edu/courses/EDPS/870) and [970](http://bulletin.unl.edu/courses/EDPS/970); or permission

Principles of item response theory (IRT) and its application to a variety of issues in educational and psychological measurement. Theoretical foundations of IRT discussed along with its assumptions and varied applications. Experience using IRT calibration and scoring computer software.

**EDPS 981**  
**School Practice in School Psychology**

**Prereqs:**  
by permission of course instructor

Supervised practice in local school districts related to academic, social, behavioral and emotional disorders of children and adolescents.

**EDPS 982**  
**Clinical Practice in School Psychology**

**Prereqs:**  
by permission of course instructor

Supervised clinical practice related to academic, social, behavioral and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasized.
Community Practice in School Psychology

**Prereqs:**
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.

Credit Hours: 2–4
Max credits per semester: 4
Max credits per degree: 16
Course Format: Field, Lab, Lecture
Course Delivery: Classroom

Ethics and Ethical Decision Making in Counseling and Education

Ethical principles in the practice of counseling. Application of ethical guidelines and development of ethical decision-making models relevant to school and mental health contents.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Couple and Family Counseling

**Prereqs:**
EDPS *866 or equivalent

Couple and family systems and change strategies. Active, brief forms of couple and family counseling and enrichment formats.

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

Developmental Perspectives on Gender and Sexuality in Counseling


Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

Psychology of Reading

Crosslisted as TEAC 989

**Prereqs:**
TEAC *811 or 841 or SPED 886

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Campus:
Course Delivery: Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 991</td>
<td>Seminar in Educational Psychology and Measurements</td>
<td>Permission</td>
<td>1-12</td>
<td>12</td>
<td>Lecture</td>
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<tr>
<td>EDPS 993</td>
<td>Workshop Seminar</td>
<td>Permission</td>
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<tr>
<td>EDPS 995</td>
<td>Doctoral Seminar</td>
<td>Permission</td>
<td>3-4</td>
<td>18</td>
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<tr>
<td>EDPS 996A</td>
<td>Research Other Than Thesis</td>
<td>Permission</td>
<td>1-12</td>
<td>12</td>
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<tr>
<td>EDPS 996B</td>
<td>Readings in Educational Psychology</td>
<td>Permission</td>
<td>1-12</td>
<td>12</td>
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<tr>
<td>EDPS 997A</td>
<td>Practicum in Counseling</td>
<td>Masters admission in educational psychology or permission of counseling area, EDPS 866</td>
<td>2-4</td>
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<td>Classroom</td>
</tr>
</tbody>
</table>
Field Placement in Counseling

**Prereqs:**
EDPS 997A (http://bulletin.unl.edu/courses/EDPS/997A)

Supervised field experiences in school counseling, college student personnel, and community social service agencies.

**Credit Hours:** 2–4
**Campus:**
**Course Delivery:** Classroom

Practicum in Behavior Management Technologies

**Prereqs:**
EDPS 863 (http://bulletin.unl.edu/courses/EDPS/863) and permission

Supervised practicum in the design, implementation, evaluation, and reporting of various behavior modification technologies for individuals and groups; social systems engineering.

**Credit Hours:** 3
**Max credits per degree:** 6
**Campus:**
**Course Delivery:** Classroom

Practicum in Counselor Supervision and Consultation

**Prereqs:**
EDPS 997G (http://bulletin.unl.edu/courses/EDPS/997G) or equivalent

Supervised counseling supervision and consultation experience emphasizing process methods and evaluation.

**Credit Hours:** 2
**Campus:**
**Course Delivery:** Classroom

Advanced Practicum in Counseling

**Prereqs:**
EDPS 997A (http://bulletin.unl.edu/courses/EDPS/997A) and permission

This course is a prerequisite for: EDPS 997E (http://bulletin.unl.edu/courses/EDPS/997E)

Supervised counseling experience in university, schools, and community agencies.

**Credit Hours:** 2–4
**Campus:**
**Course Delivery:** Classroom

Advanced Practicum in Gifted Education

**Crosslisted as:** SPED 997J

**Prereqs:**
Permission

Advanced practicum in the education of the gifted/talented child. Psychodiagnostic procedures; theory and research; and program organization, operation, and evaluation in a field setting.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

Supervision in School Psychology

**Prereqs:**

**Credit Hours:** 3–4
<table>
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<tr>
<th>Course</th>
<th>Credits per semester</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tr>
<td>Doctoral Dissertation</td>
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<td>55</td>
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<tr>
<td>Human Sexuality and Society</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>Special Topics in Education</td>
<td>1-3</td>
<td>12</td>
<td>Classroom</td>
<td>Lecture</td>
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<tr>
<td>Sociological/Anthropological Research</td>
<td>1-3</td>
<td>15</td>
<td>Classroom</td>
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</tbody>
</table>

**Doctoral standing in professional psychology program and permission.**

Supervised experience in supervising graduate students in practicum settings. Refinement of consultation, assessment, diagnosis, and treatment skills.

**Courses for SPED (SPED)**
### Teaching Learners to Learn
Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

### Supervising Special Education
Crosslisted as SPED 856

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

### Special Education Administration
Crosslisted as SPED 857

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

### Special Education Law
Crosslisted as SPED 858

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 states and school districts that are grounded in state and federal law.

### Advanced Practicum in Gifted Education
Crosslisted as SPED 997J

Prereqs: Permission

Advanced practicum in the education of the gifted/talented child. Psychodiagnostic procedures; theory and research; and program organization, operation, and evaluation in a field setting.

### Speech and Language Development of the Hearing Impaired
Crosslisted as SPED 884

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 skills.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Credit Hours</th>
<th>Max Credits per Semester</th>
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<tbody>
<tr>
<td>SLPA 956</td>
<td>Language Study of Teachers of Deaf and Hard of Hearing (DHH)</td>
<td>Theoretical and practical aspects of American Sign Language (ASL) structure. Issues relevant to the use of sign language in education, written English as a second language, classroom discourse, and educational interpreting. Sociolinguistic aspects of sign language among deaf and hearing individuals.</td>
<td>Link <a href="http://bulletin.unl.edu/courses/SLPA/956">here</a></td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>SPED 400/800</td>
<td>Characteristics of Exceptional Persons</td>
<td>This course is a prerequisite for: <a href="http://bulletin.unl.edu/courses/SPED/406">SPED 406</a>, <a href="http://bulletin.unl.edu/courses/SPED/406A">SPED 406A</a>, <a href="http://bulletin.unl.edu/courses/SPED/806">SPED 806</a>, <a href="http://bulletin.unl.edu/courses/SPED/843">SPED 843</a></td>
<td>Link <a href="http://bulletin.unl.edu/courses/SPED/400">here</a></td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>SPED 401A/801A</td>
<td>Accommodating Exceptional Learners in the Elementary School Classroom</td>
<td>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.</td>
<td>Link <a href="http://bulletin.unl.edu/courses/SPED/401A">here</a></td>
<td>Lecture</td>
<td>Classroom</td>
<td>3</td>
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<tr>
<td>SPED 401B/801B</td>
<td>Accommodating Exceptional Learners in the Secondary School Classroom</td>
<td>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.</td>
<td>Link <a href="http://bulletin.unl.edu/courses/SPED/401B">here</a></td>
<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>SPED 405/805</td>
<td>Code-based Reading Instruction</td>
<td>Direct, systematic, multi-sensory techniques for teaching reading, writing and spelling to students who have severe reading problems.</td>
<td>Link <a href="http://bulletin.unl.edu/courses/SPED/405">here</a></td>
<td>Lecture</td>
<td>Classroom</td>
<td>1-3</td>
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# Reading Center Practicum I

**Prereqs:**  
Permission.  

This course is a prerequisite for **SPED 405**.  

SPED 405A requires two hours per week in a Reading Center.  

- Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, lesson planning and teaching using direct instruction, code-based instructional strategies.

## Reading and Writing Disabilities: Adolescents

**Crosslisted as TEAC 806**  

**Prereqs:**  
SPED 400, SPED 412, (TEAC 441) required for undergraduate students only. Parallel **SPED 406A**.  

taken parallel with **SPED 406**.  

This course is a prerequisite for **SPED 406**.  

- Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

## Reading Center Practicum II

**Crosslisted as TEAC 806A**  

**Prereqs:**  
SPED 400, SPED 412, (TEAC 441) required for undergraduate students only. Taken parallel with **SPED 406**.  

This course is a prerequisite for **SPED 406**.  

- Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

## Teaching Students with Disabilities in the Secondary School

**Prereqs:**  
SPED 201 or 400

**Credit Hours:** 3
Course Delivery:
Classroom

Issues in Secondary Programs for Students with Mild Disabilities

Credit Hours: 3
Course Delivery: Classroom

Prereqs:
Special Education Professional Semester and SPED 407

Issues in secondary education for students with mild disabilities based on current literature and needs of individual students.

Assessment Techniques for Diverse Learners

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom, Web

Prereqs:
Sophomore standing; SPED 201 and 303

The role of general education teachers in the primary purposes of assessment of learners with diverse needs. Knowledge and experience with interpreting norm-referenced test information as related to planning educational programs. Use of assessment information for instructional planning and evaluation. Testing accommodations and classroom grading.

Instructional Methods for Students with Diverse Needs

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom, Web

Prereqs:
Sophomore standing; SPED 201 and 303

Instructional methods and accommodations for special education and general education teachers necessary to work successfully with students with disabilities or who are at-risk for academic failure. Curriculum modification, classroom management, strategy instruction, and instructional modifications for content areas.

Reading and Writing Disabilities: Elementary Students

Credit Hours: 2
Course Format: Lecture 2
Course Delivery: Classroom

Prereqs:
SPED 201, TEAC 311, TEAC 313 for elementary education majors; SPED 201, SPED 412, and SPED 414 (or equivalent) for SPED
majors. Must be taken with: SPED 415A
(http://bulletin.unl.edu/courses/SPED/415A)/815A
(http://bulletin.unl.edu/courses/SPED/815A).
This course is a prerequisite for: SPED 415
(http://bulletin.unl.edu/courses/SPED/415).

Theory and techniques for assessing and teaching early literacy skills in small groups and one–on–one for children who struggle with literacy.

**SPED 436/836 Career Education for the Special Needs Student**

**Prereqs:**
SPED 434 (http://bulletin.unl.edu/courses/SPED/434)/834 (http://bulletin.unl.edu/courses/SPED/834) or permission.

Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject areas.

**SPED 463/863 Medically Fragile infants**

**Prereqs:**
Major in Special Education, Speech–language Pathology or Child Youth and Family Studies. Senior status or permission of instructor.

Unique needs, family-coping strategies, specialized medical staff and various health care settings for chronically ill infants, toddlers and preschool age children. Overview of etiology, characteristics and developmental implications of selected medical conditions related to developmental disabilities.

**SPED 472/872 Psychology and Sociology of Deafness**

Education of the hearing impaired including history of, professional roles in, and educational programming within this field. Social/psychological theories as related to the hearing impaired. Patterns of social/emotional development, psychological characteristics, issues of family stress and social adaptation and discussion of counseling techniques.

**SPED 480/880 Educating Students with Intellectual Impairments & Developmental Disabilities**

This course is a prerequisite for SPED 881 (http://bulletin.unl.edu/courses/SPED/881).

Concepts related to history, definitions, identification, etiology, and assessment of students with intellectual impairments and developmental disabilities. Examine attitudes, assumptions, and stereotypes concerning persons with intellectual impairments and other developmental disabilities. Instructional methods, adaptations and teaming to provide individualized interventions and include students in least restrictive environments/general education settings. Applied assignments will be conducted in field experience and student teaching.

**SPED 495/895 Independent Study in Special Education**

(link: http://bulletin.unl.edu/courses/SPED/495)
Credit Hours: 1-3
Course Delivery: Classroom

Prereqs:
Prior arrangements with faculty member and permission.
Special research or reading project under direction of a staff member in the department.

**Directed Field Experience**

<table>
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<th>Prereqs</th>
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<tr>
<td>SPED 496</td>
<td>Permission. Pass/No Pass only for SPED 496 (<a href="http://bulletin.unl.edu/courses/SPED/496">http://bulletin.unl.edu/courses/SPED/496</a>) section. SPED 896 (<a href="http://bulletin.unl.edu/courses/SPED/896">http://bulletin.unl.edu/courses/SPED/896</a>) is graded.</td>
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<tr>
<td>SPED 896</td>
<td>Permission. Pass/No Pass only for SPED 496 (<a href="http://bulletin.unl.edu/courses/SPED/496">http://bulletin.unl.edu/courses/SPED/496</a>) section. SPED 896 (<a href="http://bulletin.unl.edu/courses/SPED/896">http://bulletin.unl.edu/courses/SPED/896</a>) is graded.</td>
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**Directed Field Experience: Inclusion**

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<td>SPED 496Y</td>
<td>Permission. Pass/No Pass only for SPED 496 (<a href="http://bulletin.unl.edu/courses/SPED/496">http://bulletin.unl.edu/courses/SPED/496</a>) section. SPED 896 (<a href="http://bulletin.unl.edu/courses/SPED/896">http://bulletin.unl.edu/courses/SPED/896</a>) is graded.</td>
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<tr>
<td>SPED 896Y</td>
<td>Permission. Pass/No Pass only for SPED 496 (<a href="http://bulletin.unl.edu/courses/SPED/496">http://bulletin.unl.edu/courses/SPED/496</a>) section. SPED 896 (<a href="http://bulletin.unl.edu/courses/SPED/896">http://bulletin.unl.edu/courses/SPED/896</a>) is graded.</td>
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**Advanced Assessment Techniques**

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<tr>
<td>SPED 802</td>
<td>SPED 800 (<a href="http://bulletin.unl.edu/courses/SPED/800">http://bulletin.unl.edu/courses/SPED/800</a>) or equivalent; or permission</td>
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**Effective Instruction for Learners with Special Needs**

<table>
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<tr>
<td>SPED 803</td>
<td>SPED 800 (<a href="http://bulletin.unl.edu/courses/SPED/800">http://bulletin.unl.edu/courses/SPED/800</a>) and *802; or permission</td>
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**Managing Challenging Behavior**

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<td>SPED 804</td>
<td>SPED 800 (<a href="http://bulletin.unl.edu/courses/SPED/800">http://bulletin.unl.edu/courses/SPED/800</a>), *802, *803; or permission</td>
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</tbody>
</table>

Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school resource personnel.

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 children’s challenging behaviors.
behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

**Autism Spectrum Disorders (ASDs): Effective Assessment and Intervention**

**Prereqs:**
- SPED 400 [link](http://bulletin.unl.edu/courses/SPED/400) / 800 [link](http://bulletin.unl.edu/courses/SPED/800) or equivalent
- SPED 809 [link](http://bulletin.unl.edu/courses/SPED/809) requires observation in schools and applied assignments.

Designed for educators of children and youth with Autism Spectrum Disorders (ASDs) in school settings. Assessment strategies to identify characteristics of ASDs focused on individual needs and strengths-based outcomes. Knowledge and skills regarding evidence-based practices and individualized educational programs.

**Autism Spectrum Disorders (ASDs): Methods and Program Planning**

**Prereqs:**
- SPED *809 or equivalent

Majors in severe disabilities must parallel with SPED *896P (1 cr). SPED *810 requires observations in schools and applied assignments.


**Mathematics Instruction for Diverse Learners**

**Prereqs:**
- SPED 201 [link](http://bulletin.unl.edu/courses/SPED/201) or 400 [link](http://bulletin.unl.edu/courses/SPED/400) or 800 [link](http://bulletin.unl.edu/courses/SPED/800)

SPED *820 and associated practicum is designed to meet professional standards (i.e., Council for Exceptional Children, Teacher Education Accreditation Council) for teachers in the area of instruction for diverse learners.

Supplemental basic skills and concepts instruction for diverse learners within a response to intervention models and on mathematics instruction. Selection, delivery, and evaluation of standard protocol and individualized interventions to diverse learners.

**Functional Behavioral Assessment**

**Prereqs:**
- SPED 303 [link](http://bulletin.unl.edu/courses/SPED/303) or equivalent.
- Parallel SPED 824A [link](http://bulletin.unl.edu/courses/SPED/824A).

This course is a prerequisite for SPED 824 [link](http://bulletin.unl.edu/courses/SPED/824A).

Functional behavioral assessments (FBAs) and development of behavior intervention plans (BIPs) based on the assessments. Contextual and
### Practicum in Functional Behavioral Assessment

**Prerequisites:**
- SPED 303 (http://bulletin.unl.edu/courses/SPED/303) or approved equivalent. Parallel SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

This course is a prerequisite for: SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

Opportunities to engage in the activities and practice the skills associated with SPED 824 (http://bulletin.unl.edu/courses/SPED/824). Culmination of the practicum is performing a complete functional behavioral assessment and developing a behavior intervention plan for a student who displays challenging behaviors.

### Behavioral Systems and Interventions

**Prerequisites:**
- SPED 813 (http://bulletin.unl.edu/courses/SPED/813) or equivalent

Three-tier models for encouraging and maintaining students' appropriate behaviors. Evaluation and implementation of interventions at the school-wide, classroom and/or small group, and individual levels. Presentation of different models i.e., Response to Intervention (RtI) and School-Wide Positive Behavior Support (SWPBS).

### Introduction to Special Vocational Needs

Foundational course emphasizing the characteristics and identification of special needs learners in vocational settings. Determines needs, interests, and abilities of these students.

### Emotional and Behavioral Disorders

**Prerequisites:**
- SPED 800 (http://bulletin.unl.edu/courses/SPED/800) or permission

Etiology, theories and assessment of child and adolescent emotional and behavioral disorders. Addresses issues of definitions and classification (DSM-IV and special education) or deviant behavior and psychopathology, as well as an overview of service delivery systems in education and mental health.

### Characteristics of Emotional and Learning Disorders

**Prerequisites:**
- SPED 400 (http://bulletin.unl.edu/courses/SPED/400) / 800 (http://bulletin.unl.edu/courses/SPED/800)

Learning, academic, behavioral, social–emotional and language characteristics of students who are classified as having disabilities for purposes of special education. Definitions, classification systems,
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 846</td>
<td>Foundations of Visual Impairment: Programs and Services for Individuals with Visual Impairments</td>
<td>Admission to visually impaired program; hold or concurrently earn subject/field endorsement; SPED *846</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
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<td>Current educational programs and services for children with visual impairments, as well as children with multiple disabilities. History of educational services, developmental characteristics, psycho-social aspects, history of legislation, and grade I Braille.</td>
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<tr>
<td>SPED 847</td>
<td>Introduction to Eye Anatomy of Students with Visual Impairments</td>
<td>SPED *846 or permission</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
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<td>Structure and function of the visual system, conditions that effect visual ability, and the functional and environmental implications of low vision. Strategies for enhancing visual ability in children with visual impairments and children who have additional disabilities.</td>
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<tr>
<td>SPED 849</td>
<td>Braille Codes and Material Adaptations for Students with Visual Impairments</td>
<td>SPED *846 and *847, or permission</td>
<td>3</td>
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<td>Classroom</td>
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<td>Basic skills in literary Braille transcription and codes. Acquire competence in reading and writing Braille and using the Perkins brailewriter and slate/stylus.</td>
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<tr>
<td>SPED 851</td>
<td>Intermediate Braille Codes and Instructional Material Adaptations for Students with Visual Impairments</td>
<td>SPED *846, *847, and *849</td>
<td>3</td>
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<td>Classroom</td>
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<td>Advanced skills in Nemeth (mathematics code) and/or Literary code. Basic activities in braille formatting, foreign language, music and identification of braille technology devices and resources.</td>
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<tr>
<td>SPED 852</td>
<td>Instructional Methods for Teachers of Students with Visual Impairments</td>
<td>SPED *846, *847, *849, and *851</td>
<td>3</td>
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<td>Methods and materials for educating children who are totally blind or have low vision, including students with multiple impairments. Practical skills in selecting, designing, and/or modifying materials for content area subjects: mathematics, science, social studies, creative arts, foreign language, and other subjects.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
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<tr>
<td>852A</td>
<td>Applied Technology Methods for Students with Visual Impairments</td>
<td>SPED *846 and *847, or equivalents</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Theory and skill development in the selection and use of technology for students with visual impairments. Technology assessments, data collection, equipment feature, source of equipment, funding sources, writing technology instructional plans, and demonstration of using various equipment and technology.</td>
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<tr>
<td>852B</td>
<td>Applied Instructional Methods to Teach Students with Visual Impairments</td>
<td>SPED *846, *847, *849, *851, and *852; or equivalents</td>
<td>2</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Practice using appropriate instructional methods and materials for educating the blind and low vision child.</td>
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<td></td>
<td>Theory and applied practice in basic orientation and mobility techniques for use with students with visual impairments. Practical methods for work in concept development, orientation skills, travel skills and techniques, personal safety and independent travel. Needs of specific populations such as people with low vision and individuals with additional disabilities. Vision simulators and occluders. An introduction to the history and development of the profession.</td>
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<tr>
<td>860</td>
<td>Issues in Early Childhood Special Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>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, transitions, service delivery systems, teamwork and assessment for young children.</td>
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<tr>
<td>861</td>
<td>Infants with Disabilities and Home Visiting</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Assessment and intervention strategies for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, and transdisciplinary services.</td>
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<tr>
<td>862</td>
<td>Preschool Children with Disabilities in a Classroom</td>
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</tbody>
</table>
### Teaching the Content Areas to the Hearing Impaired

**SPED 873**

Selection, design and implementation of developmentally appropriate, activity-based interventions for preschool-age children with disabilities. Ecological assessments. Instructional factors, such as classroom environments, activity planning, selection, use and modification of strategies, home-school communications, and consulting to staff in inclusive settings.

**Prereqs:**
- An assessment and behavior management course; and permission.
- *SPED 862* requires an applied experience.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Link:**  [SPED 873](http://bulletin.unl.edu/courses/SPED/873)

### Language Arts and Literacy for the Hearing Impaired

**SPED 874**

Assessment instruments, curricula and instructional methods for developing language and literacy in classrooms for hearing impaired children, preschool through grade 12. Methods for coordinating speech and/or language and/or auditory training program in the classroom with that in the speech and/or language therapy program.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Link:**  [SPED 874](http://bulletin.unl.edu/courses/SPED/874)

### Itinerant Teaching Methods for Students who are Deaf or Hard of Hearing

**SPED 875**

Methods for providing services for students with hearing loss, using itinerant and consultative models. Professional and parent in-service development, team-based problem solving, curriculum based pull-out services. Ecological assessment and management of deafness related technology in inclusive settings. Supervision of interpreters and paraprofessionals.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Link:**  [SPED 875](http://bulletin.unl.edu/courses/SPED/875)

### Language Development for Teachers

**SPED 876**

Introduction to the foundations of normal speech and language development and potential difficulties in both early stages and in the classroom. Analysis of child language samples. Strategies for explaining language development to parents and professional colleagues.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Web

**Link:**  [SPED 876](http://bulletin.unl.edu/courses/SPED/876)

### Methods for Students with Intellectual and Severe Disabilities

**SPED 881**

**Prereqs:**
- *SPED 480*  
- *SPED 880*

**SPED 881** requires observations in schools and applied assignments.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Link:**  [SPED 881](http://bulletin.unl.edu/courses/SPED/881)
Planning, implementing, and evaluating effective longitudinal education for individuals with intellectual impairments and severe disabilities. Knowledge and skills regarding best practices within inclusive education settings for these learners emphasizing an ecological and functional model that addresses useful skills in current and future environments.

**Specialized Instruction for Students with Severe and Multiple Disabilities**

Prereqs: SPED *881 for the Severely/Multihandicapped endorsement program or SPED *862 for Preschool Handicapped endorsement program; and permission. Majors in severe disabilities must parallel with SPED 896P (http://bulletin.unl.edu/courses/SPED/896P) (1 cr).

This course is a prerequisite for: SPED 981 (http://bulletin.unl.edu/courses/SPED/981)

SPED *882 requires observations in schools and applied assignments.

Selection, design, and implementation of best practice instruction for students with severe disabilities, multiple disabilities, or deaf-blindness.

**Assessment, Evaluation, and Instruction of**

Crosslisted as TEAC 886

This course is a prerequisite for: EDPS 989 (http://bulletin.unl.edu/courses/EDPS/989)

TEAC/SPED *886 includes case study and planning for special student populations.

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.

A. Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.

B. Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Special Topics in Education**

Crosslisted as EDAO 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

Prereqs: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel; EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Student Teaching: Exceptional Learners**

Refer to Student Teaching Seminars in Education under the “Education” section of this bulletin.
**897**

**Prereqs:**
- Permission

Laboratory and teaching experience in the area(s) of specialization.

- A. Mainstream (1–12 cr)
- B. Behavior Disorders
- D. Deaf/Hard of Hearing
- E. General Special Education
- J. Gifted/Talented (EDPS *897J)
- L. Learning Disabilities
- M. Mildly/Moderate Disabilities
- P. Severe Disabilities
- Q. Early Childhood Special Education
- V. Visual Impairments
- Y. Inclusion
- Z. Multicultural Education

**Credit Hours:** 1–9

**Max credits per degree:** 15

**Campus:**

**Course Delivery:** Classroom

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**SPED 899**

**Masters Thesis**

**Prereqs:**
- Admission to masters degree program and permission of major adviser

**Credit Hours:** 1–10

**Campus:**

**Course Delivery:** Classroom

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**SPED 907**

**Seminar in Special Education**

**Prereqs:**
- Permission

B. Behavior Disorders
- D. Deaf/Hard of Hearing
- E. General Special Education
- J. Gifted/Talented
- L. Learning Disabilities
- M. Mildly/Moderate Disabilities
- P. Severe Disabilities
- Q. Early Childhood Special Education
- V. Visual Impairments

**Credit Hours:** 1–3

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

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**SPED 908**

**Resource Consultation Services**

**Prereqs:**
- SPED 800 and one of the following: *831, *851, *861, *881; or permission

Roles and functions of school resource personnel in serving as educational consultants to regular school staff.

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

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**SPED 932**

**Cognitive Strategy Instruction**

**Prereqs:**
- SPED 800, *803, and *831 or permission

How to implement cognitive strategy instruction with students learning

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom
difficulties. Practical model which allows students to successfully teach cognitive strategies. Metacognition, attribution training, and attention deficit disorders.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SPED 942</td>
<td>Strategic Approaches for EBD</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/800">SPED 800</a>, &quot;804, and &quot;841; or permission</td>
<td>1-3</td>
<td>6</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Strategic therapy techniques for assessment and treatment of EBD.</td>
<td>A. Special Topics in EBD (1-3 cr)</td>
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<tr>
<td>SPED 960</td>
<td>Family and School Collaboration in Special Education</td>
<td>Professional experience or completion of one practicum and/or field experience with young children (birth to age 5) or other individuals ages 5 to 21 years who have disabilities</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Functions and interactions of both family and education systems. Impact of having a child with a disability on the normal and stressed family system. Promote family–professional partnerships in assessment and intervention for the child and/or student with an IFSP/IEP. Communication skills are reviewed and practiced for effective teaming among educators and for interviewing, consulting, collaborating and coaching with family members and other community team members.</td>
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<tr>
<td>SPED 980</td>
<td>Assessment of Students with Severe, Sensory, and Developmental Disabilities</td>
<td>SPED *881 and *882; and permission.</td>
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<td>Classroom</td>
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<td></td>
<td>Designed to meet the needs of educators who conduct assessment of students with low incidence disabilities in school settings. Strategies emphasize assessing capabilities and needs in relationship to valued life outcomes. Processes of instructional outcomes. Some assessment conducted in schools and community settings. Learning outcomes individualized to match special education certification program.</td>
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<tr>
<td>SPED 981</td>
<td>Functional Assessment and Behavioral Support for Students with Severe Developmental Disabilities</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/882">SPED 882</a> and permission. Majors in severe disabilities must parallel with <a href="http://bulletin.unl.edu/courses/SPED/896P">SPED 896P</a> (1 cr).  <a href="http://bulletin.unl.edu/courses/SPED/981">SPED 981</a> requires observation in schools and applied assignments.</td>
<td>2</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Assessment and intervention strategies for developing positive behavior support for students with severe disabilities or developmental disabilities who have challenging behavior. Rationale and principles for using an educative approach, functional behavior analysis, and a variety of individualized ecological and curricular interventions. Process of assessment conducted in school settings.</td>
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</tbody>
</table>
Seminar in Special Education

Prereqs:
SPED 980 and 981

Credit Hours: 1–12
Campus: Classroom

Workshop Seminar

Credit Hours: 1–12
Campus: Classroom

Doctoral Seminar

Prereqs:
Permission

Credit Hours: 3
Max credits per degree: 18
Campus: Classroom

Research Other Than Thesis

(1–12, max 12) Independent operational research under faculty supervision.

Campus: Classroom

Readings in Special Education

(1–12, max 12) Readings on selected problems in special education.

Campus: Classroom

Resource Teacher Externship

Prereqs:
SPED *802, *803

Credit Hours: 1–6
Campus: Classroom

Doctoral Dissertation

Campus: Classroom
Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

Courses for SLPA (SLPA)

**Special Topics in Human Sciences**

Credit Hours: 1-3
Max credits per degree: 12
Campus: UNO
Course Delivery: Classroom

Aspects of human sciences not covered elsewhere in the curriculum.

**Audiology for Educators of the Deaf or Hard of Hearing**

Credit Hours: 3
Course Format: Lecture 3
Campus: UNO
Course Delivery: Web

Anatomy and physiology of hearing; components of adequate evaluation of placement and educational planning; diagnosis using audiogram, functional and communication assessment; stimulation and utilization of residual hearing; and management of assistive and/or augmentative devices.

**Normal Language Development During School Years**

Credit Hours: 3
Campus: UNO
Course Delivery: Classroom

Normal syntactic, semantic, and pragmatic language development in school-age children and youth. Complex syntax, semantic development, pragmatic development, using language to learn, language-literacy relations, and abstract language development.

**Research Methodology in Speech-Language Pathology and Audiology**

Credit Hours: 3
Course Delivery: Classroom

Prereqs:
Speech-language pathology and audiology major.

Introduction to research principles, methods, and design. Survey and critique of research in special education and communication disorders.

**Language Disorders: Preschool Level**

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
Parallel SLPA 461L (http://bulletin.unl.edu/courses/SLPA/461L)/861L (http://bulletin.unl.edu/courses/SLPA/861L).

This course is a prerequisite for SLPA 461 (http://bulletin.unl.edu/courses/SLPA/461).
Characteristics of language impaired preschool children and the nature of their disorders. Introduction to principles of assessment and treatment.

**Language Disorders: Preschool Level Lab**

**Prereqs:**
Parallel with SLPA 461 (Parallel with SLPA 461)
This course is a prerequisite for SLPA 461 (SLPA 461).

Practical application of language assessment and intervention in preschool children with language disorders.

**Augmentative Communication**

Speech pathology students must register for 3 cr only; special education students may register for 2-3.

Introduction to the augmentative communication options for persons unable to speak or write because of physical, language, or cognitive disability.

**Linguistic Needs of Bilingual and Culturally Different Students**

Theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicapping conditions, socio-economic status, and cultural-ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.

**Readings and Research in Speech-Language Pathology and Audiology**

**Clinical Phonology: Assessment and Management**

Theoretical foundations; applied clinical phonology.

**Neurological Foundations of Speech and Language**
### 853
**Basic concepts of neurology, protection and blood supply of the Central Nervous System (CNS), anatomical structures of the CNS, neuromotor control of speech, cranial nerves for speech production and neuron motor disorders.**  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom

### SLP 862 **Language Disorders in Special Populations**  
Advanced information about language disorders, assessment, and intervention in various populations.  
A. Birth to Three: Communication Assessment and Intervention  
E. Preadolescents and Adolescents  
J. Severe Disabilities and Autism: Communication Assessment and Intervention  
K. Special Topics in Language Disorders  
Credit Hours: 2-3  
Campus:  
Course Delivery: Classroom

### SLP 863 **Language Disorders in Elementary School-aged Population**  
Advanced information about language disorders, assessment, and intervention in elementary school-aged children.  
Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom

### SLP 865 **Voice Disorders**  
Etiology and symptoms of voice disorders, procedures used in clinical evaluation, and methods and procedures used in therapy.  
Prereqs: SLPA 455  
Credit Hours: 2  
Campus:  
Course Delivery: Classroom

### SLP 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 skills.  
Crosslisted as SPED 884  
Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom

### SLP 885 **Fluency Disorders**  
Research related to the nature, diagnosis and clinical management of stuttering is considered. Therapy models are presented along with data bearing on the efficacy of particular approaches. Specific rehabilitation procedures.  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom

### SLP 887 **Language and Learning Disorders**  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>887</td>
<td>Review of prominent theories relating language to cognitive development and learning; student interaction on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classrooms to accommodate a child that has a language and learning disorder.</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/887">http://bulletin.unl.edu/courses/SLPA/887</a>]</td>
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<tr>
<td>890</td>
<td>Workshop Seminar</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/890">http://bulletin.unl.edu/courses/SLPA/890</a>]</td>
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<tr>
<td>892</td>
<td>Basic skills in counseling and behavior management as applied to the field of communication disorders. Practical, direct application to students' clinical work with individuals with a variety of communication disorders.</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/892">http://bulletin.unl.edu/courses/SLPA/892</a>]</td>
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<tr>
<td>893</td>
<td>Critical Thinking skills necessary for decision-making during the assessment and treatment of individuals with communication disorders. Understanding and applying clinical processes related to the practice of speech-language pathology.</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/893">http://bulletin.unl.edu/courses/SLPA/893</a>]</td>
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<td>897</td>
<td>Supervised practicum experiences provided with difficult speech, language and/or hearing problems in a variety of clinical, medical, geriatric, rehabilitational and public school settings.</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/897">http://bulletin.unl.edu/courses/SLPA/897</a>]</td>
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<tr>
<td>898</td>
<td>Special topics in speech pathology and audiology.</td>
<td>[<a href="http://bulletin.unl.edu/courses/SLPA/898">http://bulletin.unl.edu/courses/SLPA/898</a>]</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>SLPA 899</td>
<td>Masters Thesis</td>
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<td>Prereqs: Admission to masters degree program and permission of major adviser</td>
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<tr>
<td>SLPA 902</td>
<td>Advanced Clinical Evaluation</td>
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<td>Instruction and practice in understanding, applying, and interpreting advanced clinical tests. Understanding the use of differential diagnostic tests used in assessment of peripheral and central lesions.</td>
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<td>SLPA 904</td>
<td>Basic Instrumentation</td>
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<td>Basic electrical theory and practical electronic information for the audiologist. Basic electrical and electronic information applicable to hearing, perception and acoustics. Basic electronics and electronic components, analog and digital circuits, transducers, calibration of audiometric instruments, amplifiers, attenuators and test equipment.</td>
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<td>SLPA 906</td>
<td>Advanced Clinical Assessment II</td>
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<tr>
<td>SLPA 908</td>
<td>Physiological Acoustics</td>
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<td>Pneumatic/mechanical/hydraulic/electrical interfaces involved in the transduction of acoustic energy through the auditory system. Investigation of external ear biophysics, the middle ear transfer function, cochlear hydrodynamics and hydro–mechanics, and auditory biopotentials.</td>
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<tr>
<td>SLPA 910</td>
<td>Auditory Signal Processing</td>
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|            | Principles of signal processing relevant to tests of hearing and to theories of functioning of the auditory system. Introduction of concepts in mathematics, vibration and acoustics. Time– and frequency-domain representations of signals, digital filtering, analysis of lumped–element circuits, linear and nonlinear signal analyses, modulation theory, and the effect of noise on measurements. Applications relevant to audiology including hearing aid performance and measurements, middle–ear transmission, cochlear mechanics, and auditory-nerve firing patterns. Application of these models to understanding physiological sources of conductive and sensorineural
### Psychoacoustics

**SLPA 912**

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Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking level differences, psychoacoustical scaling, difference limen 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.

### Medical Aspects of Audiology

**SLPA 916**

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Effects of, and principles of, medical management of disorders of the cochlea, retrocochlear region, and central auditory mechanism. Anatomy and physiology of the inner ear and central auditory pathways, function and physiology of the vestibule and labyrinth, and histology and biochemistry of the inner ear and ascending auditory tracts.

### Auditory Assessment of Infants and Children

**SLPA 918**

**Prereqs:**

SLPA 271 or equivalent

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<td>Course Delivery:</td>
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Development of the auditory system in infants and young children. Techniques used in differential diagnosis, and screening of auditory disorders in the pediatric population.

### Electrophysiological Assessment of Hearing

**SLPA 920**

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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Instrumentation and procedures for electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography, Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.

### Pharmacology for Audiology

**SLPA 922**

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<thead>
<tr>
<th>Credit Hours:</th>
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<tr>
<td>Course Format:</td>
<td>Lecture 2</td>
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<tr>
<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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Introduction to pharmacological chemistry, drugs, and drug interactions. Ototoxic drugs and other drugs frequently seen in patients in audiology practice settings.

### Sensory Technology and Rehabilitation for the Hearing Impaired I

**SLPA 924**

**Prereqs:**

SLPA 271 or equivalent

<table>
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<tr>
<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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Students will initiate and carry out directed laboratory assignments.
Conventional analog hearing aids which includes: the design and operation of hearing aids, electroacoustic measurements and accompanying instrumentation, earmold and plumbing acoustics, evaluation and selection procedures (adults), orientation.

**Sensory Technology and Rehabilitation for the Hearing Impaired**

**SLPA 926**

**Credit Hours:** 1-3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
[SLPA 271](http://bulletin.unl.edu/courses/SLPA/271) or equivalent

Students will be expected to engage in class presentations. Various assistive technologies, other than conventional analog hearing aids, utilized by persons who are deaf and hard of hearing. Technologies such as cochlear implants, tactile devices, radio frequency systems, digital hearing aids, and telephone, television and alerting devices. Information regarding pediatric amplification, counseling, and speechreading introduced.

**Hearing Conservation and Industrial Audiology**

**SLPA 928**

**Credit Hours:** 2  
**Campus:**  
**Course Delivery:** Classroom

Theories and basic resources for participation in industrial, government, or community hearing conservation programs.

**Genetics of Hearing Loss**

**SLPA 930**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

The genetic basis for hearing loss.

**Vestibular Assessment I**

**SLPA 932**

**Credit Hours:** 4  
**Course Format:** Lab, Lecture  
**Campus:**  
**Course Delivery:** Classroom

Students will initiate and carry out directed laboratory assignments.  
The first of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Normal anatomy and physiology of the balance and ocular motor systems, contrasted with a wide range of pathological conditions. Electronystagmography (video-nystagmography two- and three-dimensional recordings) and assessment of the otolith organs.

**Vestibular Assessment II**

**SLPA 934**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

The second of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Advanced techniques for patient assessment using rotational chair and posturography protocols. Techniques for full assessment in an office situation without extensive equipment. Options for treatment and management of this group of patients. Vestibular and balance rehabilitation therapy program development.
### Implantable Prosthetics (SLPA 936)

Design, operation, candidacy, assessment, surgical procedures, fitting, verification, and rehabilitation procedures related to implantable prosthetic devices for individuals who are deaf and hard of hearing. Cochlear implants, bone anchored hearing aids, implantable middle ear devices, and auditory brainstem implants.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

### Private Practice and/or Clinic Management (SLPA 938)

Principles and procedures for starting and surviving as an independent practitioner in audiology. Practice management strategies for use in any audiological setting.

- **Credit Hours:** 2
- **Course Format:** Lecture 2
- **Campus:**
- **Course Delivery:** Classroom

### Aural Rehabilitation Across the Lifespan (SLPA 940)

Habilitation (for pre-lingual deaf and hard of hearing infants and toddlers) and rehabilitation efforts for individuals of all ages who are deaf or hard of hearing.

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

### Seminar in Audiology (SLPA 942)

Research and clinical procedures; findings and implications in audiology and hearing science.

- **Credit Hours:** 2
- **Campus:**
- **Course Delivery:** Classroom

### Language Study of Teachers of Deaf and Hard of Hearing (DHH) (SLPA 956)


- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

### Speech Perception and Processing (SLPA 964)

Prereqs: SLPA 250 and 456

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.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SLPA 966</td>
<td>Swallowing Disorders</td>
<td></td>
<td>2</td>
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<tr>
<td>SLPA 967</td>
<td>Cleft Palate</td>
<td>SLPA 464 or equivalent</td>
<td>2</td>
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<tr>
<td></td>
<td>Communication, dental, medical, and associated problems related to cleft palate.</td>
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<tr>
<td>SLPA 968</td>
<td>Motor Speech Disorders</td>
<td>SLPA *853</td>
<td>2</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Motor speech disorders resulting from neuropathology of the central and peripheral nervous systems as found in cerebral palsy, Parkinsonism, and other developmental and acquired neuromotor problems of children and adults.</td>
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<tr>
<td>SLPA 980A</td>
<td>Seminar in Speech Physiology</td>
<td>SLPA 455, 456</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.</td>
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<tr>
<td>SLPA 980B</td>
<td>Seminar in Speech Acoustics</td>
<td>SLPA 455, 456</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.</td>
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<tr>
<td>SLPA 981</td>
<td>Seminar in Speech Pathology</td>
<td>SLPA *851, *865, 967, and/or 968</td>
<td>1-3</td>
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<td>Classroom</td>
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<td></td>
<td>Research procedures, findings and clinical implications in the following areas: B. Fluency Disorders (1–3 cr)</td>
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</table>

* SLPA 966: Swallowing Disorders
  - Credit Hours: 2
  - Campus: Classroom
  - Prereqs: SLPA 464 or equivalent

* SLPA 967: Cleft Palate
  - Credit Hours: 2
  - Campus: Classroom
  - Prereqs: SLPA 464 or equivalent

* SLPA 968: Motor Speech Disorders
  - Credit Hours: 2
  - Campus: Classroom
  - Prereqs: SLPA *853

* SLPA 980A: Seminar in Speech Physiology
  - Credit Hours: 3
  - Campus: Classroom
  - Prereqs: SLPA 455, 456

* SLPA 980B: Seminar in Speech Acoustics
  - Credit Hours: 3
  - Campus: Classroom
  - Prereqs: SLPA 455, 456

* SLPA 981: Seminar in Speech Pathology
  - Credit Hours: 1–3
  - Max credits per degree: 6
  - Campus: Classroom
  - Prereqs: SLPA *851, *865, 967, and/or 968
  - Areas: B. Fluency Disorders (1–3 cr)
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<th>Course Code</th>
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<td>Seminar in Language</td>
<td>1-3</td>
<td>SLPA 251 (<a href="http://bulletin.unl.edu/courses/SLPA/251">http://bulletin.unl.edu/courses/SLPA/251</a>) or SLPA 852 or permission</td>
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<td>Research procedures, findings and implications in language pathology and</td>
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<td>treatment in the areas of development, evaluation and habilitation.</td>
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<td></td>
<td>A. Child Language Development and Disorders (1-3 cr)</td>
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<td>B. Adolescent/Adult Language Development and Disorders (1-3 cr)</td>
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<td>E. Augmentative/Alternative Communication (1-3 cr)</td>
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<td>SLPA 984</td>
<td>Seminar in Augmentative Communication</td>
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<td>SLPA 886 (<a href="http://bulletin.unl.edu/courses/SLPA/886">http://bulletin.unl.edu/courses/SLPA/886</a>)</td>
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<td>Advanced seminar on research literature in the augmentative communication</td>
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<tr>
<td>SLPA 985</td>
<td>Traumatic Brain Injury</td>
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<td>SLPA 853</td>
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<td>Assessment and treatment of child and adult cognitive and communication</td>
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<td>disorders resulting from traumatic brain injury.</td>
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<tr>
<td>SLPA 987</td>
<td>Aphasia in Adults</td>
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<td>SLPA 853</td>
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<td>Adult language disorders resulting from stroke or other acquired central</td>
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<td>nervous system insult. Includes historical/theoretical development of</td>
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<td>understanding, cerebral dominance for language, classifications, rationale</td>
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<td>for diagnostic and therapeutic management, prognostic factors, agnosias</td>
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<td>and apraxia.</td>
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<td>SLPA 990</td>
<td>Workshop Seminar</td>
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<td>Refer to Workshop Seminars in Education under the “Education” section of</td>
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<tr>
<td>SLPA 994</td>
<td>Doctoral Capstone Thesis</td>
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<td>Selection of the topic for this project should take place no later than the</td>
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</table>
summer of the third year by consultation with the project adviser. Enrollment in SLPA 994 is required during each semester that the project is underway. Capstone experience prepared in the form of a research project paper containing a significant treatment of some aspect of audiology.

**Doctoral Seminar**

**Prereqs:** 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Research Problems Other Than Thesis**

**Prereqs:** Permission

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments, teaching materials, and industrial applications related to the title description.

A. Structure and Properties of Matter: Water and Solutions (1 cr)
B. Structure and Properties of Matter: Periodicity (1 cr)
D. Structure and Properties of Matter: Bonding and Structure (1 cr)
E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
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: Acids and Bases (1 cr)
T. Chemical Reactions: Kinetics (1 cr)
U. Conservation of Energy and the Increase in Disorder: Thermodynamics (1 cr)
V. Equilibrium: Unifying Theme (1 cr)
W. Chemical Reactions: Oxidation, Reduction and Electrochemistry (1 cr)
Y. Green Chemistry (2-3 cr)
D. Demonstrations for High School Chemistry (1-3 cr)
E. Experiments for High School Chemistry (1-3 cr)
J. Developing a Safety Culture (1 cr)
K. Chemistry of Life Processes: Biomolecules (1-3 cr)
L. Mathematics Integration (MATH 874M) (2-3 cr) May be counted towards the MAT and MScT degrees in mathematics and statistics, not the MA, MS, or PhD.
N. Inquiry Strategies (1-3 cr)
P. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
Z. Structure of Atoms: Nuclear Chemistry (1 cr)

Chemical Pedagogy in the High School Laboratory
Crosslisted as TEAC 875

Credit 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.

A. Small-scale Experiments (1-3 cr)
B. Technology Integration (3-6 cr)
E. Inquiry Experiments (1-3 cr)
K. At-home Experiments (1-3 cr)
P. Probe Experiments (1-3 cr)
T. Traditional Experiments (1-3 cr)

Instructional Communication
Crosslisted as TEAC 429/829

Prereqs:
Junior/senior standing; College of Education and Human Sciences major; COMM 200 (http://bulletin.unl.edu/courses/COMM/200), 201 (http://bulletin.unl.edu/courses/COMM/201); or permission.

Advanced introductory course in instructional communication, focusing on understanding variables associated with the communication process in instructional settings and managing instructional communication more effectively. Provides an experimental and a cognitive understanding of the role of communication in the instructional process.
Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.

**Special Topics in Human Sciences**
Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891

Aspects of human sciences not covered elsewhere in the curriculum.

**Teaching Learners to Learn**
Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

**Instructional Leadership: Emerging Trends and Practices**
Crosslisted as TEAC 948

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**Field Studies in Education**
Crosslisted as NUTR 991, TEAC 991

Prereqs: Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

**Seminar in Qualitative Research**
Crosslisted as TEAC 935

Prereqs: EDUC 900K or permission

Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.
Psychology of Reading
Crosslisted as TEAC 989

Prereqs:
TEAC *811 or 841 or SPED 886
(http://bulletin.unl.edu/courses/SPED/886)

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Nebraska Writing Project Internship
Crosslisted as TEAC 895A

Prereqs:
Permission

Nebraska Humanities Project
Crosslisted as TEAC 992

Place Conscious Teaching
Crosslisted as TEAC 992B

American Cultural Perspectives through Popular Music and Guitar
Crosslisted as MUNM 450, TEAC 450/850

Approaches to Middle School General Music
Crosslisted as TEAC 873
Credit Hours: 3
Max credits per degree: 3
Course Delivery: Classroom
Groups: Music Education (MUED)

**MUED 845**

**Historical and Philosophical Foundations of American Music Education**
Crosslisted as TEAC 845

Prereqs:
Undergraduate degree in MUED.

**MUED 845** is required for a graduate degree in music education.

Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylton, Richmond and others are considered.

Credit Hours: 2–3
Max credits per degree: 3
Course Format: Lecture
Course Delivery: Classroom

**SPED 406/806**

**Reading and Writing Disabilities: Adolescents**
Crosslisted as TEAC 806

Prereqs:
SPED 400, SPED 412, and (TEAC 441 required for undergraduate students only). Parallel SPED 406A.

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

Credit Hours: 2
Course Format: Lecture 2
Course Delivery: Classroom

**SPED 406A/806A**

**Reading Center Practicum II**
Crosslisted as TEAC 806A

Prereqs:
SPED 400, SPED 412, and (TEAC 441 required for undergraduate students only). Taken parallel with SPED 406.

This course is a prerequisite for SPED 406 and SPED 406A.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

Credit Hours: 2
Course Format: Lab 2
Course Delivery: Classroom
### Assessment, Evaluation, and Instruction of

Crosslisted as **TEAC 886**

This course is a prerequisite for [EDPS 989](http://bulletin.unl.edu/courses/EDPS/989).

**TEAC/SPED 886 includes** case study and planning for special student populations.

- Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.
- A. Special Topics in Literacy Assessment (SPED 886A) (1–3 cr) Lec.
- B. Internship in Literacy Assessment and Instruction (SPED 886B) (1–3 cr)

### Special Topics in Education

Crosslisted as **EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892**

**Prereqs:**
- EDPS 859 ([link](http://bulletin.unl.edu/courses/EDPS/859)) or parallel; EDPS 859 ([link](http://bulletin.unl.edu/courses/EDPS/859)) or equivalent

Aspects of education not covered elsewhere in the curriculum.

### Contemporary Children's Literature: Principles and Practices

Crosslisted as **TEAC 402**

**Prereqs:**
- TEAC 302 ([link](http://bulletin.unl.edu/courses/TEAC/302)) and successful completion of student teaching or permission.

Contemporary literature for children, all forms and genres; development of meaningful and creative learning activities for children; professional readings and research related to children's literature.

### Improvement of Instruction in School Mathematics

Crosslisted as **TEAC 408**


### Reading Processes and Practices

Crosslisted as **TEAC 411**

Overview of reading processes and programs with attention to strategies for comprehension and word identification, approaches, and materials. A. Teaching Reading (3 cr) B. Special Topics in Reading (1–6 cr)

### Studies in Teaching English as a Second Language

Crosslisted as **TEAC 413**

Preparation for teaching K–12 learners whose language of nurture is not English. A. ESL: Acquisition (1–3 cr) B. ESL: Teaching and Curriculum (1–3 cr)
**Teaching English Language Learners (ELLs) in Content Areas**

**413M/813M**

Theory and pedagogy in the teaching of English Language Learners (ELLs) in course content areas at all levels of K–12 education. Identify and design linguistically and culturally responsive instruction for English learners in the disciplines (e.g., language arts, science, mathematics, social sciences).

**Course Delivery:** Classroom

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Teaching English Overseas**

**413P/413X/813P**

Methodologies for teaching English to speakers of other languages (TESOL) in international settings.

**Course Delivery:** Classroom, Web

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom, Web

**Inclusive Early Childhood Methods**

**416/816**

The creation and practice of developmentally appropriate instruction in curricular areas for K to 3rd grades. Role of the teacher and/or facilitator in relationship to the primary curriculum and learning environment.

**Prereqs:**
- Admission to the Inclusive Early Childhood Teacher Education Program;[FACS 270](http://bulletin.unl.edu/courses/FACS/270), [270L](http://bulletin.unl.edu/courses/FACS/270L), [374](http://bulletin.unl.edu/courses/FACS/374), and [374L](http://bulletin.unl.edu/courses/FACS/374L).

**Course Delivery:** Classroom

**Credit Hours:** 3

**Max credits per semester:** 9

**Course Format:** Lecture

**Course Delivery:** Classroom

**Teaching Writing in the Elementary School**

**418/818**

Learning and teaching of writing with consideration given to developmental factors of children and adolescents.

**Course Delivery:** Classroom

**Credit Hours:** 3

**Course Delivery:** Classroom

**Teaching Foreign Language in the Elementary School**

**420/820**

Theory, research and practice of most recent foreign language models and strategies.

**Course Delivery:** Classroom

**Credit Hours:** 3

**Course Delivery:** Classroom

**Coordination in Occupational Training Programs**

**425/825**

Crosslisted as [EDAD 825](http://bulletin.unl.edu/courses/EDAD/825)
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<tr>
<td>TEAC 430/830</td>
<td>Introduction to Philosophy of Education</td>
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<tr>
<td>TEAC 431/831</td>
<td>Studies in the Foundations of Education</td>
<td>3</td>
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<td>TEAC 432/832</td>
<td>Higher Education in America</td>
<td>3</td>
<td>Classroom</td>
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<td>TEAC 433/833</td>
<td>Comparative Education</td>
<td>3</td>
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<tr>
<td>TEAC 433A/833A</td>
<td>Comparative Education Survey</td>
<td>3</td>
<td>Classroom</td>
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**Introduction to Philosophy of Education**

Open to advanced undergraduates and graduate students

Fundamental ideas and skills that students can use to begin to form personal philosophical perspectives on education that can be justified intellectually, practically, and ethically. Using case studies of realistic school situations and the theoretical work of a range of writers in education, students explore conceptions of teaching, learning, curriculum, and the relationship between school and society.

**Studies in the Foundations of Education**

Social and cultural analyses of curriculum, teaching, and education policy from disciplinary perspectives. A. The Anthropology of Education (3 cr) B. The History of Education (3 cr) E. The Sociology of Education (3 cr) J. Special Topics (3 cr)

**Higher Education in America**

History and development of America's colleges and universities and recent trends and problems in higher education.

**Comparative Education**

Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.

**Comparative Education Survey**

Comparative Education investigates origins, goals, organization, challenges, and accomplishments of various countries' school systems with intentional comparisons to American practices. The 'A' format is a survey course that considers examples from all over the world. The 'B' format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.
**433B/833B**

**Course Format:** Field 3

**Course Delivery:** Classroom

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 9

**Prereqs:** None

This course could be taken more than once for additional credits assuming the student uses it for travel-study to different places. For example, a student could not visit South Korea twice with the same professor teaching the same syllabus, but could visit South Korea once (as one 3-hour course) and South Africa (as another 3-hour course).

Course investigates origins, goals, organization, challenges, and accomplishments of various countries’ school systems with intentional comparisons to American practices. The ‘B’ format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

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**Ethics and Education**

**434/834**

**Course Delivery:** Classroom

**Open to:** advanced undergraduates and graduate students

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equality, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.

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**Latin American Education**

**436/836**

**Course Delivery:** Classroom

**Credit Hours:** 3

**Prereqs:** 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.

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**Linguistics for the Classroom School Teacher**

**438/838**

**Course Delivery:** Classroom

**Credit Hours:** 3

**Prereqs:** Admission to the Teacher Education Program.

Analysis of various aspects of linguistic study including dialects, usage, modern grammar, semantics, lexicography, etc., and their application in the K–12 school English classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the classroom.

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**Literature for Adolescents**

**439/839**

**Course Delivery:** Classroom

**Credit Hours:** 3

**Prereqs:** Admission to a Teacher Education Program.

Wide range of young adult literature available for use in schools. Critical and rhetorical tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; consideration for readers aged 11–16.
**Content Area Reading, Grades 4–12**

This course is a prerequisite for: SPED 406, SPED 406A

Simultaneous teaching of academic content and functional teaching of reading in the content areas; assessment of comprehension, vocabulary/concept attainment; analyses of text; improvement of content area learning through reading/writing development.

**Learning and Teaching Principles and Practices**

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306, TEAC 406, TEAC 806.

Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline–based art education. Planning and incorporation of innovative approaches embracing the diversity of students. K. Career and Technical Education Prereq: As listed above. Procedures for writing, selecting and organizing subject matter for instruction. L. Methods of Teaching Information Technology (3 cr) Prereq: As listed above and TEAC 259, TEAC 397L, TEAC 894L.

Objectives, teaching materials, and methods of presentation emphasizing the organization and management of computer science instruction. [IS]N. Secondary Language Arts (3 or 4 cr) Prereq: As listed above, including ENGL 357, ENGL 377, and TEAC 438, TEAC 838; and grade average of "B" (3.0) or better in subject-area. Theoretical issues in the teaching and learning of writing, language, and literature. *O. Marketing Education Prereq: As listed above and TEAC 452K.


Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners. [IS]W. Secondary Social Science Prereq: As listed above. Theoretical issues in teaching and learning in the individual and integrated social sciences.
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Procedures for writing, selecting and organizing subject matter for instruction.

### TEAC Learning and Teaching Principles and Practices: Secondary Mathematics

#### 451P/851P

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners.

#### 451V/851V

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better. Parallel with TEAC 397V.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners.

#### 452/852

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with 2.5 GPA or better.

Focus on practical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 or 406. Theory and research into curriculum incorporating technology, interdisciplinary approaches, active learning, and course content designed to enhance art understanding by students of diversity. J. Business Education Prereq: As listed above and TEAC 451K and parallel with TEAC 397J. Objectives, teaching materials, selection and organization of subject matter, and methods of instruction and evaluation in business subjects. M. Industrial Education Prereq: As listed above and TEAC 451K and parallel with TEAC 397M. Objectives, curricula, methodology, evaluation, planning, classroom management and course organization. [IS]. Secondary Language Arts Prereq: As listed above and parallel with TEAC 397. Planning, teaching, and evaluating language arts lessons for diverse learners. P. Secondary Mathematics Prereq: As listed above and TEAC 451P with a grade of “C+” or better. Conceptualizing the 7–12 curriculum through multimedia and active, discovery learning. [IS].R. Secondary Modern Languages Prereq: As listed above. Second-language acquisition and learning theory and their relationship to curriculum planning and development. Practice in creative language–use activities designed to build second language reading, writing,
speaking, listening, and culture skills. Development of teacher as observer, reflector, and recorder of individual student needs. [IS]V. Secondary Science Prereq: As listed above and TEAC 451V
(http://bulletin.unl.edu/courses/TEAC/451V/851V)
Curricular materials, including the application of technology, as they relate to classroom instruction with diverse populations. [IS]W. Secondary Social Science 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.

**The Middle Level Professional Methods**

**Prereqs:** Admission to the Teacher Education Program.

Development of competence in planning, teaching, classroom management and assessment. Covers the scope, content, and organization of curriculum and instructional materials. I. Art (2 cr) N. Language Arts (2 cr) P. Mathematics (2 cr) T. Reading (2 cr) V. Science (2 cr) W. Social Science (2 cr)

**Literature in Education**

Comparative analyses of literature and the role of the reader as meaning maker in educational settings. A. Literary Response and Analysis (3 cr) B. Multiethnic Literature for Children and Adolescents (3 cr) E. Special Topics (3 cr)

**Teaching with Technology**


**Instructional Applications of Computers–Practicum**

Prereqs: Permission.

A task–oriented practicum in instructional application of computer to provide an opportunity for repetition and/or demonstration of fundamental practice skills. Combines discussion and demonstration with supervised task–centered field experiences.

**Independent Study**

Prereqs: Permission.

A task–oriented practicum in instructional application of computer to provide an opportunity for repetition and/or demonstration of fundamental practice skills. Combines discussion and demonstration with supervised task–centered field experiences.
<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Prereqs</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>TEAC 496/896</td>
<td>Problems in Secondary Education</td>
<td>Permission.</td>
<td>Opportunities for experienced teachers and administrators to develop plans, procedures, or experiments directed to the improvement of the curriculum or administration of the secondary school.</td>
</tr>
<tr>
<td>TEAC 498/898</td>
<td>Problems in Elementary Education</td>
<td>Permission.</td>
<td>Opportunities to develop plans, procedures, experiments, and models directed to the improvement of elementary school education on an independent study basis.</td>
</tr>
<tr>
<td>TEAC 800</td>
<td>Inquiry into Teaching and Learning</td>
<td>Permission.</td>
<td>Contemporary educational research from multiple theoretical perspectives.</td>
</tr>
<tr>
<td>TEAC 801</td>
<td>Curriculum Inquiry</td>
<td>Permission.</td>
<td>The relationship between curriculum theory and/or research to educational practices.</td>
</tr>
<tr>
<td>TEAC 803</td>
<td>Student Teaching Internship Seminar</td>
<td>TEAC 897</td>
<td>Analysis of school programs with attention to teacher certification, teacher/student rights/responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communicating with parents and community members, and current issues.</td>
</tr>
</tbody>
</table>
|             |                                                 |         | A. Elementary (K–6) (1–2 cr) Parallel TEAC 897A (http://bulletin.unl.edu/courses/TEAC/897A).  
|             |                                                 |         | B. Elementary Art (1–2 cr) Parallel TEAC 897B  
|             |                                                 |         | C. Elementary Foreign Language (1–2 cr) Parallel TEAC 897C (http://bulletin.unl.edu/courses/TEAC/897C).  
|             |                                                 |         | I. Secondary Art (1–2 cr) Parallel TEAC 897I (http://bulletin.unl.edu/courses/TEAC/897I).  
|             |                                                 |         | N. Secondary Language Arts (1–2 cr) Parallel TEAC 897N (http://bulletin.unl.edu/courses/TEAC/897N).
Advanced Teaching Strategies

Crosslisted as ALEC 805, NUTR 806

Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs public schools, and other settings. Students 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.

Improvement of Instruction in Elementary School Science

Prereqs:
12 hrs education including TEAC 315 or permission; teaching experience or student teaching

Techniques, plans, and procedures for improving instruction in elementary school science. Current practices, issues, and trends; evaluation of instructional materials.

Intercultural Communication

Introduction to intercultural communication and the theoretical and methodological tools needed to understand the tenets and implications of intercultural communication for application in personal and professional practices. Readings will deal with misunderstandings and the impact of cultural factors on the making of meaning, as well as discrimination and the impact of unequal power relations on communication, media impact in a globalized world, language, identity and communication, and intercultural competence.

Emerging Reading and Language

Prereqs: Elementary endorsement

Research, theory and practice associated with literacy development in children from birth to age 8. Language and concept development, emerging reading and writing behaviors, appropriate materials and evaluation within a holistic view teaching and learning.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 822</td>
<td>Principles and Practices in Social Studies Education</td>
<td>Current issues and trends in the curriculum and teaching of social studies. A. Special Topics (1–3 cr)</td>
<td>1–3</td>
<td>9</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 828</td>
<td>Improvement of Instruction in Industrial Education</td>
<td>Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 833</td>
<td>Comparative Education</td>
<td>Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 835</td>
<td>Ethnic Minorities and American Education</td>
<td>Chronological entry of European immigrant groups into an American society during the formative years of the development of the American public school system. Record of American social and educational history is replete with examples of inter- and intra-group human conflict as each immigrant group attempted to carve out its niche in a New World setting during a period of mass migration from Europe. Historical, sociological, and psychological barriers that became inherent during a dynamic period of nation building.</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 840</td>
<td>Culture and Schooling</td>
<td>Description and explanation of cultural values as they relate to education. A. Gender (1–3 cr) B. Gender and Science (1–3 cr) D. Special Topics (1–6 cr) E. Rural Education (1–3 cr)</td>
<td>1–3</td>
<td>15</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 842</td>
<td>Objectives and Methods of Science Teaching</td>
<td>Development of objectives, course offerings, and organization of subject matter and methods of instruction in science courses. Current national science education curriculum trends. A. Elementary B. Middle School D. Secondary and Community College E. Special Topics (1–6 cr)</td>
<td>1–3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
School Media Programs

Role of the media specialist as a member of the instructional team.
A. Administration (3 cr)
B. Reference (3 cr)
D. Cataloguing (3 cr)
E. Selection (3 cr)
J. Special Topics in School Media

Credit Hours: 1-3
Campus:
Course Delivery: Classroom

Studies in Middle Level Schooling

Historical development, philosophy, and current literature of the middle school.
A. Curriculum (1-3 cr, max 3)
B. Leadership (1-3 cr, max 3)
D. Teacher-Based Advisory (1-3 cr, max 3)
E. Special Topics (1-3 cr, max 9)

Credit Hours: 1-9
Max credits per degree: 9
Campus:
Course Delivery: Classroom

Principles of Business Education


Credit Hours: 3
Campus:
Course Delivery: Classroom

Introduction to Curriculum Studies

Historical development and philosophy of high school curricula. Review of research on schooling, curriculum trends, and school organizational structures.
A. Elementary Schools
B. Middle Schools
D. Secondary Schools
E. Special Topics in Curriculum (1-6 cr)

Credit Hours: 1-3
Campus:
Course Delivery: Classroom

Studies in Assessment and Leadership for Learning

Preparation for assessing K–12 learners and leading K–12 Teacher Learning Communities.
A. Classroom Assessment (3 cr)
B. Large-scale Assessment (3 cr)
E. Leadership in Assessment (3 cr)
J. Leading Classroom Assessment (3 cr)
K. Special Topics in Assessment and Leadership for Learning (3 or 6 cr, max 6)

Credit Hours: 6
Max credits per degree: 18
Course Format: Lecture
Campus:
Course Delivery: Classroom

Nebraska Writing Project

Topics in writing instruction, explored via the National Writing Project Institute model, for K–12 and college teachers of writing in all curricular

Crosslisted as ENGL 857B

Credit Hours: 1-3
Course Format: Lecture
**Utilization of Modern Technology**

Campus:

Course Delivery: Classroom

Credit Hours: 3

Campus: Classroom

Course Delivery: Classroom

Strategies of incorporating modern technology into the professional workplace; provides a thorough understanding of the operation and evaluation of integrating technology into the curriculum.

**Instructional Message Design**

Campus:

Course Delivery: Classroom

Credit Hours: 3

Campus: Classroom

Course Delivery: Classroom

Using selected principles from behavior science (perception, memory, attitudes, concepts), students analyze and design instructional messages. Systematic process for instructional development.

**Production and Utilization of Instructional Materials**

Campus:

Course Delivery: Classroom

Credit Hours: 3

Campus: Classroom

Course Delivery: Classroom

This course is meant to be taken after and in sequence with TEAC *859. Unique characteristics and contributions of selected instructional media and technologies to the teaching/learning and communication processes. Students produce materials for specific instructional messages.

**Education for a Pluralistic Society: Foundation and Issues**

Campus:

Course Delivery: Classroom

Credit Hours: 3

Campus: Classroom

Course Delivery: Classroom

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. Critique of curricular materials and resources promoting a multicultural perspective.

**Music in Early Childhood Education**

Crosslisted as MUED 881

Preqs:

MUED 344 or 370

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.

**Effecting High School Improvement**

Campus:

Course Format: Lecture 3

Credit Hours: 3

Campus: Classroom

Course Delivery: Classroom

The relationships and interactions among the high school student, a teacher, and the curriculum to the issues of school district, higher education, philanthropy, state department of education, and federal involvement in high school improvement efforts. The imperative and challenges for improving high school for all students.
**Teacher as Scholarly Practitioner**

**888**

**Prereqs:**

- [TEAC 800](http://bulletin.unl.edu/courses/TEAC/800) and [801](http://bulletin.unl.edu/courses/TEAC/801), or permission

Seminar on the principles of practitioner inquiry and development of a proposal for an inquiry project.
- A. Special Topics in Inquiry

**Credit Hours:** 1-3

**Max credits per degree:** 3

**Campus:**

**Course Delivery:** Classroom

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**Masters Seminar**

**889**

**Prereqs:**

- Permission

Working with a faculty mentor on either an individual or small-group basis, the student plans, conducts, and reports a summative work project.

**Credit Hours:** 1-3

**Max credits per degree:** 9

**Campus:**

**Course Delivery:** Classroom

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**Workshop Seminar**

**890**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Campus:**

**Course Delivery:** Classroom

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**Workshop Seminar**

**893**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Campus:**

**Course Delivery:** Classroom

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**Professional Practicum Experiences**

**894**

**Prereqs:**

- Admission to Teacher Education Program

TEAC *894 does not count toward the MA or MEd degree. P/N only. Guided observations and/or clinical experiences in schools and/or agencies offering programs for children/youth.
- A. Elementary (K–6) (1–10 cr)
- B. Elementary Art (1–10 cr)
- E. English as a Second Language (1–10 cr)
- G. Elementary Foreign Language (1–10 cr)
- I. Secondary Art (1–10 cr)
- J. Business Education (1–10 cr)
- L. Information Technology (1–10 cr, max 10)
- M. Industrial Education (1–10 cr)
- N. Secondary Language Arts (1–10 cr)
- O. Marketing Education (1–10 cr)
- P. Secondary Mathematics (1–10 cr)
- Q. Middle School (1–10 cr)
- R. Secondary Modern Language (1–10 cr)
- T. Reading (1–10 cr)
- V. Secondary Science (1–10 cr)
- W. Secondary Social Science (1–10 cr)
- Y. Mainstreaming (1–10 cr)

**Credit Hours:** 1–10

**Max credits per degree:** 10

**Course Format:** Field

**Campus:**

**Course Delivery:** Classroom
### Student Teaching Internship

**TEAC 897**

**Prereqs:**
Admission by application only

This course is a prerequisite for [TEAC 803](http://bulletin.unl.edu/courses/TEAC/803).

- Supervised teaching experience in schools.
  - A. Elementary (K–6)
  - B. Elementary Art
  - E. English as a Second Language
  - D. Elementary Physical Education
  - G. Elementary Foreign Language
  - I. Secondary Art
  - J. Business Education
  - K. Health
  - M. Industrial Education
  - N. Secondary Language Arts
  - P. Secondary Mathematics
  - Q. Middle School
  - R. Secondary Modern Language
  - U. Secondary Language Arts
  - V. Secondary Science
  - W. Secondary Social Science
  - Y. Mainstreaming
  - Z. Multicultural

**Credit Hours:** 1–10

**Course Delivery:** Classroom

### Masters Thesis

**TEAC 899**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Credit Hours:** 6–10

**Campus:**

**Course Delivery:** Classroom

### Supervision and Administration in Vocational Education

**TEAC 901**

**For course description, see ALEC 901.**

**Credit Hours:** 1–3

**Course Format:** Lecture

**Campus:**

**Course Delivery:** Classroom

### Colloquium in Educational Policy and Practice

**TEAC 902**

Educational policy and practice and their interconnection.

A. Special Topics in Educational Policy and Practice (1–3 cr)

**Credit Hours:** 1–3

**Max credits per degree:** 6

**Campus:**

**Course Delivery:** Classroom

### Current Trends in the Education of Young Children

**TEAC 903**

**Credit Hours:** 1–3

**Max credits per degree:** 6

**Campus:**

**Course Delivery:** Classroom
Participation in special problems of teachers in service. Guidance, evaluations, research.

**Practicum in Postsecondary Teaching**
Crosslisted as ALEC 905

- **Prereqs:**
  - ALEC *805 or permission

Work with a faculty mentor in a discipline of choice and an instructional supervisor to prepare instruction and teach students in a postsecondary setting. Practicum students are assisted in arranging for the practicum and are provided consultation and feedback during the practicum. Lesson planning and reflective papers are part of the practicum experience.

**Seminar in Elementary School Mathematics**

- **Prereqs:**
  - TEAC 808 or equivalent

Theories, literature, and research procedures relative to elementary mathematics education.

**Seminar in Teacher Education**

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)

**Seminar in Elementary School Science**

- **Prereqs:**
  - 12 hrs laboratory science including courses in both physical and biological fields; TEAC 403 or 804 or equivalent; teaching experience

Literature which deals with research and experimentation in science for the elementary school. Aspects of the teaching and supervision of elementary school science that require investigation and research.

**Seminar in Curriculum and Teaching of Career and Technical Education**

Current research and theory within the curriculum and teaching of career and technical education.

**Seminar in Literacy Studies**
921

Research in literacy and schooling.
A. Curriculum and Teaching (3 cr)
B. Special Topics (1-3 cr)
D. Language, Culture, and Education (1-3 cr)

Credit Hours: 1-3
Max credits per degree: 9
Course Format: Lecture
Campus:
Course Delivery: Classroom

Seminar in the Learning and Teaching of Foreign Languages

Prereqs:
Undergraduate teaching major in a foreign language and teaching experience in a foreign language

Critical review and evaluation of current literature, research and theory.
A. Reading in the Foreign Language Classroom (1-3 cr, max 3)
B. Writing in the Foreign Language Classroom (1-3 cr, max 3)
D. Listening in the Foreign Language Classroom (1-3 cr, max 3)
E. Speaking in the Foreign Language Classroom (1-3 cr, max 3)
J. Planning in the Foreign Language Classroom (1-3 cr, max 3)
K. Technology-Enhanced Language Instruction (1-3 cr, max 3)

Credit Hours: 1-21
Max credits per degree: 21
Campus:
Course Delivery: Classroom

Seminar in the Curriculum and Teaching of Secondary School Mathematics

Prereqs:
Undergraduate teaching major and teaching experience in mathematics

Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of mathematics.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Seminar in the Curriculum and Teaching of Science

Prereqs:
Undergraduate teaching major and teaching experience in science, and TEAC 842 (http://bulletin.unl.edu/courses/TEAC/842) and EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)

Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.
A. Elementary
B. Middle School
D. Secondary
E. Inclusive Science Teaching
J. Special Topics (1–6 cr)

Credit Hours: 1-3
Campus:
Course Delivery: Classroom

Seminar in the Curriculum and Teaching of Social Sciences

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)

Credit Hours: 3
Max credits per degree: 12
Campus:
Course Delivery: Classroom
**Seminar in Individualized Instruction for Gifted, Talented, and Creative Students**

Nature of curricular and instructional programs and practices for gifted, talented, and creative students in elementary and secondary schools. Range of learner outcomes, identification of instructional principles, personalizing instruction for this group of learners.

**Sociological/Anthropological Research Methods in Education**

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.

- A. Ethnographic Methods (1–3 cr, max 3)
- B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
- D. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
- E. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
- J. Hermeneutic Traditions in Education (1–3 cr, max 3)
- K. Quantitative Research Traditions in Education (1–3 cr, max 3)

**Research in the History of Education**

Historical research methods in education culminating in the research and writing of a historical article as publication report.

**Contract Studies in International Education**

Prereqs: Permission

Student proposed course of studies in international education: may include field experiences, individual/group research, participation in mini-seminars, etc.

**Seminar in College Teaching**

Overview of teaching in post-secondary settings.

**Philosophy of Science and Educational Research**

Major themes in philosophy of science and relates these to conceptions of research on human beings and social institutions, particularly as this is applied to schooling. Students consider such fundamental issues as whether
educational research is a science, the form and purpose of educational research, and what research might imply for practice.

**Seminar in Curriculum Studies**

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)

**Instructional Improvement and Decision Making**

Study and application of teaching models and techniques based on research, theory, and exemplary practice.

A. Instructional Assessment
B. Special Topics in Instruction

**Seminar in Education**

Critical analysis of literature and research on teaching, learning, and schooling.

A. Special Topics in Education (1–3 cr)

**Contextual Research in English/Language Arts**

Uses of qualitative research in English language arts; interpreting, planning, conducting, and reporting contextual research results.

**Seminar in Reading Education**

Scholarship in 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, 6 max)

**Language and Learning**

Role that language plays in empowering and constraining children as they attempt to make sense of their world. Consideration of application of language scholarship for general instruction.
**TEAC 953** Seminar on Writing in the Curriculum

Writing development, writing instruction, and the use of writing in the content areas. Consideration of application of scholarship in writing for general learning and instruction.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

**TEAC 957B** Nebraska Writing Project

Crosslisted as ENGL 957B

Summer institute for K–12 and college teachers of writing in all curricular areas, taught on the National Writing Project model.

**Credit Hours:** 6
**Course Format:** Lecture 6
**Campus:**
**Course Delivery:** Classroom

**TEAC 959** Portfolio in Instructional Technology Competencies

Prereqs:
Permission

No more than six credits of TEAC 959 (http://bulletin.unl.edu/courses/TEAC/959) may be counted towards a masters degree. Portfolio components represent a significant contribution to the solution of an instructional problem and reflect broadly the major competencies of instructional technology: problem definition, learner analysis, media selection and message design, production, and evaluation.

**Credit Hours:** 1–12
**Campus:**
**Course Delivery:** Classroom

**TEAC 960** Topical Seminar in Instructional Technology

Prereqs:
Permission

Critical analysis of research in a delimited problem area within instructional technology (e.g., ITV, CAI, videodisc, simulations, programmed instruction). Empirically testable research questions related to the topic.

**Credit Hours:** 1–3
**Campus:**
**Course Delivery:** Classroom

**TEAC 961** Current Approaches to Elementary Music Education

Crosslisted as MUED 961

Prereqs:
Teaching experience

Implementation of current programs, materials, and techniques for the improvement of music instruction in the elementary school.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

**TEAC 990** Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Credit Hours:** 1–12
**Max credits per degree:** 12
**Campus:**
**Course Delivery:** Classroom
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- 1 Description (#Description)
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- 2 Faculty (#Faculty)
Description

The College of Education and Human Sciences (CEHS) offers graduate degree programs through its seven CEHS departments: Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design. In addition to graduate degree programs, CEHS also offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

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 focused interest but which are not included in other professional education courses. 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.

CEHS offers three masters degrees in nine majors and the education specialist degree in three majors. The MEd is offered only in Educational Administration; Special Education and Communication Disorders; and Teaching, Learning, and Teacher Education. The following requirements for the MEd are College requirements. Departmental requirements may exceed these. In work for the master of education degree, at least 6 semester hours selected from College of Education and Human Sciences courses outside the major must be included and supporting work may be substituted for the minor(s). For information on masters and specialist degree programs, consult the relevant department’s listing in this bulletin.

CEHS offers two doctoral degrees, both the EdD and the PhD, under three majors: educational studies, human sciences, and psychological studies in education. In addition, CEHS participates in two additional doctoral majors. The Educational Studies major includes six specializations: Instructional Technology; Internet-based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education is sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co-hosts, with Architecture, Architecture Education.

The Human Sciences major includes five specializations. Communication Disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies is sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Clothing and Design is based in the Department of Textiles, Clothing and Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.

The Psychological Studies in Education major includes four specializations, all hosted by the Department of Educational Psychology: Cognition, Learning and Development; Counseling Psychology; Qualitative and Quantitative Methodologies in Education; and School Psychology. In addition, the Department of Educational Administration—in cooperation with UNO’s Department of Educational Administration—offers a major in Educational Administration, and the Department of Nutrition and Health Sciences participates in the Interdepartmental Nutrition major.

Specific program and application information is available under each department’s listing in this bulletin. Up-to-date information is also available on-line at cehs.unl.edu. Inquiries may be directed to cehsgrad@unl.edu or to (402) 472-5333.

Educational Administration

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Interim Department Chair: Brent D. Cejda, Ph.D.
Graduate Committee Chair: Jody Isernhagen, Ph.D.

The Department of Educational Administration offers programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization.

Masters degree programs

The Masters Degree program meets the academic requirements for either a Master of Arts (MA) or a Master of Education (MEd) degree with a major in Educational Administration. The MA degree requires the completion of a thesis. Students enrolled in the Masters Degree program are interested in both K–12 and higher education administration.

The majority of students interested in K–12 education intend to satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, at either the standard or professional level, with administrative endorsements that will qualify them for employment as administrators in K–12 school systems. Students interested in higher education administration have the opportunity to pursue specializations in student affairs or human resource development or complete a general higher education program.

Doctoral degree programs

There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency.

Certificates of Specialization

In addition to masters and doctoral degrees, the department offers four certificates of specialization. Individuals who already have a Masters Degree in education can pursue a certificate endorsement program that will satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, a requirement for employment as an administrator in a K–12 school system.

The Certificate of Specialization in Educational Administration is designed to meet the requirements of a Nebraska Professional and Administrative Supervisory Certificate with an endorsement of superintendent.

The School Improvement Certificate Program that focuses on the K–12 school improvement process. The School Improvement Program benefits you—the teacher, by preparing you as a school leader while gaining the specialist credential, allowing you to increase your skills and build career opportunities.

The Community College Leadership Certificate is designed for those already employed in community colleges who aspire to administrative appointments as well as those who are in leadership positions and need or desire additional preparation.

Course Delivery

The Department of Educational Administration has been a campus leader in reaching out to students who need or wish to study from off campus and offers most of the course work for the MEd and EdD online. The primary emphasis in all courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of educational institutions.

Further information about graduate degree programs and about certification programs may be located on the department’s Website, located at cehs.unl.edu/edad.

Educational Psychology

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: R. J. De Ayala, Ph.D.
Graduate Committee Chair: Edward Daly, Ph.D.
Website: edpsyc.unl.edu
The Department of Educational Psychology consists of four program areas: counseling psychology; cognition, learning and development (CLD); quantitative, qualitative, and psychometric methods (QQPM); and school psychology.

Masters Degree
The master of arts (MA) degree may be obtained with a specialization in cognition, learning and development (CLD program), or with a concentration in counseling psychology, or research and psychometric methods (QQPM program). Individuals in the CLD program may select the general CLD specialization or an option in behavior health or in college learning center. 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, measurement, counseling psychology, and school psychology through the field of educational specialization called psychological studies in education. For further information, see and contact the chair of the Department’s Graduate Committee.

Counseling and School Psychology Clinic
The Counseling and School Psychology Clinic in the Department of Educational Psychology serves the dual function of (1) providing training for qualified graduate students and of (2) providing services to individuals, public schools, families, and community agencies. Clinic therapists assist adults, families, children and youth experiencing academic, psychological, and behavioral concerns. In addition to therapeutic services, clinic therapists provide psychological testing and consultation for school related concerns. Therapeutic services are also provided for educational and vocational concerns. Service is provided by appointment.

Buros Center for Testing
The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practices. Founded by Oscar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evaluations of commercially available tests. In addition to its international reputation for providing test reviews, BIMM maintains the largest collection of tests and testing materials in the world. The Buros Institute for Assessment Consultation and Outreach (BIACO) was established in 1994 to expand the range of available assessment services to proprietary testing programs that include credentialing, state educational assessment, employment testing, and assessment literacy. Together, the two Buros Institutes advance the goals of the Department of Educational Psychology and the College of Education and Human Sciences by providing consultation and instructional services to graduate programs, by training and supporting graduate students in current assessment practices, and by serving assessment outreach needs both within and outside the state of Nebraska.

Special Education and Communication Disorders
For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders)

Department Chair: Sherri Jones, Ph.D.
Graduate Committee Chair: Karen Hux, Ph.D.
The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech–language pathology and the master of arts and master of education degrees in special education. The department administers a PhD in human sciences with a specialization in communication disorders and the PhD or EdD in educational studies with a specialization in special education. The department also offers the professional doctor of audiology (AuD) degree in audiology and a combined AuD/PhD Program. For more information on doctoral programs, please call (402) 472–2141 or visit our website at www.unl.edu/barkley.

Masters Degree Programs.
Students seeking admission into a masters program should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Graduate Secretary at special@unl.edu. Three letters of recommendation, preferably from former college instructors, should be submitted to the departmental Graduate Governance Committee Chair along with the departmental application. Each applicant should also arrange to have a current academic transcript and scores for the General Test of the Graduate Record Examination submitted to the Graduate Studies Office at the University of Nebraska–Lincoln. Early submission of the scores is important because the application file cannot be given consideration until the file is complete.

For a master of science degree in speech–language pathology, completion of an appropriate undergraduate or pre–professional program is required for full graduate standing. Students with strong potential but without an academic background in the major may be admitted on a provisional basis until deficiencies have been met. Completion of the masters degree requires a minimum of 48 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure. The application deadline for full admission into the M.S. program in Speech–Speech Pathology is January 15.

Teacher Certification (licensure) and the Masters Degree.
Masters degrees may be obtained with teaching certificate endorsements for special education and speech–language pathology. Candidates must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.

Distance Education.
The Department has several special education masters degrees, an educational specialist degree, and/or teaching endorsement programs that are available in part or fully through distance education. These include Early Childhood Special Education, Deaf and Hard of Hearing, Mild/Moderate Disabilities, Visual Impairments, Autism, Severe Disabilities, and Supervisor of Special Education (joint with Educational Administration) programs. Distance courses are delivered via the Internet with Blackboard and/or Breeze software. Some distance courses also require some weekend meetings, telephone or Breeze connections to the on–campus course section, and may have scheduled participation requirements. Field experience and practicum courses can be arranged in near or local communities but may require special fees. Where required courses are not currently available via distance delivery, an equivalent course (either on–campus or at a distance) from another institution can be substituted with the approval of the advisor or may be taken on the UNL campus during the summer. See the department website for information about computer requirements for distance on–line courses and distance course availability.

Educational Specialist (EdS) Degree.
This program in special education provides opportunity for practitioners in the field to upgrade their skills and/or develop leadership skills as a special educator in a particular area of specialization. Two years successful professional experience as a special educator is a minimum requirement for admission. A minimum of 66 credit hours past the bachelors degree is required, with at least 24 credits to be taken after admission to UNL’s EdS program. These include at least 40 hours of core content courses, 6 credits of electives or practica, and 3 credits of research. Relevant coursework completed as part of a prior masters degree can be used toward this degree. The program also requires a written comprehensive examination. Degree requirements can be used for additional teaching endorsements. Other relevant information and the application form can be found online at: www.unl.edu/barkley/sped/eds.shtml.

Doctor of Audiology (AuD) Degree.
The Department of Special Education and Communication Disorders offers a professional audiology degree, the Doctor of Audiology (AuD) degree. The AuD program is a four–year course of study post B.A. or B.S. designed to provide students with academic and clinical practicum experiences that will meet or exceed the requirements of the American Speech–Language–Hearing Association (ASHA) for the Certificate of Clinical Competence in Audiology (CCC–AUD) as well as licensure requirements in most states.

Students seeking admission to the AuD program should download the application from www.unl.edu/barkley. Three letters of recommendation, preferably from former college instructors, should be submitted to the AuD program coordinator along with the departmental application. Students do not apply to the Office of
Graduate Studies and submission of the Graduate Record Examination is not required for admission. Students should contact the Graduate Support Staff at special@unl.edu for further application instructions.

PhD/EdD 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. Students seeking admission into one of these programs should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Support Staff at special@unl.edu. Prospective students 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 departmental 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 an applicant meets the qualifications for entrance into the program and whether a student’s interests are in accord with the type of education and direction the department faculty can provide. Final review of an application is made by the appropriate doctoral field graduate committee in special education or communications disorders.

Teaching, Learning and Teacher Education

For a brief description of the program, application requirements and contact information, view the graduate program summary.  
[http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation)

Interim Department Chair: L. James Walter, Ph.D.
Graduate Committee Chair: Kathleen Wilson, Ph.D.

The Department of Teaching, Learning and Teacher Education (TLTE) provides masters, specialist and doctoral degree courses and programs for teachers, administrators, and other educational leaders and practitioners with a focus on scholarship and practice in curriculum and instruction in schools and non-school educational settings. Graduate endorsements are also offered in Reading Specialist K–12 and ESL.

Masters Degrees.

The aim of the TLTE masters program is to help educators build on their own experience, achieve a broad and deep understanding of educational practice, develop a professional identity, and engage in informed conversations about important teaching and learning issues towards making wise judgments regarding the many complex issues educators face. All candidates must complete a program which conforms to the requirements listed on the TLTE masters program [http://cehs.unl.edu/tlte/graduate/master.shtml](http://cehs.unl.edu/tlte/graduate/master.shtml) web page. There are two masters degrees available in TLTE: the MA and MEd. Both degree programs offer a good deal of flexibility to enable the student—in concert with a faculty adviser—to develop a course of study that meets the student’s needs and interests.

If you are interested in earning teacher certification at the elementary level in combination with a master degree, a 14 month full time program (MAet) is available. If instead you see yourself teaching at the middle school or high school level with a specialization in science or mathematics, read about our newest 14 month full time programs (MAmt and MAst) where you can qualify for teacher certification and earn a Master of Arts degree. A limited number of fellowships are available with the MAst and MAmt programs.

Educational Specialist (EdS) Degree.

This program in curriculum and instruction provides an opportunity for practitioners in the field to upgrade their professional skills. Two years of successful professional experiences is a minimum requirement for admission. Sixty-six hours beyond the bachelors degree, research competence, practicum experiences, and a written comprehensive examination are basic requirements for the program. It is recommended that you contact the department Graduate Chair before applying.

Doctoral Programs.

The EdD and PhD degrees are available under the major heading Educational Studies refer to the web page [doctoral programs in education](http://cehs.unl.edu/tlte/graduate/doctoral.shtml). The EdD is recommended for those whose primary interest is in the application of theory and knowledge to improve educational practice. The PhD is designed for students seeking to conduct research in order to generate new knowledge or reform educational theory. The Department of Teaching, Learning and Teacher Education administers three doctoral–level specializations, available for both the EdD and PhD in Educational Studies. Teaching, Curriculum and Learning focuses on teaching and learning processes; Instructional Technology focuses on using technology as a learning tool in various educational settings; and Internet–based Education focuses on using the Internet as a platform for teaching and learning. The most current information on these specializations is kept up–to–date on the web page for TLTE doctoral programs.  
[http://cehs.unl.edu/tlte/graduate/doctoral.shtml#tcl](http://cehs.unl.edu/tlte/graduate/doctoral.shtml#tcl)

For additional information, see or of this bulletin. The Graduate Record Examination (GRE) is required for admission to the doctoral programs and foreign students must also submit a TOEFL score.

Faculty

Educational Administration

For faculty list, research interests and department contact information, view the graduate program summary.  
[http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration)

Educational Psychology

For faculty list, research interests and department contact information, view the graduate program summary.  
[http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology)

Special Education and Communication Disorders

For faculty list, research interests and department contact information, view the graduate program summary.  
[http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders](http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders)

Teaching, Learning and Teacher Education

For faculty list, research interests and department contact information, view the graduate program summary.  
[http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation)

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Education

Subject Areas

- Education (EDUC) (#EDUC)
- Education and Human Sciences (CEHS) (#CEHS)
- Educational Administration (EDAD) (#EDAD)
- Educational Psychology (EDPS) (#EDPS)
- Special Education (SPED) (#SPED)
- Speech–Language Pathology and Audiology (SLPA) (#SLPA)
- Teaching, Learning and Teacher Education (TEAC) (#TEAC)
### Courses for EDUC (EDUC)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 892</td>
<td>Special Topics in Education</td>
<td>EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/892">Link</a></td>
</tr>
</tbody>
</table>

**Prereqs:**
- [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or parallel; [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or equivalent

- Aspects of education not covered elsewhere in the curriculum.

### Courses for CEHS (CEHS)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEHS 467/867</td>
<td>International Cultures Experience in the Local Community</td>
<td><a href="http://bulletin.unl.edu/courses/CEHS/467">Link</a></td>
</tr>
</tbody>
</table>

**Lecture and discussion will be required as part of the field discussion.**

**Field hours will be assigned at the rate of three hours per week.**

- An international cultural experience in the local community by providing field-based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.

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<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Link</th>
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</thead>
<tbody>
<tr>
<td>CEHS 494/894</td>
<td>International Experience in Communities, Schools, and Families</td>
<td><a href="http://bulletin.unl.edu/courses/CEHS/494">Link</a></td>
</tr>
</tbody>
</table>

**Lecture and discussion will be required as part of the field experience.**

**Field hours will be assigned at the rate of two hours per week per student credit hour.**

- Instructor-guided experiences of a culture in another nation in order to critically examine individual and cross-cultural differences in values, lifestyles, education, history and culture of international families, schools, and communities.

### Courses for EDAD (EDAD)

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Link</th>
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</thead>
<tbody>
<tr>
<td>EDAD 421/821</td>
<td>Foundations of Human Resource Development</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/421">Link</a></td>
</tr>
</tbody>
</table>

- Lays the foundation for further study of Human Resource Development (HRD) by examining the knowledge of HRD professionals, the roles they play, and the organizational settings in which HRD occurs. The design and development of education and training programs, how change occurs in organizations, how career development can optimize the match between individual and organizational goals and needs, and how to improve performance in organizations by analyzing performance opportunities and designing employee training to address these opportunities.

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<thead>
<tr>
<th>Code</th>
<th>Course Title</th>
<th>Link</th>
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</thead>
<tbody>
<tr>
<td>EDAD 422</td>
<td>Instructional Design in Human Resource Development</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/422">Link</a></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
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<tr>
<td>422/822</td>
<td>Examines the role of instruction for enhancing human learning and performance in organizations. The analysis of performance problems/opportunities and design of interventions for learning and performance improvement. The essential components of instruction, selecting 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.</td>
<td>3</td>
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<tr>
<td>EDAD 801</td>
<td>Cross-Cultural Leadership Studies</td>
<td>3</td>
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<tr>
<td></td>
<td>For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their 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 through the comparison of cultural viewpoints. Native American understanding of leadership.</td>
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<tr>
<td>EDAD 811</td>
<td>Practicum in Educational Administration and Supervision</td>
<td>3-4</td>
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<tr>
<td></td>
<td>May be repeated for credit. Rating and supervision of teachers; principles and procedures in the development of school policies; selection and promotion of teachers; courses of study and professional ethics.</td>
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<tr>
<td>EDAD 813</td>
<td>Administration in Physical Education and Athletics</td>
<td>3</td>
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<tr>
<td></td>
<td>Organization and administration of physical education and athletic programs in colleges and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.</td>
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<tr>
<td>EDAD 814</td>
<td>Risk Management for Sport Facilities</td>
<td>3</td>
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<tr>
<td></td>
<td>Legal and risk management aspects of construction, supervision, and management of sport, athletic, and recreation indoor and outdoor facilities.</td>
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<tr>
<td>EDAD 830</td>
<td>Administrative Theory in Educational Organizations</td>
<td>3</td>
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<tr>
<td></td>
<td>Introduction to classic and contemporary administrative theory as applied to educational organizations. The theoretical nature of the course content is relevant to those with an interest in a broad variety of educational institutions. General organizational theory, organizational models, historical</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>EDAD 833</td>
<td>Educational Finance</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/833">Link</a></td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>EDAD 835</td>
<td>Business Management of Schools</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/835">Link</a></td>
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<tr>
<td></td>
<td>Allocation and management of fiscal resources including aspects of financial planning and reporting, budgeting and accounting procedures, purchasing, risk management and insurance, investing and bond issues, and auxiliary service.</td>
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<tr>
<td>EDAD 836</td>
<td>Planning for Change</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/836">Link</a></td>
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<td></td>
<td>Rationale for planning in a changing environment will be explored; the theoretical base for planning presented; strategic, futuristic planning and operational planning explored; the development of planning strategies, techniques and procedures; the process of evaluation, feedback and revisions explored; and the management of the change process analyzed.</td>
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<tr>
<td>EDAD 837</td>
<td>Education Law</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/837">Link</a></td>
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<tr>
<td></td>
<td>Evolution, principles, and practice of education law in relation to local, state, and national units of organization. Education law of Nebraska.</td>
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<tr>
<td>EDAD 838</td>
<td>Educational Surveys</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/838">Link</a></td>
</tr>
<tr>
<td></td>
<td>School systems and its educational program in terms of needs of attendance area served. Organization and interpretation of pertinent data and formulation of recommendations for improvement of educational systems. Long-range planning.</td>
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<tr>
<td>EDAD 839</td>
<td>Educational Facilities</td>
<td><a href="http://bulletin.un.edu/courses/EDAD/839">Link</a></td>
</tr>
<tr>
<td></td>
<td>Techniques for planning educational facilities through use of surveys, educational specifications, and standards. Function of the school administrator in school facilities planning, construction, and utilization.</td>
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<tr>
<td>EDAD</td>
<td>College Students in America</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/842">Link</a></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
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<tr>
<td>842</td>
<td>This course is designed to provide students an understanding of a broad range of facts and issues pertaining to undergraduate college students in America.</td>
<td>3</td>
</tr>
<tr>
<td>EDAD 843</td>
<td><strong>Counseling Principles for Educational Administrators</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>This is an introductory level counseling course designed specifically for educational administrators. It is not intended to prepare individuals to become professional counseling practitioners. It offers a broad overview of counsel principles. This is a theory-to-practice course.</td>
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<tr>
<td>EDAD 851</td>
<td><strong>Faculty and Staff Appraisal</strong></td>
<td>3</td>
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<tr>
<td></td>
<td>Faculty and support staff in P–12 schools: appraisal, professional learning communities, high standards/high performance and accountability.</td>
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<tr>
<td>EDAD 852</td>
<td><strong>School Culture and Student Behavior</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>School culture and student behavior in P–12 schools. Personalized teaching and learning environments that address student diversity, needs and interests.</td>
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<tr>
<td>EDAD 855</td>
<td><strong>Teaching Learners to Learn</strong></td>
<td>3</td>
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<td>Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855</td>
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<tr>
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<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
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<tr>
<td>EDAD 856</td>
<td><strong>Supervising Special Education</strong></td>
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<td>Crosslisted as SPED 856</td>
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<td></td>
<td>For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.</td>
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<tr>
<td>EDAD 857</td>
<td><strong>Special Education Administration</strong></td>
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<td>Crosslisted as SPED 857</td>
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</table>
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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

**EDAD 858**  
**Special Education Law**  
Crosslisted as *SPED 858*  
[LINK](http://bulletin.unl.edu/courses/EDAD/858)

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 states and school districts that are grounded in state and federal law.

**EDAD 870**  
**Constitutional Law I**  
Crosslisted as *LAW 609G*  
[LINK](http://bulletin.unl.edu/courses/EDAD/870)

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.

**EDAD 871**  
**Constitutional Law II**  
Crosslisted as *LAW 732G*  
[LINK](http://bulletin.unl.edu/courses/EDAD/871)

Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom of speech, association, and press; and constitutional principles enforcing the first amendment’s command that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.”

**EDAD 872**  
**Introduction to Law, Legal Process, and Legislation**  
[LINK](http://bulletin.unl.edu/courses/EDAD/872)

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.

**EDAD 874**  
**Torts I**  
Crosslisted as *LAW 503G*  
[LINK](http://bulletin.unl.edu/courses/EDAD/874)

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

**EDAD 875**  
**Torts II**  
[LINK](http://bulletin.unl.edu/courses/EDAD/875)

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests.
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.

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<td>EDAD 880B</td>
<td>Designing Instructional Technology K–12</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/880B">LINK</a></td>
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<td>Workshops Seminar</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/890">LINK</a></td>
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<td>Workshops Seminar</td>
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<td>Independent Study</td>
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<td>Masters Thesis</td>
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<td>System-Level School Improvement</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/901">LINK</a></td>
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<td></td>
<td>Data for Action Planning</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/902">LINK</a></td>
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<td>EDAD 902</td>
<td>Issues in Community Relations</td>
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<td>Prereqs: EDAD 901 (<a href="http://bulletin.unl.edu/courses/EDAD/901">http://bulletin.unl.edu/courses/EDAD/901</a>).</td>
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<td>EDAD 902 (<a href="http://bulletin.unl.edu/courses/EDAD/902">http://bulletin.unl.edu/courses/EDAD/902</a>) requires developing an initial school improvement plan.</td>
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<td>Assessment theory and types of assessments used to measure student performance relative to a school improvement goal. Relationships between profile data and baseline data, locally developed classroom assessments, and post data pertaining to school improvement goals and action plans.</td>
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<td>EDAD 903</td>
<td>Issues in Community Relations</td>
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<td>This course is a prerequisite for EDAD 904 (<a href="http://bulletin.unl.edu/courses/EDAD/904">http://bulletin.unl.edu/courses/EDAD/904</a>).</td>
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<td>Principles of community relations and public relations; development of school and community understanding; collaboration of educators and community agents and agencies; communication tools and evaluation.</td>
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<tr>
<td>EDAD 904</td>
<td>Analysis in Continuous Improvement</td>
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<td>Prereqs: EDAD 903 (<a href="http://bulletin.unl.edu/courses/EDAD/903">http://bulletin.unl.edu/courses/EDAD/903</a>).</td>
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<td>EDAD 904 (<a href="http://bulletin.unl.edu/courses/EDAD/904">http://bulletin.unl.edu/courses/EDAD/904</a>) requires generating recommendations for proceeding into the next cycle of school improvement and conducting a personal self-analysis of improvement process skills and obtain information from supervisors and/or colleagues regarding abilities as a</td>
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<td>Analyze how staff attitudes and behaviors are impacted through the improvement process.</td>
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<tr>
<td>EDAD 905</td>
<td>Issues in Governance of Educational Institutions</td>
<td>1–3</td>
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<tr>
<td></td>
<td>Issues in the governance of K–12 schools including administrator–school board roles and relationships.</td>
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<tr>
<td>EDAD 906</td>
<td>Issues in System Level Administration</td>
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<td>Prereqs: Masters degree or equivalent.</td>
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<td>Selected system level issues faced by pre-K to grade 12 school administrators.</td>
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<tr>
<td>EDAD 907</td>
<td>Issues in Educational Politics and Policies</td>
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</tbody>
</table>
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 institutional structures with competing interests; understand people as the actors in roles they occupy in the political system.

**Seminar in Adult and Continuing Education**  
EDAD 908/929  
Crosslisted as EDPS 929  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
LINK (http://bulletin.unl.edu/courses/EDAD/908)

**Seminar in Human Resource Development**  
EDAD 909  
Prereqs: EDAD 821 (http://bulletin.unl.edu/courses/EDAD/821) or 822 (http://bulletin.unl.edu/courses/EDAD/822)  
Credit Hours: 1-3  
Campus:  
Course Delivery: Classroom  
LINK (http://bulletin.unl.edu/courses/EDAD/909)

**The Higher Education Environment**  
EDAD 910  
Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutions. Environment concepts, components and structures are studied together with analysis techniques and methodological approaches to future study.  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
LINK (http://bulletin.unl.edu/courses/EDAD/910)

**Educational Leadership in Higher Education**  
EDAD 912A  
Strategic thinking, application of leadership theories in the educational setting. Develop a clear personal philosophy of leadership and engage in collaborative active-learning. Multi-media simulations and/or scenarios and role playing to examine options, consequences, and leadership effectiveness in decision-making.  
Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom  
LINK (http://bulletin.unl.edu/courses/EDAD/912A)

**Educational Leadership in Community Colleges**  
EDAD 912B  
Issues facing community college leaders and the knowledge, skills, and competencies necessary to provide effective leadership in the community college setting. Case studies of community colleges, combined with the literature on community college leadership, and active learning opportunities to examine current practices and develop a personal philosophy of leadership.  
Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom  
LINK (http://bulletin.unl.edu/courses/EDAD/912B)

**Administrative Issues in Higher Education**  
EDAD 921  
Credit Hours:  
Campus:  
Course Delivery:  
LINK (http://bulletin.unl.edu/courses/EDAD/921)
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<tr>
<td>921</td>
<td>Introduction to contemporary issues in the administration of higher education with a focus on the scholarly literature, a comparative analysis of administration in types of institutions, leadership and planning, institutional and environmental issues, and selected topics.</td>
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<td>3</td>
<td>Lecture</td>
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<tr>
<td>EDAD 922</td>
<td>Finance in Higher Education</td>
<td>Federal and state government funding, institutional planning, technological and community influences, human resources finance, budgeting, and sources of financial support as they relate to higher education institutions and agencies.</td>
<td>3</td>
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<td>EDAD 923</td>
<td>The Community/Junior College</td>
<td>Designed particularly for those interested in upper secondary and college levels. Junior college movement; relationship of movement to provisions 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.</td>
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<td>Lecture</td>
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<tr>
<td>EDAD 924</td>
<td>Administration of Higher Education Instructional Programs</td>
<td>Administration of higher education instructional programs. Exploration of curricular issues including an assessment of program quality and reputation, program reallocations, retrenchments, and expansions.</td>
<td>3</td>
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<td>EDAD 925</td>
<td>Law and Higher Education</td>
<td>Examination of legal principles applicable to higher education institutions. Overview of the legal system, higher education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights and responsibilities, institutional and personal liability, and other selected issues.</td>
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<td>Lecture</td>
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<tr>
<td>EDAD 926</td>
<td>The American Professoriate: An Administrative Perspective</td>
<td>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.</td>
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<tr>
<td>EDAD</td>
<td>Higher Education Information Systems</td>
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</table>
Foundation in management information systems. Issues in information systems, current research and writings, key terms, and how information systems impacts organizational culture, business processes, work-flow, and overall operations of an institution. The roles in the application, analysis, and management of higher education administration technology.

**EDAD 932**  
Global Issues in Higher Education  
[Link](http://bulletin.unl.edu/courses/EDAD/932)

Selected issues affecting global educational policies and practices.

**EDAD 933**  
Strategic Planning  
[Link](http://bulletin.unl.edu/courses/EDAD/933)

EDAD 933 requires the student to analyze their respective institution's planning process and plan, and to participate in a simulation activity that reinforces the principles and practices of strategic planning.


**EDAD 934**  
Teaching and Learning in the Community College  
[Link](http://bulletin.unl.edu/courses/EDAD/934)

Develop comprehensive understanding of five aspects of the community college: Curricular missions in general education, transfer education, career education, remedial/developmental education and community education; faculty and student populations; exemplary teaching and assessment of student learning outcomes; program and curriculum development; and human resources aspects related to instructional programs in hiring faculty and providing faculty development programs.

**EDAD 935**  
Workforce, Economic, and Community Development  
[Link](http://bulletin.unl.edu/courses/EDAD/935)

Workforce, economic and community development role of higher education within the broader context of recent economic, social, and technological changes in communities, society, and the economy. Applicable to higher education in general with an emphasis on the example of two-year community colleges.

**EDAD 948**  
Instructional Leadership: Emerging Trends and Practices  
Crosslisted as TEAC 948  
[Link](http://bulletin.unl.edu/courses/EDAD/948)

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along
<table>
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<td>EDAD 956</td>
<td>Employment Law Seminar</td>
<td>LAW 759G</td>
<td>Credit Hours: 1-4, Campus: Classroom, Course Delivery: Classroom</td>
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<td>Selected current national and state legal issues pertaining to private and public employment.</td>
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<td>EDAD 959</td>
<td>Law and Educational Administration</td>
<td>LAW 695G</td>
<td>Credit Hours: 1-4, Campus: Classroom, Course Delivery: Classroom</td>
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<td>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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.</td>
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<td>EDAD 960</td>
<td>Public Employment Law</td>
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<td>Legal issues relating to public employment with particular emphasis on public schools and colleges; collective bargaining by public employees, impasse, and 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, wage and hour laws, retirement plans, and public records.</td>
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<td>EDAD 961</td>
<td>Trial Advocacy</td>
<td>LAW 646G</td>
<td>Credit Hours: 1-4, Campus: Classroom, Course Delivery: Classroom</td>
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<td>Prereqs: LAW 646G. Students perform weekly exercises which are videotaped and critiqued and will try a case. Fundamentals of trial practice. Emphasis on questioning witnesses, selecting and addressing the jury, and admitting items into evidence.</td>
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<td>EDAD 963</td>
<td>Legislation Seminar</td>
<td>LAW 777G</td>
<td>Credit Hours: 1-4, Campus: Classroom, Course Delivery: Classroom</td>
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<td>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.</td>
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<td>EDAD 964</td>
<td>Local Government Law</td>
<td>LAW 788G</td>
<td>Credit Hours: 1-4, Campus: Classroom, Course Delivery: Classroom</td>
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<td>964</td>
<td>Law of local government units with emphasis on current problems in the operation and administration of local government.</td>
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<td>EDAD 966</td>
<td>Seminar in Educational Administration</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/966">http://bulletin.unl.edu/courses/EDAD/966</a>)</td>
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<td>Prereqs: Permission</td>
<td>Education administration problems with an analysis of research and literature pertaining to these problems.</td>
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<td>EDAD 968</td>
<td>Education Law Seminar</td>
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<td>Crosslisted as LAW 621G</td>
<td>Selected current national and state legal issues pertaining to education.</td>
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<td>EDAD 970</td>
<td>Criminal Law</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/970">http://bulletin.unl.edu/courses/EDAD/970</a>)</td>
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<td>Crosslisted as LAW 508G</td>
<td>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.</td>
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<td>EDAD 971</td>
<td>Evidence</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/971">http://bulletin.unl.edu/courses/EDAD/971</a>)</td>
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<td>Crosslisted as LAW 646G</td>
<td>Relevancy and admission of evidence, including hearsay, opinions, privileges, other exclusionary rules, examination of witnesses, judicial notice, and physical evidence.</td>
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<td>EDAD 973</td>
<td>Jurisprudence</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/973">http://bulletin.unl.edu/courses/EDAD/973</a>)</td>
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<td>Crosslisted as LAW 672G</td>
<td>What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.</td>
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<td>EDAD 976</td>
<td>Legal Control of Discrimination</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDAD/976">http://bulletin.unl.edu/courses/EDAD/976</a>)</td>
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<td>Crosslisted as LAW 680G</td>
<td>Selected legal issues pertaining to the legal control of discrimination.</td>
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<td>EDAD 977</td>
<td><strong>Constitutional History</strong></td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/977">Link</a></td>
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<tr>
<td>Crosslisted as LAW 619/619G</td>
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<tr>
<td>Credit Hours: 1–4</td>
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<tr>
<td>Course Format: Lecture</td>
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<tr>
<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>American constitutional history with a focus on &quot;transformative&quot; moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.</td>
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<table>
<thead>
<tr>
<th>EDAD 978</th>
<th><strong>Mass Communications Law</strong></th>
<th><a href="http://bulletin.unl.edu/courses/EDAD/978">Link</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Crosslisted as LAW 649G</td>
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<tr>
<td>Credit Hours: 1–4</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.</td>
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</tbody>
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<thead>
<tr>
<th>EDAD 979</th>
<th><strong>Seminar in College Student Personnel Work</strong></th>
<th><a href="http://bulletin.unl.edu/courses/EDAD/979">Link</a></th>
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</thead>
<tbody>
<tr>
<td>Crosslisted as EDPS 979</td>
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</tr>
<tr>
<td>Credit Hours: 2–3</td>
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<tr>
<td>Max credits per degree: 6</td>
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<tr>
<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>Current professional issues 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.</td>
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<table>
<thead>
<tr>
<th>EDAD 981</th>
<th><strong>Introduction to Research</strong></th>
<th><a href="http://bulletin.unl.edu/courses/EDAD/981">Link</a></th>
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</thead>
<tbody>
<tr>
<td>Credit Hours: 1–6</td>
<td></td>
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<td>Campus:</td>
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<td></td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>A written report is required. Investigation and analysis of current problems in education administration and supervision.</td>
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</table>

<table>
<thead>
<tr>
<th>EDAD 988</th>
<th><strong>Dissertation Proposal Development</strong></th>
<th><a href="http://bulletin.unl.edu/courses/EDAD/988">Link</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prereqs: Admission to a doctoral program</td>
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<tr>
<td>Credit Hours: 3</td>
<td></td>
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<tr>
<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>Intended for students who are working on the development of their dissertation proposal. Component parts of the dissertation proposal. Students from all areas of Teachers College and the University of Nebraska who are in the process of developing their proposal will find this course to be of use. Typically the course should be taken after the research tools have been completed.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>EDAD 989</th>
<th><strong>Survey of Administrative Research</strong></th>
<th><a href="http://bulletin.unl.edu/courses/EDAD/989">Link</a></th>
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<tbody>
<tr>
<td>Credit Hours: 3</td>
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<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery: Classroom</td>
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</tr>
<tr>
<td>Intended primarily for students of education who are candidates for doctoral degrees. Readings, discussions, and an analysis of educational problems and research.</td>
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</tbody>
</table>
Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Field Studies in Education

Crosslisted as NUTR 991, TEAC 991

Prereqs:
Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Doctoral Seminar

Prereqs:
Permission

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. Intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

Seminar: Internship in Educational Administration

Prereqs:
Permission

Opportunity for educational administrators to gain an understanding of administering changes or innovations, and to obtain supervised field experience. Consideration will be given antecedents of change, change models, the role of government, forces that restrict or stimulate change, tools to implement change, and evaluation.

Doctoral Dissertation

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1-24
Max credits per degree: 55
Campus: Classroom

Course Delivery: Classroom
### Historical Methods in Educational Research

**Course Code:** EDPS 900J  
**Crosslisted as:** EDAD 900J  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:**  
- EDPS 800 or equivalent; EDPS 459  
- EDPS 859 or equivalent  

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

### Seminar in College Student Development

**Course Code:** EDPS 977  
**Crosslisted as:** EDAD 980  
**Credit Hours:** 2-3  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom  
**Special field experiences and research projects are available to students for additional credit.**  

Current knowledge, theories, and practices, and related issues in the area of college student development.

### Special Topics in Education

**Course Code:** SPED 892  
**Crosslisted as:** EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892  
**Credit Hours:** 1-3  
**Max credits per degree:** 12  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:**  
- EDPS 859 or equivalent  

Aspects of education not covered elsewhere in the curriculum.

### Coordination in Occupational Training Programs

**Course Code:** TEAC 425/825  
**Crosslisted as:** EDAD 825  
**Credit Hours:** 1-3  
**Course Delivery:** Classroom  

Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.

### Courses for EDPS (EDPS)

### Pro-seminar in Latin American Studies

**Course Code:** ANTH 478/878  
**Crosslisted as:** HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878  
**Credit Hours:** 3  
**Max credits per degree:** 6  
**Course Delivery:** Classroom  
**Groups:** Integrative Courses, Research and Reading  

Junior standing and permission.  

Topical seminar required for all Latin American Studies majors.  

An interdisciplinary analysis of topical issues in Latin American Studies.
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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

Current professional issues 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.

Mental, social, and emotional development of boys and girls during the adolescent period.

Cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.

Computation and interpretation of measures of central position, variability, and correlation; introduction to sampling, probability, and tests of significance.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>URL</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 462</td>
<td>Psychology of Disability</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/462">LINK</a></td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>EDPS 463</td>
<td>Introduction to Applied Behavior Analysis</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/463">LINK</a></td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>EDPS 465</td>
<td>Practices in Counseling and Personnel Services</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/465">LINK</a></td>
<td>1-8</td>
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<td>Classroom</td>
</tr>
<tr>
<td>EDPS 469</td>
<td>Psychopathological Disorders of Childhood and Adolescence</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/469">LINK</a></td>
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<td>Classroom</td>
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<tr>
<td>EDPS 470</td>
<td>Introduction to Educational and Psychological Measurement</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/470">LINK</a></td>
<td>3</td>
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<tr>
<td>EDPS 496</td>
<td>Directed Field Experience</td>
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</table>

**Psychology of Disability**
Research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.

**Introduction to Applied Behavior Analysis**
This course is a prerequisite for EDPS 954.
Research methods and findings, concepts, and principles of operant conditioning as related to the experimental analysis of human behavioral events and to the development of behavior engineering technologies.

**Practices in Counseling and Personnel Services**
Basic practices and related research in counseling and helping practices in educational or other youth-serving agencies. Specialized applications to populations presenting unique problems are offered in sections B through L.

- **B. Special Practices for Handicapped Children and Youth (1 cr)** Prereq or parallel: EDPS 465A [LINK](http://bulletin.unl.edu/courses/EDPS/465A) / 865A [LINK](http://bulletin.unl.edu/courses/EDPS/865A)

- **D. Special Practices for Exceptionally Talented and Gifted (1 cr)** Prereq or parallel: EDPS 465A [LINK](http://bulletin.unl.edu/courses/EDPS/465A) / 865A [LINK](http://bulletin.unl.edu/courses/EDPS/865A)

- **E. Special Practices in the Elementary School (1 cr)** Prereq or parallel: EDPS 465A [LINK](http://bulletin.unl.edu/courses/EDPS/465A) / 865A [LINK](http://bulletin.unl.edu/courses/EDPS/865A)

- **K. Special Practices for Vocational Education/Development Programs (1 cr)** Prereq or parallel: EDPS 465A [LINK](http://bulletin.unl.edu/courses/EDPS/465A) / 865A [LINK](http://bulletin.unl.edu/courses/EDPS/865A)

**Psychopathological Disorders of Childhood and Adolescence**
Investigation of the genesis, course, classification, and treatment of function and organic pathologies found in children and adolescents.

**Introduction to Educational and Psychological Measurement**
Prereqs:
EDPS 459 [LINK](http://bulletin.unl.edu/courses/EDPS/459) / 859 [LINK](http://bulletin.unl.edu/courses/EDPS/859) or equivalent.
Introduction to the construction, 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>496/896</td>
<td>Special Topics</td>
<td>1-24</td>
<td>Permission</td>
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<tr>
<td>498/898</td>
<td>Special Topics</td>
<td>1-6</td>
<td>Permission</td>
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<tr>
<td>EDPS 498/898</td>
<td><strong>Special Topics</strong></td>
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<tr>
<td></td>
<td>Seminar on current issues or topics in educational psychology. Topics vary.</td>
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<tr>
<td>800</td>
<td>Foundations of Educational Research</td>
<td>3</td>
<td>EDPS 459/859</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Purposes 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.</td>
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<tr>
<td>845</td>
<td>Computer-Assisted Research Data Analysis</td>
<td>3</td>
<td>One statistics course beyond EDPS 859</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Statistical software packages for both mainframe and microcomputers. How to develop and manage data files; how to transfer data files between computers; and principles of data transformation and selection.</td>
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<tr>
<td>846</td>
<td>Foundations of Health Behavior</td>
<td>3</td>
<td>EDPS 859</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education.</td>
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<tr>
<td>847</td>
<td>Theoretical Models of Health Behavior Change</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks.</td>
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<tr>
<td>850</td>
<td>Child Psychology</td>
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</table>
850
This course is a prerequisite for: EDPS 960, EDPS 961, EDPS 962, EDPS 963, EDPS 963
Advanced study of the behavior and development of preschool and elementary school children.

853
Psychological Assessment I
Prereqs:
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.

860
Applications of Selected Advanced Statistics
Prereqs:
EDPS 859
Variety of parametric and nonparametric 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. Appropriate mainframe and microcomputer statistical packages utilized to assist in the numerical analysis of data.

866
Counseling Pre-Practicum
Counseling skills required for basic, entry-level clinical work. Practicing skills, receiving peer/instructor performance feedback, and role-playing clinical situations.

867
Roles and Functions in School Psychological Services
Foundations, models, and practices of contemporary school psychology and an exploration of transitions and future developments in the profession. Investigations of the major legal and ethical systems affecting specialists in the schools and the application of standards for ethical professional practice.

868
Multicultural Counseling
### EDPS 890: Workshop Seminar

**Prereqs:**
- EDPS *866 or comparable course or permission

Ethnic subcultures in the US, cross-cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity in the counseling relationship.

**Course Delivery:** Classroom

**Credit Hours:** 3

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

### EDPS 893: Workshop Seminar

**Prereqs:**
- Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Course Delivery:** Classroom

**Credit Hours:** 1–12

**Max credits per degree:** 12

### EDPS 897J: Gifted/Talented

**Prereqs:**
- Admission to masters degree program and permission of major adviser

**Course Delivery:** Classroom

### EDPS 899: Masters Thesis

**Prereqs:**
- Admission to masters degree program

**Course Delivery:** Classroom

### EDPS 900A: Correlational and Experimental Methods in Educational Research

**Prereqs:**
- EDPS 459 or equivalent; EDPS *800 or equivalent

Integrated view of correlational and experimental research in education and social sciences. Builds on idea of relationships among variables and concept of casual relationships between variables. Possible research designs in light of these general principles.

**Course Format:** Lecture 3

**Course Delivery:** Classroom

### EDPS 900B: Single Case/Small N Methods in Educational Research

**Prereqs:**
- Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Course Delivery:** Classroom
General issues related to the use of single case and/or small N methods, in which individuals are observed over time before and subsequent to experimental intervention. Comparison to traditional experimental methods. Repeated measurement techniques. Various research designs appropriate to single case methods.

Survey Methods in Educational Research

Prereqs: EDPS 459 or equivalent; EDPS *800 or equivalent

Principles and applications of survey research. Use of appropriate sampling techniques and applications of survey methods to the study of relative incidence, distribution, and interrelations of educational, sociological, and psychological variables.

Historical Methods in Educational Research

Crosslisted as EDAD 900J

Prereqs: EDPS *800 or equivalent; EDPS 459 or equivalent

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

Qualitative Approaches to Educational Research

Prereqs: EDPS 459 or equivalent; EDPS *800 or equivalent

Uses of qualitative research methods in education. The theoretical premises of research using qualitative methods and the application of this information through critique and planning research. Qualitative methods for data collection.

Research and Evaluation Literature on Health Promotion

Crosslisted as NUTR 905

Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care–based health promotion and education programs.

Seminar in Qualitative Research

Crosslisted as TEAC 935
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDUC 900K</td>
<td>Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.</td>
<td>3</td>
<td>EDUC 900K (<a href="http://bulletin.unl.edu/courses/EDUC/900K">http://bulletin.unl.edu/courses/EDUC/900K</a>) or permission</td>
<td>Classroom</td>
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<tr>
<td>EDPS 936</td>
<td>Mixed Methods Research</td>
<td>3</td>
<td>EDPS 800 (<a href="http://bulletin.unl.edu/courses/EDPS/800">http://bulletin.unl.edu/courses/EDPS/800</a>) or equivalent, and EDUC 900K (<a href="http://bulletin.unl.edu/courses/EDUC/900K">http://bulletin.unl.edu/courses/EDUC/900K</a>)</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>EDPS 941</td>
<td>Intermediate Statistics: Experimental Methods</td>
<td>3</td>
<td>EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>)</td>
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<tr>
<td>EDPS 942</td>
<td>Intermediate Statistics: Correlational Methods</td>
<td>3</td>
<td>EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
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<tr>
<td>EDPS 948</td>
<td>Multicultural Issues in School Psychological Service Delivery</td>
<td>3</td>
<td></td>
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<tr>
<td>EDPS 949</td>
<td>Cognitive and Behavioral Therapy with Children and Adolescents</td>
<td>3</td>
<td>Permission</td>
<td>Classroom</td>
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</tbody>
</table>
Cognitive and behavioral techniques. Theoretical issues, application and evaluation of major empirically-validated therapeutic treatments that represent best practices in child and adolescent therapy.

**Intellectual Assessment**

**EDPS 950**

**Prereqs:**
- EDPS 859
- EDPS 870, and permission

This course is a prerequisite for: EDPS 951

**Credit Hours:** 1-4
**Campus:**
**Course Delivery:** Classroom

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.

**Academic and Behavioral Assessment**

**EDPS 951**

**Prereqs:**
- EDPS 950
- EDPS 859, 870, and permission

This course is a prerequisite for: EDPS 954

**Credit Hours:** 1-4
**Campus:**
**Course Delivery:** Classroom

Advanced study of the theory and practice in the assessment of educational and psychological problems of children and youth to include assessment of systems that impact on the behavior of children and youth. Assessment techniques include environmental observation, interviewing, standardized assessment procedures for academic skills, adaptive behavior, social and emotional problems, curriculum based assessment, and functional analysis and assessment. Ecological-behavioral basis of assessment is explored. A complete psychological and educational evaluation is conducted in a school or other relevant setting.

**Systems of Consultation in School Psychology**

**EDPS 952**

**Prereqs:**
- EDPS 863

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

Intensive analysis of the theory and practice of various systems of mental health consultation in the schools with special emphasis and practicum with mental health service models other than conventional clinical, psychometric, and direct psychoeducational remediation models.

**Psychological Assessment II**

**EDPS 953**

**Prereqs:**
- EDPS 853 or equivalent

**Credit Hours:** 4
**Campus:**
**Course Delivery:** Classroom

Advanced assessment and testing skills. Selection, administration and interpretation of a battery of psychological tests and integration and synthesis of relevant test and non-test data into an accessible report writing format. Development of effective consultation and test interpretation feedback skills.

**Interventions in School Psychology**

**EDPS 954**

**Credit Hours:**
**Campus:**
**Course Delivery:** Classroom
954

**Prereqs:**
EDPS 463, EDPS 863, EDPS 951, or parallel; and permission

Prepares school psychologists to plan and provide evidence-based psychoeducational interventions for children, youth, families and schools. Application of ecobehavioral theory, models of school mental health, the scientist-practitioner model, the practice of psychotherapy, and empirical evidence of the effectiveness of interventions for culturally and linguistically diverse students.

955

**Child Therapy**

**Prereqs:**
EDPS 949

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

**Projective Psychological Assessment**

**Prereqs:**
EDPS 853 and EDPS 953. Permission may be granted by Instructor to take Psychological Assessment II after Projective Psychological Assessment.

The primary goal of this course is to assist doctoral students in developing their ability to utilize projective assessment techniques to integrate information from a variety of sources about a person (an adult or older adolescent) into an integrated, useful psychological report. The broad array of data will include not only the results of formal tests (e.g., the Rorschach), but also personal and family history, and behavioral observations.

958B

**Practicum in School Psychology Consultation Techniques**

**Prereqs:**
EDPS 863, EDPS 952, 997D or equivalent, and permission

Practicum experience in ecological/behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/feedback sessions each week.

960

**Problem Solving and Concept Learning in Humans**
Critical examination of the non-Piagetian research literature and theory which examines higher mental processes in humans through the lifespan.

EDPS 961  
Cognitive Development  LINK (http://bulletin.unl.edu/courses/EDPS/961)

Prereqs:  
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851 (http://bulletin.unl.edu/courses/EDPS/851) and 854 (http://bulletin.unl.edu/courses/EDPS/854)

Critical examination of theories and research on cognitive development throughout the lifespan, including Piagetian and alternative perspectives.

EDPS 962  
Research Literature in Personality and Social Development  LINK (http://bulletin.unl.edu/courses/EDPS/962)

Prereqs:  
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851 (http://bulletin.unl.edu/courses/EDPS/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.

EDPS 963  
Developmental Psychobiology  LINK (http://bulletin.unl.edu/courses/EDPS/963)

Prereqs:  
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851 (http://bulletin.unl.edu/courses/EDPS/851) and permission

Biological foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.

EDPS 964  
Counseling Theories and Intervention Techniques  LINK (http://bulletin.unl.edu/courses/EDPS/964)

Prereqs:  
EDPS *866

Parallel: EDPS 997A (http://bulletin.unl.edu/courses/EDPS/997A) and permission of counseling area. Overview of theoretical approaches to counseling. Close examination of selected theories and intervention procedures.

EDPS 965A  
Group Counseling: Social Psychological Aspects  LINK (http://bulletin.unl.edu/courses/EDPS/965A)

Prereqs:  
EDPS *866

Parallel: EDPS 964 (http://bulletin.unl.edu/courses/EDPS/964) and 997A (http://bulletin.unl.edu/courses/EDPS/997A) Develops student competencies in analyzing organizational contexts, designing group counseling experiences, and evaluating group experiences.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Course Description</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPS 966</td>
<td>Psychology of Learning</td>
<td>EDPS 854 and 870</td>
<td>Theories of learning and experimental investigation in the field of animal and human behavior and their application to the classroom.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 967</td>
<td>Psychology of Motivation in Education</td>
<td>Graduate standing EDPS 854</td>
<td>Psychology of Motivation focuses on understanding and impacting students’ motivation to learn. Theories discussed in this class are applicable to a wide array of achievement settings (e.g., math, science, writing, health education) as well as more general motivational concerns (e.g., studying, addiction, video games). Content covered includes drive theory, behaviorism as motivation, achievement motivation, goal theory, self-determination theory, social cognitive theory, and ecological theories of motivation.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 968</td>
<td>Gender and Counseling Psychology</td>
<td>Admitted as a graduate student in the Counseling Psychology program.</td>
<td>The major purpose of this course is for students to learn about gender issues within the field of counseling psychology from a multicultural and feminist perspective and to gain the essential knowledge and techniques in working with gender issues in diverse settings.</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
</tr>
<tr>
<td>EDPS 969</td>
<td>Nonparametric Statistical Methods</td>
<td>EDPS 859 or equivalent</td>
<td>Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi Square tests, rank tests of location (Wilcoxon, Mann Whitney, Kruskal-Wallis, Friedman), tests of goodness of fit (Chi Square, Kolmogorov-Smirnoff), tests of randomness (Runs).</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 97</td>
<td>College Major Forum</td>
<td>EDPS 973B, EDPS 978, EDPS 97</td>
<td>This course is a prerequisite for EDPS 973B, EDPS 978. EDPS 97 (EDPS 97) is Pass/No Pass only. This is an eight week seminar course for first semester students in the General Studies Learning Community. Students will complete activities to identify interests, research majors that match their interests and complete a</td>
<td>0</td>
<td></td>
<td>Lecture</td>
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Guided Professional Shadowing experience to gain first-hand knowledge about a career of their choice.

**EDPS 970**
Theory and Methods of Educational Measurement  
Crosslisted as SRAM 970

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<th>Credit Hours:</th>
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<td>Campus:</td>
<td>Classroom</td>
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**Prereqs:**
EDPS 859 [Crosslisted as SRAM 859](http://bulletin.unl.edu/courses/EDPS/859) and 870 [Crosslisted as SRAM 870](http://bulletin.unl.edu/courses/EDPS/870); EDPS/ SRAM 941 [Crosslisted as SRAM 941](http://bulletin.unl.edu/courses/EDPS/941); or equivalent

Presentation of various measurement theories and concepts, including classical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion-referenced tests.

**EDPS 971**
Structural Equation Modeling  
Crosslisted as SRAM 971

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<th>Credit Hours:</th>
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<td>Campus:</td>
<td>Classroom</td>
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**Prereqs:**
EDPS/SRAM 942 [Crosslisted as SRAM 942](http://bulletin.unl.edu/courses/SRAM/942) and 970 [Crosslisted as SRAM 970](http://bulletin.unl.edu/courses/SRAM/970); or equivalent

Introduction to the techniques of path analysis, confirmatory factor analysis, and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

**EDPS 972**
Multivariate Analysis  
Crosslisted as SRAM 972

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<th>Credit Hours:</th>
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**Prereqs:**
EDPS/ SRAM 941 [Crosslisted as SRAM 941](http://bulletin.unl.edu/courses/SRAM/941) and 942 [Crosslisted as SRAM 942](http://bulletin.unl.edu/courses/SRAM/942)

Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

**EDPS 973A**
Evaluation Theory and Practice

This course is a prerequisite for: [EDPS 973B](http://bulletin.unl.edu/courses/EDPS/973B)

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<th>Credit Hours:</th>
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<td>Course Format:</td>
<td>Lecture</td>
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<td>Campus:</td>
<td>Classroom</td>
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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.

**EDPS 973B**
Evaluation Practicum

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<tr>
<th>Credit Hours:</th>
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<td>Campus:</td>
<td>Classroom</td>
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</table>

Actual supervised evaluation of a program or project.
Guidance and Counseling in Schools


Occupations and Vocational Psychology

Evaluation and uses of occupational and educational information; job analysis; psychological and behavioral attributes relating to work and life-styles; occupational taxonomies; career-development theories; impact of accelerating changes on personal and social planning; investigations of value-oriented expectations as sources of work satisfaction and dissatisfaction; critical assessment of the concept of vocational choice. For counselors and educators.

Advanced Counseling Psychology I: Counseling Theory and Practice

Prereqs:
Doctoral level counseling students and others by permission

This course is a prerequisite for: EDPS 978

Counseling methodology in relationship to personality theory and research. Consideration of various theories and research in relation to counseling practice.

Seminar in College Student Development

Crosslisted as EDAD 980

Special field experiences and research projects are available to students for additional credit.

Current knowledge, theories, and practices, and related issues in the area of college student development.

Advanced Counseling Psychology II: Research in Counseling

Prereqs:
EDPS 976; EDUC 900A and either EDUC 9008 or 900K

Research strategies appropriate for counseling psychology. Identification of researchable problem and completion of research proposal including literature review, design, and proposed data analysis procedures.

Item Response Theory

Prereqs:

Credit Hours: 3
Max credits per degree: 6

Course Delivery: Classroom
Principles of item response theory (IRT) and its application to a variety of issues in educational and psychological measurement. Theoretical foundations of IRT discussed along with its assumptions and varied applications. Experience using IRT calibration and scoring computer software.

**EDPS 870**

**Prereqs:**
by permission of course instructor

**Course Delivery:**
Classroom

**School Practice in School Psychology**

Supervised practice in local school districts related to academic, social, behavioral and emotional disorders of children and adolescents.

**EDPS 970**

**Prereqs:**
by permission of course instructor

**Course Delivery:**
Classroom

**Clinical Practice in School Psychology**

Supervised clinical practice related to academic, social, behavioral and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasized.

**EDPS 982**

**Prereqs:**
Doctoral standing in professional psychology program and permission

**Course Delivery:**
Classroom

**Community Practice in School Psychology**

Supervised clinical experience working with children, adolescents and families in a variety of school and community settings.

**EDPS 983**

**Ethical principles in the practice of counseling. Application of ethical guidelines and development of ethical decision-making models relevant to school and mental health contents.**

**EDPS 984**

**Couple and Family Counseling**

**Prereqs:**
EDPS *866 or equivalent
Couple and family systems and change strategies. Active, brief forms of couple and family counseling and enrichment formats.

**EDPS 987 Developmental Perspectives on Gender and Sexuality in Counseling**


**EDPS 989 Psychology of Reading**

Crosslisted as TEAC 989

Prereqs: TEAC *811 or 841 or SPED 886

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

**EDPS 990 Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**EDPS 991 Seminar in Educational Psychology and Measurements**

Prereqs: Permission

**EDPS 993 Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**EDPS 995 Doctoral Seminar**

Prereqs: Permission

EDPS 995 is intended primarily for EDPS doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor. Students are
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.

**EDPS 996A**

**Research Other Than Thesis**

Independent operational research under faculty supervision.

- **Credit Hours:** 1–12
- **Max credits per degree:** 12
- **Campus:**
- **Course Delivery:** Classroom

**EDPS 996B**

**Readings in Educational Psychology**

Prereqs:
- Permission

Readings on selected problems in educational psychology.

- **Credit Hours:** 1–12
- **Max credits per degree:** 12
- **Campus:**
- **Course Delivery:** Classroom

**EDPS 997A**

**Practicum in Counseling**

Prereqs:
- Masters admission in educational psychology or permission of counseling area, EDPS *866*

This course is a prerequisite for: EDPS 997B [](http://bulletin.unl.edu/courses/EDPS/997B), EDPS 997G [](http://bulletin.unl.edu/courses/EDPS/997G)


- **Credit Hours:** 2–4
- **Campus:**
- **Course Delivery:** Classroom

**EDPS 997B**

**Field Placement in Counseling**

Prereqs:
- EDPS 997A [](http://bulletin.unl.edu/courses/EDPS/997A)

Supervised field experiences in school counseling, college student personnel, and community social service agencies.

- **Credit Hours:** 2–4
- **Campus:**
- **Course Delivery:** Classroom

**EDPS 997D**

**Practicum in Behavior Management Technologies**

Prereqs:
- EDPS 863 [](http://bulletin.unl.edu/courses/EDPS/863) and permission

Supervised practicum in the design, implementation, evaluation, and reporting of various behavior modification technologies for individuals and groups; social systems engineering.

- **Credit Hours:** 3
- **Max credits per degree:** 6
- **Campus:**
- **Course Delivery:** Classroom

**EDPS 997E**

**Practicum in Counselor Supervision and Consultation**

- **Credit Hours:**
- **Max credits per degree:**
- **Campus:**
- **Course Delivery:** Classroom
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per semester</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Prereqs Details</th>
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<tbody>
<tr>
<td>997E</td>
<td>Advanced Practicum in Counseling</td>
<td>EDPS 997G or equivalent</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Classroom</td>
<td>Supervised counseling supervision and consultation experience emphasizing process methods and evaluation.</td>
</tr>
<tr>
<td>997G</td>
<td>997G Advanced Practicum in Counseling</td>
<td>EDPS 997A and permission</td>
<td>2-4</td>
<td></td>
<td></td>
<td></td>
<td>Classroom</td>
<td>This course is a prerequisite for EDPS 997E.</td>
</tr>
<tr>
<td>997J</td>
<td>Advanced Practicum in Gifted Education</td>
<td>Permission</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>Classroom</td>
<td>Supervised counseling experience in university, schools, and community agencies.</td>
</tr>
<tr>
<td>997K</td>
<td>Supervision in School Psychology</td>
<td>Doctoral standing in professional psychology program and permission.</td>
<td>3-4</td>
<td>8</td>
<td>8</td>
<td>Field, Lab, Lecture</td>
<td>Classroom</td>
<td>Supervised experience in supervising graduate students in practicum settings. Refinement of consultation, assessment, diagnosis, and treatment skills.</td>
</tr>
<tr>
<td>999</td>
<td>Doctoral Dissertation</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>1-24</td>
<td>55</td>
<td></td>
<td></td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>471/871</td>
<td>Human Sexuality and Society</td>
<td>Junior standing and 12 hrs in one of the departments in which the course is listed.</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>Classroom</td>
<td>Open to advanced students planning careers in the professions in which</td>
</tr>
</tbody>
</table>
knowledge of human behavior and society is important (e.g., helping professions, medicine, law, ministry, education, etc.).

Interdisciplinary approach to the study of human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.

**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

Prereqs: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel; EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Sociological/Anthropological Research Methods in Education**

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.

A. Ethnographic Methods (1–3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
D. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
E. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
J. Hermeneutic Traditions in Education (1–3 cr, max 3)
K. Quantitative Research Traditions in Education (1–3 cr, max 3)

**Courses for SPED (SPED)**

**Teaching Learners to Learn**

Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

**Supervising Special Education**

Crosslisted as SPED 856

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

**Special Education Administration**

Crosslisted as SPED 857
857

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

EDAD 858

Special Education Law
Crosslisted as SPED 858

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 states and school districts that are grounded in state and federal law.

EDPS 997J

Advanced Practicum in Gifted Education
Crosslisted as SPED 997J

Prereqs: Permission

Advanced practicum in the education of the gifted/talented child. Psychodiagnostic procedures; theory and research; and program organization, operation, and evaluation in a field setting.

SLPA 884

Speech and Language Development of the Hearing Impaired
Crosslisted as SPED 884

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 skills.

SLPA 956

Language Study of Teachers of Deaf and Hard of Hearing (DHH)
Crosslisted as SPED 956


SPED 400/800

Characteristics of Exceptional Persons

This course is a prerequisite for SPED 406, SPED 406A, SPED 809, SPED 843.

Etiology, growth and development, and characteristics of children and youth who deviate from the norm.
### Accommodating Exceptional Learners in the Elementary School Classroom

**Course:** 401A/801A  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** Admission to the Teacher Education Program; EDPS 362; TEAC 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.

### Accommodating Exceptional Learners in the Secondary School Classroom

**Course:** 401B/801B  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** Admission to the Teacher Education Program; EDPS 362; TEAC 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.

### Code-based Reading Instruction

**Course:** 405/805  
**Credit Hours:** 1–3  
**Max credits per semester:** 6  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Prereqs:** Permission.  

This course is a prerequisite for: SPED 405/805  

Direct, systematic, multi-sensory techniques for teaching reading, writing and spelling to students who have severe reading problems.

### Reading Center Practicum I

**Course:** 405A/805A  
**Credit Hours:** 1–3  
**Max credits per semester:** 3  
**Course Format:** Field  
**Course Delivery:** Classroom  
**Prereqs:** Permission.  

This course is a prerequisite for: SPED 405/805  

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, lesson planning and teaching using direct instruction, code-based instructional strategies.

### Reading and Writing Disabilities: Adolescents

**Course:** 406/806  
**Credit Hours:** 2  
**Prereqs:** Crosslisted as TEAC 806  

Crosslisted as TEAC 806
Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

Information about the mildly/moderately disabled secondary-level student; including characteristics, assessment, models for programs, social skill training, behavior management, working with parents, and curriculum modification.

Issues in secondary education for students with mild disabilities based on current literature and needs of individual students.
### Instructional Methods for Students with Diverse Needs

**Link:** [SPED 414](http://bulletin.unl.edu/courses/SPED/414)

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom, Web

**Prereqs:**  
Sophomore standing; SPED 201 ([link](http://bulletin.unl.edu/courses/SPED/201)) and SPED 303 ([link](http://bulletin.unl.edu/courses/SPED/303)).

This course is a prerequisite for: SPED 415 ([link](http://bulletin.unl.edu/courses/SPED/415)).

Instructional methods and accommodations for special education and general education teachers necessary to work successfully with students with disabilities or who are at-risk for academic failure. Curriculum modification, classroom management, strategy instruction, and instructional modifications for content areas.

### Reading and Writing Disabilities: Elementary Students

**Link:** [SPED 415](http://bulletin.unl.edu/courses/SPED/415)

**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom

**Prereqs:**  
SPED 201 ([link](http://bulletin.unl.edu/courses/SPED/201)), TEAC 311 ([link](http://bulletin.unl.edu/courses/TEAC/311)), TEAC 313 ([link](http://bulletin.unl.edu/courses/TEAC/313)) for elementary education majors; SPED 201 ([link](http://bulletin.unl.edu/courses/SPED/201)), SPED 412 ([link](http://bulletin.unl.edu/courses/SPED/412)), and SPED 414 ([link](http://bulletin.unl.edu/courses/SPED/414)) (or equivalent) for SPED majors. Must be taken with: SPED 415A ([link](http://bulletin.unl.edu/courses/SPED/415A))/815A ([link](http://bulletin.unl.edu/courses/SPED/815A)).

This course is a prerequisite for: SPED 415 ([link](http://bulletin.unl.edu/courses/SPED/415)).

Theory and techniques for assessing and teaching early literacy skills in small groups and one-on-one for children who struggle with literacy.

### Career Education for the Special Needs Student

**Link:** [SPED 436](http://bulletin.unl.edu/courses/SPED/436)

**Credit Hours:** 3  
**Course Delivery:** Classroom

**Prereqs:**  
SPED 434 ([link](http://bulletin.unl.edu/courses/SPED/434))/834 or permission.

Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject areas.
### Medically Fragile infants

**Prereqs:**
- Major in Special Education, Speech-language Pathology or Child Youth and Family Studies. Senior status or permission of instructor.

Unique needs, family-coping strategies, specialized medical staff and various health care settings for chronically ill infants, toddlers and preschool age children. Overview of etiology, characteristics and developmental implications of selected medical conditions related to developmental disabilities.

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<th>Credit Hours:</th>
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<td>Course Format:</td>
<td>Lecture</td>
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<td>Course Delivery:</td>
<td>Web</td>
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### Psychology and Sociology of Deafness

Education of the hearing impaired including history of, professional roles in, and educational programming within this field. Social/psychological theories as related to the hearing impaired. Patterns of social/emotional development, psychological characteristics, issues of family stress and social adaptation and discussion of counseling techniques.

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### Educating Students with Intellectual Impairments & Developmental Disabilities

This course is a prerequisite for: [SPED 881](http://bulletin.unl.edu/courses/SPED/881)

Concepts related to history, definitions, identification, etiology, and assessment of students with intellectual impairments and developmental disabilities. Examine attitudes, assumptions, and stereotypes concerning persons with intellectual impairments and other developmental disabilities. Instructional methods, adaptations and teaming to provide individualized interventions and include students in least restrictive environments/general education settings. Applied assignments will be conducted in field experience and student teaching.

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<td>Course Delivery:</td>
<td>Classroom, Web</td>
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### Independent Study in Special Education

**Prereqs:**
- Prior arrangements with faculty member and permission.

Special research or reading project under direction of a staff member in the department.

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
<td>Classroom</td>
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### Directed Field Experience

**Prereqs:**
- Permission.

Pass/No Pass only for [SPED 496](http://bulletin.unl.edu/courses/SPED/496) section. [SPED 896](http://bulletin.unl.edu/courses/SPED/896) is graded.

E. Field Experience: General Special Education (1–6 cr, max 12) M. Field Experience: Mild/Moderate (1–6 cr, max 12) Y. Field Experience: Inclusion (1–6 cr, max 12)

### Directed Field Experience: Inclusion
**496Y/896Y**

**Prereqs:**
Permission.

Pass/No Pass only for SPED 496 (http://bulletin.unl.edu/courses/SPED/496) section. SPED 896 (http://bulletin.unl.edu/courses/SPED/896) is graded.

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**Advanced Assessment Techniques**

**Prereqs:**
SPED 800 (http://bulletin.unl.edu/courses/SPED/800) or equivalent; or permission

Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school resource personnel.

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**Effective Instruction for Learners with Special Needs**

**Prereqs:**
SPED 800 (http://bulletin.unl.edu/courses/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.

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**Managing Challenging Behavior**

**Prereqs:**
SPED 800 (http://bulletin.unl.edu/courses/SPED/800), *802, *803; or permission

Functional approaches that can be used by teachers and mental health practitioners for assessing, preventing, and managing children’s challenging behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

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**Autism Spectrum Disorders (ASDs): Effective Assessment and Intervention**

**Prereqs:**
SPED 400 (http://bulletin.unl.edu/courses/SPED/400) or equivalent

SPED 809 (http://bulletin.unl.edu/courses/SPED/809) requires observation in schools and applied assignments.

Designed for educators of children and youth with Autism Spectrum Disorders (ASDs) in school settings. Assessment strategies to identify characteristics of ASDs focused on individual needs and strengths-based outcomes. Knowledge and skills regarding evidence-based practices and individualized educational programs.
Autism Spectrum Disorders (ASDs): Methods and Program Planning

Prereqs:
SPED *809 or equivalent


Mathematics Instruction for Diverse Learners

Prereqs:
SPED 201 or 400 or 800

SPED *820 and associated practicum is designed to meet professional standards (i.e., Council for Exceptional Children, Teacher Education Accreditation Council) for teachers in the area of instruction for diverse learners.

Mathematical instruction for diverse learners within a response to intervention models and on mathematics instruction. Selection, delivery, and evaluation of standard protocol and individualized interventions to diverse learners.

Functional Behavioral Assessment

Prereqs:
SPED 303 or equivalent.

SPED 824 and associated practicum is a prerequisite for SPED 824A.

Functional behavioral assessments (FBAs) and development of behavior intervention plans (BIPs) based on the assessments. Contextual and curriculum manipulations, and replacement behavior training.

Practicum in Functional Behavioral Assessment

Prereqs:
SPED 303 or approved equivalent.

This course is a prerequisite for SPED 824.

Opportunities to engage in the activities and practice the skills associated with SPED 824. Culmination of the practicum is performing a complete functional behavioral assessment and developing a behavior intervention plan for a student who displays challenging behaviors.

Behavioral Systems and Interventions
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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SPED 833</td>
<td>Three-tier models for encouraging and maintaining students' appropriate behaviors. Evaluation and implementation of interventions at the school-wide, classroom and/or small group, and individual levels. Presentation of different models i.e., Response to Intervention (RtI) and School-Wide Positive Behavior Support (SWPBS).</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/813">SPED 813</a> or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 834</td>
<td>Introduction to Special Vocational Needs</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/834">Foundational course emphasizing the characteristics and identification of special needs learners in vocational settings. Determines needs, interests, and abilities of these students.</a></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 841</td>
<td>Emotional and Behavioral Disorders</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/841">Etiology, theories and assessment of child and adolescent emotional and behavioral disorders. Addresses issues of definitions and classification (DSM-IV and special education) or deviant behavior and psychopathology, as well as an overview of service delivery systems in education and mental health.</a></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 843</td>
<td>Characteristics of Emotional and Learning Disorders</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/843">Learning, academic, behavioral, social–emotional and language characteristics of students who are classified as having disabilities for purposes of special education. Definitions, classification systems, assessment and verification criteria, and medications for students with learning and emotional disabilities.</a></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 846</td>
<td>Foundations of Visual Impairment: Programs and Services for Individuals with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/846">Current educational programs and services for children with visual impairments, as well as children with multiple disabilities. History of educational services, developmental characteristics, psycho–social aspects, history of legislation, and grade I Braille.</a></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 847</td>
<td>Introduction to Eye Anatomy of Students with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/847">Introduction to Eye Anatomy of Students with Visual Impairments</a></td>
<td>3</td>
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<td>Classroom</td>
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</tbody>
</table>
### Braille Codes and Material Adaptations for Students with Visual Impairments

**SPED 849**

**Prereqs:**
SPED *846 or permission

Structure and function of the visual system, conditions that effect visual ability, and the functional and environmental implications of low vision. Strategies for enhancing visual ability in children with visual impairments and children who have additional disabilities.

**Prereqs:**
SPED *846 and *847, or permission

Basic skills in literary Braille transcription and codes. Acquire competence in reading and writing Braille and using the Perkins braillewriter and slate/stylus.

### Intermediate Braille Codes and Instructional Material Adaptations for Students with Visual Impairments

**SPED 851**

**Prereqs:**
SPED *846, *847, and *849

Advanced skills in Nemeth (mathematics code) and/or Literary code. Basic activities in braille formatting, foreign language, music and identification of braille technology devices and resources.

### Instructional Methods for Teachers of Students with Visual Impairments

**SPED 852**

**Prereqs:**
SPED *846, *847, *849, and *851

Methods and materials for educating children who are totally blind or have low vision, including students with multiple impairments. Practical skills in selecting, designing, and/or modifying materials for content area subjects: mathematics, science, social studies, creative arts, foreign language, and other subjects.

### Applied Technology Methods for Students with Visual Impairments

**SPED 852A**

**Prereqs:**
SPED *846 and *847, or equivalents

Theory and skill development in the selection and use of technology for students with visual impairments. Technology assessments, data collection, equipment feature, source of equipment, funding sources, writing technology instructional plans, and demonstration of using various equipment and technology.

### Applied Instructional Methods to Teach Students with Visual Impairments

**SPED 852B**

**Prereqs:**
SPED *846, *847, *849, *851, and *852; or equivalents

Practice using appropriate instructional methods and materials for educating...
Orientation and Mobility Skills for Students with Visual Impairments

Prereqs:
SPED *846, *847, *849, *851, and *852

Theory and applied practice in basic orientation and mobility techniques for use with students with visual impairments. Practical methods for work in concept development, orientation skills, travel skills and techniques, personal safety and independent travel. Needs of specific populations such as people with low vision and individuals with additional disabilities. Vision simulators and occluders. An introduction to the history and development of the profession.

Issues in Early Childhood Special Education

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, transitions, service delivery systems, teamwork and assessment for young children.

Infants with Disabilities and Home Visiting

Prereqs:
SPED 960 and permission.

Assessment and intervention strategies for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, and transdisciplinary services.

Preschool Children with Disabilities in a Classroom

Prereqs:
An assessment and behavior management course; and permission.

Selection, design and implementation of developmentally appropriate, activity-based interventions for preschool-age children with disabilities. Ecological assessments. Instructional factors, such as classroom environments, activity planning, selection, use and modification of strategies, home-school communications, and consulting to staff in inclusive settings.

Teaching the Content Areas to the Hearing Impaired

SPED 873 is for all students in the hearing impaired program.

Methods for teaching content areas (science, math, and social studies) to hearing impaired students from preschool through grade 12. Adapting
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SPED 874</td>
<td><strong>Language Arts and Literacy for the Hearing Impaired</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPED/874">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Assessment instruments, curricula and instructional methods for developing language and literacy in classrooms for hearing impaired children, preschool through grade 12. Methods for coordinating speech and/or language and/or auditory training program in the classroom with that in the speech and/or language therapy program.</td>
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<tr>
<td>SPED 875</td>
<td><strong>Itinerant Teaching Methods for Students who are Deaf or Hard of Hearing</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPED/875">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>SPED 876</td>
<td><strong>Language Development for Teachers</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPED/876">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
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<td></td>
<td>Introduction to the foundations of normal speech and language development and potential difficulties in both early stages and in the classroom. Analysis of child language samples. Strategies for explaining language development to parents and professional colleagues.</td>
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<tr>
<td>SPED 881</td>
<td><strong>Methods for Students with Intellectual and Severe Disabilities</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPED/881">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Prereqs: SPED 480 (<a href="http://bulletin.unl.edu/courses/SPED/480">Link</a>/880)</td>
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<td>SPED 881 (<a href="http://bulletin.unl.edu/courses/SPED/881">Link</a>) requires observations in schools and applied assignments.</td>
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<td>Planning, implementing, and evaluating effective longitudinal education for individuals with intellectual impairments and severe disabilities. Knowledge and skills regarding best practices within inclusive education settings for these learners emphasizing an ecological and functional model that addresses useful skills in current and future environments.</td>
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<tr>
<td>SPED 882</td>
<td><strong>Specialized Instruction for Students with Severe and Multiple Disabilities</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPED/882">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Prereqs: SPED *881 for the Severely/Multihandicapped endorsement program or SPED *862 for Preschool Handicapped endorsement program; and permission. Majors in severe disabilities must parallel with SPED 896P (<a href="http://bulletin.unl.edu/courses/SPED/896P">Link</a> (1 cr).</td>
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<td></td>
<td>This course is a prerequisite for: SPED 881 (<a href="http://bulletin.unl.edu/courses/SPED/881">Link</a>)</td>
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<td>SPED *882 requires observations in schools and applied assignments.</td>
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<td></td>
<td>Selection, design, and implementation of best practice instruction for students with severe disabilities, multiple disabilities, or deaf–blindness.</td>
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<td>Course Code</td>
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<tr>
<td>SPED 886</td>
<td>Assessment, Evaluation, and Instruction of</td>
<td>This course is a prerequisite for EDPS 889 (<a href="http://bulletin.unl.edu/courses/EDPS/889">http://bulletin.unl.edu/courses/EDPS/889</a>)</td>
<td>1–3</td>
<td>6</td>
<td>Lecture</td>
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<td></td>
<td>Crosslisted as TEAC 886</td>
<td>TEAC/SPED *886 includes case study and planning for special student populations.</td>
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<td></td>
<td>Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.</td>
<td>A. Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.  B. Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)</td>
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<tr>
<td>SPED 890</td>
<td>Workshop Seminar</td>
<td>Refer to Workshop Seminars in Education under the &quot;Education&quot; section of this bulletin.</td>
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<tr>
<td>SPED 892</td>
<td>Special Topics in Education</td>
<td>Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892</td>
<td>1–3</td>
<td>12</td>
<td>Lecture</td>
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<td>Prereqs:</td>
<td>EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or parallel; EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
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<td>Aspects of education not covered elsewhere in the curriculum.</td>
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<td>SPED 893</td>
<td>Workshop Seminar</td>
<td>Refer to Workshop Seminars in Education under the &quot;Education&quot; section of this bulletin.</td>
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<tr>
<td>SPED 897</td>
<td>Student Teaching: Exceptional Learners</td>
<td>Prereqs: Permission</td>
<td>1–9</td>
<td>15</td>
<td>Classroom</td>
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<td></td>
<td>Laboratory and teaching experience in the area(s) of specialization.</td>
<td>A. Mainstream (1–12 cr)  B. Behavior Disorders  D. Deaf/Hand of Hearing  E. General Special Education  J. Gifted/Talented (EDPS *897J)  L. Learning Disabilities  M. Mildly/Moderate Disabilities  P. Severe Disabilities  Q. Early Childhood Special Education  V. Visual Impairments  Y. Inclusion  Z. Multicultural Education</td>
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<tr>
<td>SPED 899</td>
<td>Masters Thesis</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/SPED/899">http://bulletin.unl.edu/courses/SPED/899</a>)</td>
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<td>Course Code</td>
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<tr>
<td>SPED 899</td>
<td><strong>Seminar in Special Education</strong></td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>1–10</td>
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<td>Classroom</td>
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<tr>
<td>SPED 908</td>
<td><strong>Cognitive Strategy Instruction</strong></td>
<td>Preprereq: SPED 800, *803, and *831 or permission; and one of the following: *831, *851, *861, *881; or permission</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SPED 932</td>
<td><strong>Strategic Approaches for EBD</strong></td>
<td>Preprereq: SPED 800, *804, and *841; or permission</td>
<td>1–3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>SPED 942</td>
<td><strong>Family and School Collaboration in Special Education</strong></td>
<td>Preprereq: SPED 800, *804, and *841; or permission; and one of the following: *831, *851, *861, *881; or permission</td>
<td>1–3</td>
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<td>Classroom</td>
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</tbody>
</table>
**Assessment of Students with Severe, Sensory, and Developmental Disabilities**

*SPED 980*

**Prereqs:**
SPED *881* and *882*; and permission.

This course is a prerequisite for: [SPED 987E](http://bulletin.unl.edu/courses/SPED/987E).

- Designed to meet the needs of educators who conduct assessment of students with low incidence disabilities in school settings. Strategies emphasize assessing capabilities and needs in relationship to valued life outcomes. Processes of instructional outcomes. Some assessment conducted in schools and community settings. Learning outcomes individualized to match special education certification program.

**Functional Assessment and Behavioral Support for Students with Severe Developmental Disabilities**

*SPED 981*

**Prereqs:**
SPED 882 and permission. Majors in severe disabilities must parallel with SPED 896P (1 cr).

- Assessment and intervention strategies for developing positive behavior support for students with severe disabilities or developmental disabilities who have challenging behavior. Rationale and principles for using an educative approach, functional behavior analysis, and a variety of individualized ecological and curricular interventions. Process of assessment conducted in school settings.

**Seminar in Special Education**

*SPED 987E*

**Prereqs:**
SPED 980 and 981.

- Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Workshop Seminar**

*SPED 990*

- Refer to Workshop Seminars in Education under the “Education” section of this bulletin.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>SPED 995</td>
<td>Doctoral Seminar</td>
<td>Permission</td>
<td>3</td>
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<td>The course is intended primarily for doctoral</td>
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<td>students, although non-doctoral graduate</td>
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<td>graduate students may be admitted with special</td>
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<td>permission of the instructor. Students are</td>
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<td>immersed in outcome-based scholarly activities</td>
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<td>with a faculty mentor. Working on either a</td>
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<td>individualized or small group basis, students</td>
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<td>develop, execute and report one or more</td>
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<td>projects addressing the interaction between</td>
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<td>research and practice.</td>
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<tr>
<td>SPED 996A</td>
<td>Research Other Than Thesis</td>
<td>Permission</td>
<td>(1-12, max 12)</td>
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<td>(1-12, max 12) Independent operational research</td>
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<td>under faculty supervision.</td>
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<tr>
<td>SPED 996B</td>
<td>Readings in Special Education</td>
<td>Permission</td>
<td>(1-12, max 12)</td>
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<td>(1-12, max 12) Readings on selected problems in</td>
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<td>special education.</td>
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<td>SPED 997E</td>
<td>Resource Teacher Externship</td>
<td>SPED *802, *803</td>
<td>1-6</td>
<td>12</td>
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<td>Extensive practicum experience in school</td>
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<td>settings for individuals preparing to serve as</td>
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<td></td>
<td>school resource teachers and consultants.</td>
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<tr>
<td>SPED 999</td>
<td>Doctoral Dissertation</td>
<td>Admission to doctoral degree</td>
<td>1-24</td>
<td>55</td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>program and permission of supervisory committee</td>
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<td>chair</td>
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<tr>
<td>CYAF 891</td>
<td>Special Topics in Human Sciences</td>
<td></td>
<td>1-3</td>
<td>12</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Crosslisted as HUMS 891, NUTR 891, SLPA 891,</td>
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<tr>
<td></td>
<td>TEAC 891, TMFD 891</td>
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</tr>
<tr>
<td></td>
<td>Aspects of human sciences not covered elsewhere</td>
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<td></td>
<td>in the curriculum.</td>
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</tbody>
</table>
### Audiology for Educators of the Deaf or Hard of Hearing

<table>
<thead>
<tr>
<th>SLPA 450/850</th>
<th>LINK</th>
<th>5️⃣</th>
<th>3️⃣</th>
<th>UNO</th>
<th>3️⃣</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anatomy and physiology of hearing; components of adequate evaluation for placement and educational planning; diagnosis using audiogram, functional and communication assessment; stimulation and utilization of residual hearing; and management of assistive and/or augmentative devices.</strong></td>
<td>Credit Hours:  3️⃣</td>
<td>Course Format:  Lecture 3️⃣</td>
<td>Campus:  UNO</td>
<td>Course Delivery:  Web</td>
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</table>

### Normal Language Development During School Years

<table>
<thead>
<tr>
<th>SLPA 452/852</th>
<th>LINK</th>
<th>5️⃣</th>
<th>3️⃣</th>
<th>3️⃣</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Normal syntactic, semantic, and pragmatic language development in school-age children and youth. Complex syntax, semantic development, pragmatic development, using language to learn, language-literacy relations, and abstract language development.</strong></td>
<td>Credit Hours:  3️⃣</td>
<td>Course Delivery:  Classroom</td>
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</tr>
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</table>

### Research Methodology in Speech-Language Pathology and Audiology

<table>
<thead>
<tr>
<th>SLPA 454/854</th>
<th>3️⃣</th>
<th>3️⃣</th>
<th>3️⃣</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs: Speech-language pathology and audiology major. Introduction to research principles, methods, and design. Survey and critique of research in special education and communication disorders.</strong></td>
<td>Credit Hours:  3️⃣</td>
<td>Course Delivery:  Classroom</td>
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</table>

### Language Disorders: Preschool Level

<table>
<thead>
<tr>
<th>SLPA 461/861</th>
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</thead>
<tbody>
<tr>
<td><strong>Prereqs: Parallel SLPA 461L (<a href="http://bulletin.unl.edu/courses/SLPA/461L">http://bulletin.unl.edu/courses/SLPA/461L</a>) /861L (<a href="http://bulletin.unl.edu/courses/SLPA/861L">http://bulletin.unl.edu/courses/SLPA/861L</a>). This course is a prerequisite for: SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461">http://bulletin.unl.edu/courses/SLPA/461</a>). SLPA 461L (<a href="http://bulletin.unl.edu/courses/SLPA/461L">http://bulletin.unl.edu/courses/SLPA/461L</a>). Characteristics of language impaired preschool children and the nature of their disorders. Introduction to principles of assessment and treatment.</strong></td>
<td>Credit Hours:  3️⃣</td>
<td>Course Format:  Lecture 3️⃣</td>
<td>Course Delivery:  Classroom</td>
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</table>

### Language Disorders: Preschool Level Lab

<table>
<thead>
<tr>
<th>SLPA 461L/861L</th>
<th>1️⃣</th>
<th>1️⃣</th>
<th>1️⃣</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs: Parallel with SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461)/861">http://bulletin.unl.edu/courses/SLPA/461)/861</a> (<a href="http://bulletin.unl.edu/courses/SLPA/861">http://bulletin.unl.edu/courses/SLPA/861</a>). This course is a prerequisite for: SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461">http://bulletin.unl.edu/courses/SLPA/461</a>).</strong></td>
<td>Credit Hours:  1️⃣</td>
<td>Course Format:  Lab</td>
<td>Course Delivery:  Classroom</td>
</tr>
</tbody>
</table>

### Augmentative Communication

<table>
<thead>
<tr>
<th>SLPA 486/886</th>
<th>2️⃣</th>
<th>2️⃣</th>
<th>2️⃣</th>
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</thead>
<tbody>
<tr>
<td><strong>Speech pathology students must register for 3 cr only; special education students may rights for 2-3. Introduction to the augmentative communication options for persons unable to communicate.</strong></td>
<td>Credit Hours:  2️⃣</td>
<td>Course Delivery:  Classroom</td>
<td></td>
</tr>
</tbody>
</table>
to speak or write because of physical, language, or cognitive disability.

**Linguistic Needs of Bilingual and Culturally Different Students**

**SLPA 488/888**

**Prereqs:**
SLPA 250 (http://bulletin.unl.edu/courses/SLPA/250) and 251 (http://bulletin.unl.edu/courses/SLPA/251) or permission.

Theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicapping conditions, socio-economic status, and cultural-ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.

**Readings and Research in Speech–Language Pathology and Audiology**

**SLPA 496/896**

**Prereqs:**
Permission.

**Clinical Phonology: Assessment and Management**

**SLPA 851**

**Prereqs:**
SLPA 250 (http://bulletin.unl.edu/courses/SLPA/250) and 464 (http://bulletin.unl.edu/courses/SLPA/464) or permission

Theoretical foundations; applied clinical phonology.

**Neurological Foundations of Speech and Language**

**SLPA 853**

Basic concepts of neurology, protection and blood supply of the Central Nervous System (CNS), anatomical structures of the CNS, neuromotor control of speech, cranial nerves for speech production and neuron motor disorders.

**Language Disorders in Special Populations**

**SLPA 862**

Advanced information about language disorders, assessment, and intervention in various populations.
A. Birth to Three: Communication Assessment and Intervention
E. Preadolescents and Adolescents
J. Severe Disabilities and Autism: Communication Assessment and Intervention
K. Special Topics in Language Disorders

**Language Disorders in Elementary School–aged Population**

**SLPA 863**

Advanced information about language disorders, assessment, and intervention in elementary school-aged children.
### Voice Disorders

**Course Code:** SLPA 865  
**Credits:** 2  
**Campus:**  
**Course Delivery:** Classroom  

**Prereq:**  
[SLPA 455](http://bulletin.unl.edu/courses/SLPA/455)  

Etiology and symptoms of voice disorders, procedures used in clinical evaluation, and methods and procedures used in therapy.

### Speech and Language Development of the Hearing Impaired

**Course Code:** SLPA 884  
**Credits:** 3  
**Campus:**  
**Course Delivery:** Classroom  

Crosslisted as SPED 884  

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 skills.

### Fluency Disorders

**Course Code:** SLPA 885  
**Credits:** 3  
**Campus:**  
**Course Delivery:** Classroom  

Research related to the nature, diagnosis and clinical management of stuttering is considered. Therapy models are presented along with data bearing on the efficacy of particular approaches. Specific rehabilitation procedures.

### Language and Learning Disorders

**Course Code:** SLPA 887  
**Credits:** 3  
**Campus:**  
**Course Delivery:** Classroom  

Prereq:  
For non-SLPA majors only  

Review of prominent theories relating language to cognitive development and learning; student interaction on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classrooms to accommodate a child that has a language and learning disorder.

### Workshop Seminar

**Course Code:** SLPA 890  
**Credits:** 1  
**Campus:**  
**Course Delivery:** Classroom  

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Counseling and Behavior Issues in Speech Language Pathology

**Course Code:** SLPA 892  
**Credits:**  
**Course Format:** Lecture 1  
**Campus:**  

Basic skills in counseling and behavior management as applied to the field of communication disorders. Practical, direct application to students’ clinical work with individuals with a variety of communication disorders.
**Clinical Decision Making**

- **SLPA 893**
- **Course Delivery:** Classroom
- **Credit Hours:** 1
- **Course Format:** Lecture
- **Campus:**
- **Course Delivery:** Classroom

Critical Thinking skills necessary for decision-making during the assessment and treatment of individuals with communication disorders. Understanding and applying clinical processes related to the practice of speech-language pathology.

**Advanced Practicum**

- **SLPA 897**
- **Course Delivery:** Classroom
- **Credit Hours:** 1-3
- **Max credits per degree:** 6
- **Course Format:** Field
- **Campus:**
- **Course Delivery:** Classroom

Prereqs:
- Completion of the undergraduate preprofessional program

Supervised practicum experiences provided with difficult speech, language and/or hearing problems in a variety of clinical, medical, geriatric, rehabilitational and public school settings.

- A. Audiology (1-3 cr per sem)
- B. Speech/Language Pathology (1-3 cr per sem)
- E. Externship (1-3 cr per sem)
- G. Public Schools (1-3 cr per sem)
- T. Externship in Audiology (1-6 cr per sem, max 12)

**Special Topics in Speech Pathology and Audiology**

- **SLPA 898**
- **Prereqs:** Permission
- **Course Delivery:** Classroom
- **Credit Hours:** 1-24
- **Campus:**
- **Course Delivery:** Classroom

Special topics in speech pathology and audiology.

**Masters Thesis**

- **SLPA 899**
- **Prereqs:** Admission to masters degree program and permission of major adviser
- **Campus:**
- **Course Delivery:** Classroom
- **Credit Hours:** 1-10

**Advanced Clinical Evaluation**

- **SLPA 902**
- **Course Delivery:** Classroom
- **Credit Hours:** 3
- **Campus:**

Instruction and practice in understanding, applying, and interpreting advanced clinical tests. Understanding the use of differential diagnostic tests used in assessment of peripheral and central lesions.

**Basic Instrumentation**

- **SLPA 904**
- **Course Format:** Lab, Lecture
- **Campus:**
- **Credit Hours:** 3

Basic electrical theory and practical electronic information for the audiologist. Basic electrical and electronic information applicable to hearing, perception and acoustics. Basic electronics and electronic components, analog and digital circuits, transducers, calibration of audiometric.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SLPA 906</td>
<td>Advanced Clinical Assessment II</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SLPA 908</td>
<td>Physiological Acoustics</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Pneumatic/mechanical/hydraulic/electrical interfaces involved in the transduction of acoustic energy through the auditory system. Investigation of external ear biophysics, the middle ear transfer function, cochlear hydrodynamics and hydro–mechanics, and auditory biopotentials.</td>
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<tr>
<td>SLPA 910</td>
<td>Auditory Signal Processing</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SLPA 912</td>
<td>Psychoacoustics</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking level differences, psychoacoustical scaling, difference limen 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.</td>
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<tr>
<td>SLPA 916</td>
<td>Medical Aspects of Audiology</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Effects of, and principles of, medical management of disorders of the cochlea, retrocochlear region, and central auditory mechanism. Anatomy and physiology of the inner ear and central auditory pathways, function and physiology of the vestibule and labyrinth, and histology and biochemistry of the inner ear and ascending auditory tracts.</td>
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<tr>
<td>SLPA 918</td>
<td>Auditory Assessment of Infants and Children</td>
<td>3</td>
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<td>Classroom</td>
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</tbody>
</table>
Electrophysiological Assessment of Hearing

SLPA 920

Instrumentation and procedures for electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography, Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.

Pharmacology for Audiology

SLPA 922

Introduction to pharmacological chemistry, drugs, and drug interactions. Ototoxic drugs and other drugs frequently seen in patients in audiology practice settings.

Sensory Technology and Rehabilitation for the Hearing Impaired I

SLPA 924

Prereqs:
SLPA 271 (http://bulletin.unl.edu/courses/SLPA/271) or equivalent

Students will initiate and carry out directed laboratory assignments. Conventional analog hearing aids which includes: the design and operation of hearing aids, electroacoustic measurements and accompanying instrumentation, earmold and plumbing acoustics, evaluation and selection procedures (adults), orientation.

Sensory Technology and Rehabilitation for the Hearing Impaired II

SLPA 926

Prereqs:
SLPA 271 (http://bulletin.unl.edu/courses/SLPA/271) or equivalent

Students will be expected to engage in class presentations. Various assistive technologies, other than conventional analog hearing aids, utilized by persons who are deaf and hard of hearing. Technologies such as cochlear implants, tactile devices, radio frequency systems, digital hearing aids, and telephone, television and alerting devices. Information regarding pediatric amplification, counseling, and speechreading introduced.

Hearing Conservation and Industrial Audiology

SLPA 928

Theories and basic resources for participation in industrial, government, or community hearing conservation programs.
Genetics of Hearing Loss

The genetic basis for hearing loss.

Vestibular Assessment I

Students will initiate and carry out directed laboratory assignments.
The first of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Normal anatomy and physiology of the balance and ocular motor systems, contrasted with a wide range of pathological conditions. Electronystagmography (video–nystagmography two– and three–dimensional recordings) and assessment of the otolith organs.

Vestibular Assessment II

The second of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Advanced techniques for patient assessment using rotational chair and posturography protocols. Techniques for full assessment in an office situation without extensive equipment. Options for treatment and management of this group of patients. Vestibular and balance rehabilitation therapy program development.

Implantable Prosthetics

Design, operation, candidacy, assessment, surgical procedures, fitting, verification, and rehabilitation procedures related to implantable prosthetic devices for individuals who are deaf and hard of hearing. Cochlear implants, bone anchored hearing aids, implantable middle ear devices, and auditory brainstem implants.

Private Practice and/or Clinic Management

Principles and procedures for starting and surviving as an independent practitioner in audiology. Practice management strategies for use in any audiological setting.

Aural Rehabilitation Across the Lifespan

Habilitation (for pre–lingual deaf and hard of hearing infants and toddlers) and rehabilitation efforts for individuals of all ages who are deaf or hard of hearing.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SLPA 942</td>
<td>Seminar in Audiology</td>
<td>Research and clinical procedures; findings and implications in audiology and hearing science.</td>
<td>2</td>
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</tr>
<tr>
<td>SLPA 956</td>
<td>Language Study of Teachers of Deaf and Hard of Hearing (DHH) crosslisted as SPED 956</td>
<td>Theoretical and practical aspects of American Sign Language (ASL) structure. Issues relevant to the use of sign language in education, written English as a second language, classroom discourse, and educational interpreting. Sociolinguistic aspects of sign language among deaf and hearing individuals.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>SLPA 964</td>
<td>Speech Perception and Processing</td>
<td>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.</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SLPA 966</td>
<td>Swallowing Disorders</td>
<td>Swallowing disorders of children and adults. Procedures used in assessment, diagnosis, and intervention.</td>
<td>2</td>
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<tr>
<td>SLPA 967</td>
<td>Cleft Palate</td>
<td>Communication, dental, medical, and associated problems related to cleft palate.</td>
<td>2</td>
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<tr>
<td>SLPA 968</td>
<td>Motor Speech Disorders</td>
<td>Motor speech disorders resulting from neuropathology of the central and peripheral nervous systems as found in cerebral palsy, Parkinsonism, and other developmental and acquired neuromotor problems of children and adults.</td>
<td>2</td>
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</tbody>
</table>
Seminar in Speech Physiology

**Prereqs:**
SLPA 455 and 456

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

Seminar in Speech Acoustics

**Prereqs:**
SLPA 455 and 456

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

Seminar in Speech Pathology

**Prereqs:**
SLPA '851, '865, 967, and/or 968

Research procedures, findings and clinical implications in the following areas:
- Fluency Disorders (1-3 cr)
- Voice Disorders (1-3 cr)
- Motor Speech Disorder (1-3 cr)

Seminar in Language

**Prereqs:**
SLPA 251 or 852

Research procedures, findings and implications in language pathology and treatment in the areas of development, evaluation and habilitation.
- Child Language Development and Disorders (1-3 cr)
- Adolescent/Adult Language Development and Disorders (1-3 cr)
- Augmentative/Alternative Communication (1-3 cr)

Seminar in Augmentative Communication

**Prereqs:**
SLPA 886

Advanced seminar on research literature in the augmentative communication field.
# Traumatic Brain Injury

**SLPA 985**

**Prereqs:**
SLPA *853

Assessment and treatment of child and adult cognitive and communication disorders resulting from traumatic brain injury.

**Credit Hours:** 2
**Campus:**
**Course Delivery:** Classroom

# Aphasia in Adults

**SLPA 987**

**Prereqs:**
SLPA *853

Adult language disorders resulting from stroke or other acquired central nervous system insult. Includes historical/theoretical development of understanding, cerebral dominance for language, classifications, rationale for diagnostic and therapeutic management, prognostic factors, agnosias and apraxia.

**Credit Hours:** 2
**Course Format:** Lecture 2
**Campus:**
**Course Delivery:** Classroom

# Workshop Seminar

**SLPA 990**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Campus:**
**Course Delivery:** Classroom

# Doctoral Capstone Thesis

**SLPA 994**

Selection of the topic for this project should take place no later than the summer of the third year by consultation with the project adviser. Enrollment in SLPA 994 (http://bulletin.unl.edu/courses/SLPA/994) is required during each semester that the project is underway. Capstone experience prepared in the form of a research project paper containing a significant treatment of some aspect of audiology.

**Credit Hours:** 3
**Max credits per degree:** 9
**Course Format:** Independent Study
**Campus:**
**Course Delivery:** Classroom

# Doctoral Seminar

**SLPA 995**

**Prereqs:**
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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Credit Hours:** 3
**Max credits per degree:** 18
**Campus:**
**Course Delivery:** Classroom

# Research Problems Other Than Thesis

**SLPA 996**

**Prereqs:**
Permission

**Credit Hours:** 1–9
**Campus:**
**Course Delivery:** Classroom

**Doctoral Dissertation**

**SLPA 999**

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1-24
**Max credits per degree:** 55
**Campus:**
**Course Delivery:** Classroom

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**Courses for TEAC (TEAC)**

**Chemistry for Secondary School Classrooms**

**BIOC 869**

Crosslisted as BIOS 883, CHEM 869, TEAC 869

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes:
- A. Structure and Properties of Matter: Water and Solutions (1 cr)
- B. Structure and Properties of Matter: Periodicity (1 cr)
- C. Structure and Properties of Matter: Bonding and Structure (1 cr)
- D. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
- E. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
- F. Chemistry of Life Processes: Biomolecules (1 cr)
- G. Structure and Properties of Matter: Condensed States and Materials Science (1 cr)
- H. Interactions of Matter and Energy (1 cr)
- I. Chemistry of Life Processes: DNA (1 cr)
- J. Chemical Reactions: Equations and their Consequences (1 cr)
- K. Chemical Reactions: Acids and Bases (1 cr)
- L. Chemical Reactions: Kinetics (1 cr)
- M. Chemical Reactions: Oxidation, Reduction and Electrochemistry (1 cr)
- N. Equilibrium: Unifying Theme (1 cr)
- O. Conservation of Energy and the Increase in Disorder: Thermodynamics (1 cr)
- P. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
- Q. Structure of Atoms: Nuclear Chemistry (1 cr)

**Credit Hours:** 1
**Max credits per degree:** 12
**Campus:**
**Course Delivery:** Classroom

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**Topics in Chemical Pedagogy**

**CHEM 874**

Crosslisted as TEAC 874

A maximum combined total of 12 hours from TEAC *869 and/or *874 may be counted toward a masters degree. Credit in this course will not count towards a graduate degree in chemistry. Courses are Web–based. Topical chemistry content for high school teachers organized according to the National Science Education Standards.
- A. Green Chemistry (2–3 cr)
- B. Demonstrations for High School Chemistry (1–3 cr)
- C. Experiments for High School Chemistry (1–3 cr)
- D. Developing a Safety Culture (1 cr)
- E. Chemistry of Life Processes: Biomolecules (1–3 cr)
- F. Addressing Misconceptions (1–3 cr)
- G. Mathematics Integration (MATH 874M) (2–3 cr) May be counted towards the MAT and MScT degrees in mathematics and statistics, not the MA, MS, or PhD.
- H. Inquiry Strategies (1–3 cr)

**Credit Hours:** 1–3
**Max credits per degree:** 12
**Campus:**
**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 875</td>
<td><strong>Chemical Pedagogy in the High School Laboratory</strong></td>
<td>Crosslisted as TEAC 875</td>
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<td>1-3</td>
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<td>Classroom</td>
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<td>Credit 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. A. Small-scale Experiments (1-3 cr) B. Technology Integration (3-6 cr) C. Inquiry Experiments (1-3 cr) D. At-home Experiments (1-3 cr) E. Probe Experiments (1-3 cr) F. Traditional Experiments (1-3 cr)</td>
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<tr>
<td>COMM 427/827</td>
<td><strong>Instructional Communication</strong></td>
<td>Crosslisted as TEAC 429/829</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td><strong>Prereqs:</strong> Junior/senior standing; College of Education and Human Sciences major; COMM 200, 201</td>
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<td></td>
<td>Advanced introductory course in instructional communication, focusing on understanding variables associated with the communication process in instructional settings and managing instructional communication more effectively. Provides an experimental and a cognitive understanding of the role of communication in the instructional process.</td>
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<tr>
<td>CYAF 814</td>
<td><strong>Evaluation in Career and Technical Education</strong></td>
<td>Crosslisted as TEAC 814</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.</td>
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<tr>
<td>CYAF 891</td>
<td><strong>Special Topics in Human Sciences</strong></td>
<td>Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891</td>
<td></td>
<td>1-3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Aspects of human sciences not covered elsewhere in the curriculum.</td>
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<tr>
<td>EDAD 855</td>
<td><strong>Teaching Learners to Learn</strong></td>
<td>Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
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</tbody>
</table>
### EDAD 948 Instructional Leadership: Emerging Trends and Practices
Crosslisted as TEAC 948

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</tbody>
</table>

### EDAD 991 Field Studies in Education
Crosslisted as NUTR 991, TEAC 991

**Prereqs:**
- Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–3</th>
</tr>
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<tbody>
<tr>
<td>Max credits per degree:</td>
<td>6</td>
</tr>
<tr>
<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### EDPS 935 Seminar in Qualitative Research
Crosslisted as TEAC 935

**Prereqs:**
- [EDUC 900K](http://bulletin.unl.edu/courses/EDUC/900K) or permission

Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
<td></td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### EDPS 989 Psychology of Reading
Crosslisted as TEAC 989

**Prereqs:**
- TEAC 811 or 841 or SPED 886

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</tbody>
</table>

### ENGL 895A Nebraska Writing Project Internship
Crosslisted as TEAC 895A

**Prereqs:**
- Permission

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–3</th>
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<tbody>
<tr>
<td>Course Format:</td>
<td>Lecture</td>
</tr>
<tr>
<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### ENGL 992 Nebraska Humanities Project
Crosslisted as TEAC 992

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1–24</th>
</tr>
</thead>
</table>
**Place Conscious Teaching**

Crosslisted as TEAC 992B

Theory and practice of teaching writing, literature, and rhetoric in connection with local place, region, and community.

Credit Hours: 1–6
Max credits per degree: 6

**American Cultural Perspectives through Popular Music and Guitar**

Crosslisted as MUNM 450, TEAC 450/850

Exploration of the historical, social and cultural context of late 19th and 20th century America through learning to play jazz and popular music on the guitar to provide an authentic, performance-based encounter in music.

Credit Hours: 3
Max credits per degree: 3

**Approaches to Middle School General Music**

Crosslisted as TEAC 873

For prospective new and experienced general music/middle school teachers. Characteristics of middle school students, materials, methodology, guitar and recorder techniques, and curriculum development.

Credit Hours: 3
Max credits per degree: 3

**Historical and Philosophical Foundations of American Music Education**

Crosslisted as TEAC 845

Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylon, Richmond and others are considered.

Credit Hours: 2–3
Max credits per degree: 3

**Reading and Writing Disabilities: Adolescents**

Crosslisted as TEAC 806

**Prereqs:**
SPED 400 (http://bulletin.unl.edu/courses/SPED/406)/800

Credit Hours: 2
### Reading Center Practicum II

**Course Code:** SPED 406A/806A  
**Prerequisites:** SPED 400 (or SPED 800), 412 (or SPED 812), and (TEAC 441 required for undergraduate students only). Parallel SPED 406A.  
**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom  

This course is a prerequisite for: SPED 406, SPED 406A, and SPED 806A.  

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

### Assessment, Evaluation, and Instruction of Literacy

**Course Code:** SPED 886  
**Prerequisites:** SPED 400 (or SPED 800), 412 (or SPED 812), and (TEAC 441 required for undergraduate students only). Taken parallel with SPED 406.  
**Credit Hours:** 1-3  
**Max credits per degree:** 6  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  

This course is a prerequisite for: EDPS 989.  

TEAC/SPED 886 includes case study and planning for special student populations.  

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.  

- A. Special Topics in Literacy Assessment (SPED 886A) (1–3 cr) Lec.  
- B. Internship in Literacy Assessment and Instruction (SPED 886B) (1–3 cr)

### Special Topics in Education

**Course Code:** SPED 892  
**Prerequisites:** EDPS 859 (or parallel; EDPS 859) or equivalent  
**Credit Hours:** 1–3  
**Max credits per degree:** 12  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  

Aspects of education not covered elsewhere in the curriculum.

### Contemporary Children's Literature: Principles and Practices

**Course Code:** TEAC 402/802  
**Prerequisites:**  
**Credit Hours:** 1–3  
**Max credits per degree:** 12  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.
Contemporary literature for children, all forms and genres; development of meaningful and creative learning activities for children; professional readings and research related to children's literature.

**Improvement of Instruction in School Mathematics**

**TEAC 408/808**


**Reading Processes and Practices**

**TEAC 411/811**

Overview of reading processes and programs with attention to strategies for comprehension and word identification, approaches, and materials. A. Teaching Reading (3 cr) B. Special Topics in Reading (1–6 cr)

**Studies in Teaching English as a Second Language**

**TEAC 413/813**

Preparation for teaching K–12 learners whose language of nurture is not English. A. ESL: Acquisition (1–3 cr) B. ESL: Teaching and Curriculum (1–3 cr) D. ESL: Assessment (1–3 cr) E. Special Topics in Teaching ESL (1–6 cr)

**Teaching English Language Learners (ELLs) in Content Areas**

**TEAC 413M/813M**

**TEAC 413M** (for ESL certification). Theory and pedagogy in the teaching of English Language Learners (ELLs) in course content areas at all levels of K–12 education. Identify and design linguistically and culturally responsive instruction for English learners in the disciplines (e.g. language arts, science, mathematics, social sciences).

**Teaching English Overseas**

**TEAC 413P/413X/813P**

Methodologies for teaching English to speakers of other languages (TESOL) in international settings.

**Inclusive Early Childhood Methods**

**TEAC 416/816**
The creation and practice of developmentally appropriate instruction in curricular areas for K to 3rd grades. Role of the teacher and/or facilitator in relationship to the primary curriculum and learning environment. A. Literacy Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel TEAC 397D.

Learning and teaching of writing with consideration given to developmental factors of children and adolescents.

Theory, research and practice of most recent foreign language models and strategies.

Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.

Open to advanced undergraduates and graduate students

Social and cultural analyses of curriculum, teaching, and education policy from disciplinary perspectives. A. The Anthropology of Education (3 cr) B. The History of Education (3 cr) E. The Sociology of Education (3 cr) J. Special Topics (3 cr)
Higher Education in America

**Course:**
Higher Education in America

**Link:** [http://bulletin.unl.edu/courses/TEAC/432](http://bulletin.unl.edu/courses/TEAC/432)

**Credit Hours:**
3

**Course Delivery:**
Classroom

**Prereqs:**
12 hrs education.

History and development of America’s colleges and universities and recent trends and problems in higher education.

Comparative Education

**Course:**
Comparative Education

**Link:** [http://bulletin.unl.edu/courses/TEAC/433](http://bulletin.unl.edu/courses/TEAC/433)

**Credit Hours:**
3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.

Comparative Education Survey

**Course:**
Comparative Education Survey

**Link:** [http://bulletin.unl.edu/courses/TEAC/433A](http://bulletin.unl.edu/courses/TEAC/433A)

**Credit Hours:**
3

**Max credits per semester:**
3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

Comparative Education investigates origins, goals, organization, challenges, and accomplishments of various countries’ school systems with intentional comparisons to American practices. The ‘A’ format is a survey course that considers examples from all over the world. The ‘B’ format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

Comparative Education: Special Topics/Travel Study

**Course:**
Comparative Education: Special Topics/Travel Study

**Link:** [http://bulletin.unl.edu/courses/TEAC/433B](http://bulletin.unl.edu/courses/TEAC/433B)

**Credit Hours:**
3

**Max credits per semester:**
3

**Max credits per degree:**
9

**Course Format:**
Field 3

**Course Delivery:**
Classroom

Prereqs:
None

This course could be taken more than once for additional credits assuming the student uses it for travel-study to different places. For example, a student could not visit South Korea twice with the same professor teaching the same syllabus, but could visit South Korea once (as one 3-hour course) and South Africa (as another 3-hour course).

Course investigates origins, goals, organization, challenges, and accomplishments of various countries’ school systems with intentional comparisons to American practices. The ‘B’ format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

Ethics and Education

**Course:**
Ethics and Education

**Link:** [http://bulletin.unl.edu/courses/TEAC/434](http://bulletin.unl.edu/courses/TEAC/434)

**Credit Hours:**
3

**Course Delivery:**
Classroom

Open to advanced undergraduates and graduate students

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equality, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.

Latin American Education

**Course:**
Latin American Education

**Link:** [http://bulletin.unl.edu/courses/TEAC/436](http://bulletin.unl.edu/courses/TEAC/436)

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equality, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.
**436/836**

**Prereqs:**
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.

**Credit Hours:** 3  
**Course Delivery:** Classroom

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**438/838**

**Linguistics for the Classroom School Teacher**

**Prereqs:**
Admission to the Teacher Education Program.

Analysis of various aspects of linguistic study including dialects, usage, modern grammar, semantics, lexicography, etc., and their application in the K-12 school English classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the classroom.

**Credit Hours:** 3  
**Course Delivery:** Classroom

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**439/839**

**Literature for Adolescents**

**Prereqs:**
Admission to a Teacher Education Program.

Wide range of young adult literature available for use in schools. Critical and rhetorical tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; consideration for readers aged 11-16.

**Credit Hours:** 3  
**Course Delivery:** Classroom

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**441/841**

**Content Area Reading, Grades 4–12**

This course is a prerequisite for **SPED 406** or **SPED 406A**.

Simultaneous teaching of academic content and functional teaching of reading in the content areas; assessment of comprehension, vocabulary/concept attainment; analyses of text; improvement of content area learning through reading/writing development.

**Credit Hours:** 3  
**Course Delivery:** Classroom

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**451/851**

**Learning and Teaching Principles and Practices**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and **TEAC 306** or 406. Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline-based art education. Planning and incorporation of innovative approaches embracing the diversity of students. K. Career and Technical Education Prereq: As listed above. Procedures for writing, selecting and organizing subject matter for instruction. L. Methods of Teaching
<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.</th>
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</thead>
<tbody>
<tr>
<td>Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Procedures for writing, selecting and organizing subject matter for instruction.</td>
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</table>

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<thead>
<tr>
<th>Prereqs:</th>
<th>Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.</th>
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<tbody>
<tr>
<td>Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners.</td>
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<thead>
<tr>
<th>Prereqs:</th>
<th>Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better. Parallel with TEAC 397V (<a href="http://bulletin.unl.edu/courses/TEAC/397V">http://bulletin.unl.edu/courses/TEAC/397V</a>).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners.</td>
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</tbody>
</table>
interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners.

**Curriculum Principles and Practices**

**TEAC 452/852**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with 2.5 GPA or better.


**The Middle Level Professional Methods**

**TEAC 453/853**

**Prereqs:**
Admission to the Teacher Education Program.

Development of competence in planning, teaching, classroom management and assessment. Covers the scope, content, and organization of curriculum and instructional materials. I. Art (2 cr) N. Language Arts (2 cr) P. Mathematics (2 cr) T. Reading (2 cr) V. Science (2 cr) W. Social Science (2 cr)

**Literature in Education**

**TEAC 454/854**

Comparative analyses of literature and the role of the reader as meaning maker in educational settings. A. Literary Response and Analysis (3 cr) B. Multiethnic Literature for Children and Adolescents (3 cr) E. Special Topics (3 cr)
<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Instructional Applications of Computers–Practicum</strong> 482/882</td>
<td>2-3</td>
<td>Permission</td>
<td>A task-oriented practicum in instructional application of computer to provide an opportunity for repetition and/or demonstration of fundamental practice skills. Combines discussion and demonstration with supervised task-centered field experiences.</td>
</tr>
<tr>
<td><strong>Independent Study</strong> 495/895</td>
<td>1-6</td>
<td>Permission</td>
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<tr>
<td><strong>Problems in Secondary Education</strong> 496/896</td>
<td>1-6</td>
<td>Permission</td>
<td>Opportunities for experienced teachers and administrators to develop plans, procedures, or experiments directed to the improvement of the curriculum or administration of the secondary school.</td>
</tr>
<tr>
<td><strong>Problems in Elementary Education</strong> 498/898</td>
<td>2-3</td>
<td>Permission</td>
<td>Opportunities to develop plans, procedures, experiments, and models directed to the improvement of elementary school education on an independent study basis.</td>
</tr>
<tr>
<td><strong>Inquiry into Teaching and Learning</strong> 800</td>
<td></td>
<td>Permission</td>
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</tbody>
</table>
This course is a prerequisite for: TEAC 888 (http://bulletin.unl.edu/courses/TEAC/888)

Contemporary educational research from multiple theoretical perspectives.

**Curriculum Inquiry**

Credit Hours: 3
Campus:
Course Delivery: Classroom

**Student Teaching Internship Seminar**

Prereqs: Parallel TEAC 897 (http://bulletin.unl.edu/courses/TEAC/897)

Analysis of school programs with attention to teacher certification, teacher/student rights/responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communicating with parents and community members, and current issues.

A. Elementary (K–6) (1–2 cr) Parallel TEAC 897A (http://bulletin.unl.edu/courses/TEAC/897A).
B. Elementary Art (1–2 cr) Parallel TEAC 897B (http://bulletin.unl.edu/courses/TEAC/897B).
G. Elementary Foreign Language (1–2 cr) Parallel TEAC 897G (http://bulletin.unl.edu/courses/TEAC/897G).
I. Secondary Art (1–2 cr) Parallel TEAC 897I (http://bulletin.unl.edu/courses/TEAC/897I).
N. Secondary Language Arts (1–2 cr) Parallel TEAC 897N (http://bulletin.unl.edu/courses/TEAC/897N).
P. Secondary Mathematics (1–2 cr) Parallel TEAC 897P (http://bulletin.unl.edu/courses/TEAC/897P).
Q. Middle School (1–2 cr) Parallel TEAC 897Q (http://bulletin.unl.edu/courses/TEAC/897Q).
V. Secondary Science (1–2 cr) Parallel TEAC 897V (http://bulletin.unl.edu/courses/TEAC/897V).
Y. Mainstreaming (1–2 cr) Parallel TEAC 897Y (http://bulletin.unl.edu/courses/TEAC/897Y).
Z. Multicultural (1–2 cr) Parallel TEAC 897Z (http://bulletin.unl.edu/courses/TEAC/897Z).

**Advanced Teaching Strategies**

Crosslisted as ALEC 805, NUTR 806

This course is a prerequisite for: ALEC 400 (http://bulletin.unl.edu/courses/ALEC/400)

Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs public schools, and other settings. Students 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.

**Improvement of Instruction in Elementary School Science**

Link (http://bulletin.unl.edu/courses/TEAC/812)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credits</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 315</td>
<td>Intercultural Communication</td>
<td>12 hrs education including <a href="http://bulletin.unl.edu/courses/TEAC/315">TEAC 315</a> or permission; teaching experience or student teaching</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 813J</td>
<td>Intercultural Communication</td>
<td>Techniques, plans, and procedures for improving instruction in elementary school science. Current practices, issues, and trends; evaluation of instructional materials.</td>
<td>3</td>
<td>Lecture 3 Classroom</td>
</tr>
<tr>
<td>TEAC 817</td>
<td>Emerging Reading and Language</td>
<td>Research, theory and practice associated with literacy development in children from birth to age 8. Language and concept development, emerging reading and writing behaviors, appropriate materials and evaluation within a holistic view teaching and learning.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 822</td>
<td>Principles and Practices in Social Studies Education</td>
<td>Current issues and trends in the curriculum and teaching of social studies. A. Special Topics (1–3 cr)</td>
<td>1-3</td>
<td>9 Classroom</td>
</tr>
<tr>
<td>TEAC 828</td>
<td>Improvement of Instruction in Industrial Education</td>
<td>Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 833</td>
<td>Comparative Education</td>
<td>Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC</td>
<td>Ethnic Minorities and American Education</td>
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</table>
835

Chronological entry of European immigrant groups into an American society during the formative years of the development of the American public school system. Record of American social and educational history is replete with examples of inter- and intra-group human conflict as each immigrant group attempted to carve out its niche in a New World setting during a period of mass migration from Europe. Historical, sociological, and psychological barriers that became inherent during a dynamic period of nation building.

840

Culture and Schooling

Description and explanation of cultural values as they relate to education.
A. Gender (1–3 cr)
B. Gender and Science (1–3 cr)
D. Special Topics (1–6 cr)
E. Rural Education (1–3 cr)

842

Objectives and Methods of Science Teaching

A. Elementary
B. Middle School
D. Secondary and Community College
E. Special Topics (1–6 cr)

844

School Media Programs

Role of the media specialist as a member of the instructional team.
A. Administration (3 cr)
B. Reference (3 cr)
D. Cataloguing (3 cr)
E. Selection (3 cr)
J. Special Topics in School Media

846

Studies in Middle Level Schooling

Historical development, philosophy, and current literature of the middle school.
A. Curriculum (1–3 cr, max 3)
B. Leadership (1–3 cr, max 3)
D. Teacher-Based Advisory (1–3 cr, max 3)
E. Special Topics (1–3 cr, max 9)

847

Principles of Business Education

Principles, philosophy, historical development, and emerging role of
## Introduction to Curriculum Studies

**TEAC 848**

Introduction to Curriculum Studies

**Credit Hours:** 1-3

**Campus:** Classroom

Historical development and philosophy of high school curricula. Review of research on schooling, curriculum trends, and school organizational structures.

A. Elementary Schools  
B. Middle Schools  
D. Secondary Schools  
E. Special Topics in Curriculum (1-6 cr)

## Studies in Assessment and Leadership for Learning

**TEAC 849**

Studies in Assessment and Leadership for Learning

**Credit Hours:** 6

**Max credits per degree:** 18

**Course Format:** Lecture

**Campus:** Classroom

Preparation for assessing K-12 learners and leading K-12 Teacher Learning Communities.

A. Classroom Assessment (3 cr)  
B. Large-scale Assessment (3 cr)  
E. Leadership in Assessment (3 cr)  
J. Leading Classroom Assessment (3 cr)  
K. Special Topics in Assessment and Leadership for Learning (3 or 6 cr, max 6)

## Nebraska Writing Project

**TEAC 857B**

Nebraska Writing Project  
Crosslisted as ENGL 857B

**Credit Hours:** 1-3

**Course Format:** Lecture

**Campus:** Classroom

Topics in writing instruction, explored via the National Writing Project Institute model, for K-12 and college teachers of writing in all curricular areas.

## Utilization of Modern Technology

**TEAC 858**

Utilization of Modern Technology

**Credit Hours:** 3

**Campus:** Classroom

Strategies of incorporating modern technology into the professional workplace; provides a thorough understanding of the operation and evaluation of integrating technology into the curriculum.

## Instructional Message Design

**TEAC 859**

Instructional Message Design

**Credit Hours:** 3

**Campus:** Classroom

Using selected principles from behavior science (perception, memory, attitudes, concepts), students analyze and design instructional messages. Systematic process for instructional development.

## Production and Utilization of Instructional Materials

**TEAC 860**

Production and Utilization of Instructional Materials

**Credit Hours:** 3

This course is meant to be taken after and in sequence with TEAC 859.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus:</th>
<th>Course Delivery:</th>
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<td>Education for a Pluralistic Society: Foundation and Issues</td>
<td></td>
<td>3</td>
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<tr>
<td>TEAC 881</td>
<td>Music in Early Childhood Education</td>
<td>Crosslisted as MUED 881</td>
<td></td>
<td>3</td>
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<td>TEAC 887</td>
<td>Effecting High School Improvement</td>
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<td>Lecture 3</td>
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<td>TEAC 888</td>
<td>Teacher as Scholarly Practitioner</td>
<td>TEAC 800 and 801, or permission</td>
<td>1-3</td>
<td>3</td>
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<td>TEAC 889</td>
<td>Masters Seminar</td>
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<td>TEAC 890</td>
<td>Workshop Seminar</td>
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### Workshop Seminar

- **Code:** TEAC 893
- **Description:** Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Professional Practicum Experiences

- **Code:** TEAC 894
- **Prereqs:** Admission to Teacher Education Program
- **Credit Hours:** 1-10
- **Max credits per degree:** 10
- **Course Format:** Field
- **Description:** TEAC 894 does not count toward the MA or MEd degree. P/N only. Guided observations and/or clinical experiences in schools and/or agencies offering programs for children/youth.
  - A. Elementary (K–6) (1–10 cr)
  - B. Elementary Art (1–10 cr)
  - E. English as a Second Language (1–10 cr)
  - G. Elementary Foreign Language (1–10 cr)
  - I. Secondary Art (1–10 cr)
  - J. Business Education (1–10 cr)
  - L. Information Technology (1–10 cr, max 10)
  - M. Industrial Education (1–10 cr)
  - N. Secondary Language Arts (1–10 cr)
  - O. Marketing Education (1–10 cr)
  - P. Secondary Mathematics (1–10 cr)
  - Q. Middle School (1–10 cr)
  - R. Secondary Modern Language (1–10 cr)
  - T. Reading (1–10 cr)
  - V. Secondary Science (1–10 cr)
  - W. Secondary Social Science (1–10 cr)
  - Y. Mainstreaming (1–10 cr)
  - Z. Multicultural (1–10 cr)

### Student Teaching Internship

- **Code:** TEAC 897
- **Prereqs:** Admission by application only
- **Credit Hours:** 1-10
- **Course Delivery:** Classroom
- **Description:** This course is a prerequisite for TEAC 803. (See "Admission to Student Teaching" in the UNL Undergraduate Bulletin.) This course will not count towards the MA or MEd degree. P/N only. Supervised teaching experience in schools.
  - A. Elementary (K–6)
  - B. Elementary Art
  - E. English as a Second Language
  - D. Elementary Physical Education
  - G. Elementary Foreign Language
  - I. Secondary Art
  - J. Business Education
  - K. Health
  - M. Industrial Education
  - N. Secondary Language Arts
  - P. Secondary Mathematics
  - Q. Middle School
  - R. Secondary Modern Language
  - U. Secondary Physical Education
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<th>Course Code</th>
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<th>Course Delivery</th>
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<td>TEAC 899</td>
<td>Masters Thesis</td>
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<td>Prereqs: Admission to masters degree program and</td>
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<td>permission of major adviser</td>
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<tr>
<td>TEAC 901</td>
<td>Supervision and Administration in Vocational Education</td>
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<td>1-3</td>
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<td>For course description, see ALEC 901</td>
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<tr>
<td>TEAC 902</td>
<td>Colloquium in Educational Policy and Practice</td>
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<td>1-3</td>
<td>6</td>
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<td>Educational policy and practice and their interconnection.</td>
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<td></td>
<td>A. Special Topics in Educational Policy and Practice</td>
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<td>TEAC 903</td>
<td>Current Trends in the Education of Young Children</td>
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<td>2-3</td>
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<td>Participation in special problems of teachers in</td>
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<td>Practicum in Postsecondary Teaching</td>
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<td>Work with a faculty mentor in a discipline of choice</td>
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<td>and an instructional supervisor to prepare instruction</td>
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<td>and teach students in a postsecondary setting.</td>
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<td>Practicum students are assisted in arranging for the</td>
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<td>practicum and are provided consultation and feedback</td>
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<td>during the practicum.  Lesson planning and reflective</td>
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<td>papers are part of the practicum experience.</td>
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<td>TEAC 907</td>
<td>Seminar in Elementary School Mathematics</td>
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<td>Prereqs: TEAC 808 or equivalent</td>
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</tbody>
</table>
### Seminar in Teacher Education (TEAC 908)

**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)

**Credit Hours:** 1–12

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/TEAC/908)

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### Seminar in Elementary School Science (TEAC 911)

**Prereqs:**
12 hrs laboratory science including courses in both physical and biological fields; TEAC 403 or 804 (or equivalent; teaching experience)

**Literature which deals with research and experimentation in science for the elementary school. Aspects of the teaching and supervision of elementary school science that require investigation and research.**

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/TEAC/911)

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### Seminar in Curriculum and Teaching of Career and Technical Education (TEAC 920)

**Current research and theory within the curriculum and teaching of career and technical education.**

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/TEAC/920)

---

### Seminar in Literacy Studies (TEAC 921)

**Research in literacy and schooling.**
- A. Curriculum and Teaching (3 cr)
- B. Special Topics (1–3 cr)
- D. Language, Culture, and Education (1–3 cr)

**Credit Hours:** 1–3

**Max credits per degree:** 9

**Course Format:** Lecture

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/TEAC/921)

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### Seminar in the Learning and Teaching of Foreign Languages (TEAC 922)

**Prereqs:** Undergraduate teaching major in a foreign language and teaching experience in a foreign language

**Critical review and evaluation of current literature, research and theory.**
- A. Reading in the Foreign Language Classroom (1–3 cr, max 3)
- B. Writing in the Foreign Language Classroom (1–3 cr, max 3)
- D. Listening in the Foreign Language Classroom (1–3 cr, max 3)
- E. Speaking in the Foreign Language Classroom (1–3 cr, max 3)
- J. Planning in the Foreign Language Classroom (1–3 cr, max 3)
- K. Technology-Enhanced Language Instruction (1–3 cr, max 3)

**Credit Hours:** 1–21

**Max credits per degree:** 21

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/TEAC/922)
Seminar in the Curriculum and Teaching of Secondary School Mathematics

Prereqs:
Undergraduate teaching major and teaching experience in mathematics

Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of mathematics.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Seminar in the Curriculum and Teaching of Science

Prereqs:
Undergraduate teaching major and teaching experience in science, and TEAC 842 and EDPS 859

Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.
A. Elementary
B. Middle School
D. Secondary
E. Inclusive Science Teaching
J. Special Topics (1-6 cr)

Credit Hours: 1-3
Campus:
Course Delivery: Classroom

Seminar in the Curriculum and Teaching of Social Sciences

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)

Credit Hours: 3
Max credits per degree: 12
Campus:
Course Delivery: Classroom

Seminar in Individualized Instruction for Gifted, Talented, and Creative Students

Nature of curricular and instructional programs and practices for gifted, talented, and creative students in elementary and secondary schools. Range of learner outcomes, identification of instructional principles, personalizing instruction for this group of learners.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Sociological/Anthropological Research Methods in Education

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
A. Ethnographic Methods (1-3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1-3 cr, max 3)
D. Discourse Analysis Across School, Home and Community Settings (1-3 cr, max 3)
E. Introduction to Linguistic Analysis of Classroom Interaction (1-3 cr, max 3)
J. Hermeneutic Traditions in Education (1-3 cr, max 3)
K. Quantitative Research Traditions in Education (1-3 cr, max 3)

Credit Hours: 1-3
Max credits per degree: 15
Campus:
Course Delivery: Classroom
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<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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<th>Description</th>
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<tbody>
<tr>
<td>931</td>
<td>Research in the History of Education</td>
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<td>Historical research methods in education culminating in the research and writing of a historical article as publication report.</td>
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<tr>
<td>932</td>
<td>Contract Studies in International Education</td>
<td>1-6</td>
<td>Permission</td>
<td>Student proposed course of studies in international education: may include field experiences, individual/group research, participation in mini-seminars, etc.</td>
</tr>
<tr>
<td>936</td>
<td>Seminar in College Teaching</td>
<td>1-3</td>
<td></td>
<td>Overview of teaching in post-secondary settings.</td>
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<tr>
<td>937</td>
<td>Philosophy of Science and Educational Research</td>
<td>3</td>
<td></td>
<td>Major themes in philosophy of science and relates these to conceptions of research on human beings and social institutions, particularly as this is applied to schooling. Students consider such fundamental issues as whether educational research is a science, the form and purpose of educational research, and what research might imply for practice.</td>
</tr>
<tr>
<td>944</td>
<td>Seminar in Curriculum Studies</td>
<td>1-3</td>
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<td>Critical examination of issues in curriculum development with an analysis of research and literature on the subject.</td>
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<td>946</td>
<td>Instructional Improvement and Decision Making</td>
<td>1-3</td>
<td></td>
<td>Study and application of teaching models and techniques based on research, theory, and exemplary practice.</td>
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<td>Seminar in Education</td>
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<tr>
<td>949</td>
<td>Critical analysis of literature and research on teaching, learning, and schooling. A. Special Topics in Education (1-3 cr)</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/949">Link</a></td>
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<td>950</td>
<td>Contextual Research in English/Language Arts</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/950">Link</a></td>
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<tr>
<td>951</td>
<td>Seminar in Reading Education</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/951">Link</a></td>
<td>3-9</td>
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<tr>
<td>952</td>
<td>Language and Learning</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/952">Link</a></td>
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<td>953</td>
<td>Seminar on Writing in the Curriculum</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/953">Link</a></td>
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<td>957B</td>
<td>Nebraska Writing Project</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/957B">Link</a></td>
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<td>959</td>
<td>Portfolio in Instructional Technology Competencies</td>
<td><a href="http://bulletin.unl.edu/courses/TEAC/959">Link</a></td>
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</table>

Prereqs: [ENGL 957B]
permission

No more than six credits of TEAC 959 (http://bulletin.unl.edu/courses/TEAC/959) may be counted towards a masters degree. Portfolio components represent a significant contribution to the solution of an instructional problem and reflect broadly the major competencies of instructional technology: problem definition, learner analysis, media selection and message design, production, and evaluation.

<table>
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<tr>
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<th>Course Title</th>
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<td>Topical Seminar in Instructional Technology</td>
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<td>961</td>
<td>Current Approaches to Elementary Music Education</td>
<td>Teaching experience</td>
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<td>990</td>
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<td>995</td>
<td>Doctoral Seminar</td>
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</table>
The College of Education and Human Sciences (CEHS) offers graduate degree programs through its seven CEHS departments: Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design. In addition to graduate degree programs, CEHS also offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

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 focused interest but which are not included in other professional education courses. 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. CEHS offers three masters degrees in nine majors and the education specialist degree in three majors. The MEd is offered only in Educational Administration; Special Education and Communication Disorders; and Teaching, Learning and Teacher Education. The following requirements for the MEd are College requirements. Departmental requirements may exceed these. In work for the master of education degree, at least 6 semester hours selected from College of Education and Human Sciences courses outside the major must be included and supporting work may be substituted for the minor(s). For information on masters and specialist degree programs, consult the relevant department's listing in this bulletin. CEHS offers two doctoral degrees, both the EdD and the PhD, under three majors: educational studies, human sciences, and psychological studies in education. In addition, CEHS participates in two additional doctoral majors. The Educational Studies major includes six specializations. Instructional Technology; Internet-based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education is sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co–hosts, with Architecture, Architecture Education.

The Human Sciences major includes five specializations. Communication Disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies is sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Clothing and Design is based in the Department of Textiles, Clothing and Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.
The Psychological Studies in Education major includes four specializations, all hosted by the Department of Educational Psychology: Cognition, Learning and Development; Counseling Psychology; Qualitative and Quantitative Methodologies in Education; and School Psychology.

In addition, the Department of Educational Administration—in cooperation with UNO’s Department of Educational Administration—offers a major in Educational Administration, and the Department of Nutrition and Health Sciences participates in the Interdepartmental Nutrition major.

Specific program and application information is available under each department’s listing in this bulletin. Up-to-date information is also available online at cehs.unl.edu. Inquiries may be directed to cehsgrad@unl.edu or to (402) 472–5333.

### Educational Administration

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration).

**Interim Department Chair:** Brent D. Cejda, Ph.D.

**Graduate Committee Chair:** Jody Isenmagen, Ph.D.

The Department of Educational Administration offers programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization.

#### Masters degree programs

The Masters Degree program meets the academic requirements for either a Master of Arts (MA) or a Master of Education (MEd) degree with a major in Educational Administration. The MA degree requires the completion of a thesis. Students enrolled in the Masters Degree program are interested in both K–12 and higher education administration.

The majority of students interested in K–12 education intend to satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, at either the standard or professional level, with administrative endorsements that will qualify them for employment as administrators in K–12 school systems. Students interested in higher education administration have the opportunity to pursue specializations in student affairs or human resource development or complete a general higher education program.

#### Doctoral degree programs

There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency.

#### Certificates of Specialization

In addition to masters and doctoral degrees, the department offers four certificates of specialization. Individuals who already have a Masters Degree in education can pursue a certificate endorsement program that will satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, a requirement for employment as an administrator in a K–12 school system.

The Certificate of Specialization in Educational Administration is designed to meet the requirements of a Nebraska Professional and Administrative Supervisory Certificate with an endorsement of superintendent.

The School Improvement Program benefits you—the teacher, by preparing you as a school leader while gaining the specialist credential, allowing you to increase your skills and build career opportunities. The Community College Leadership Certificate is designed for those already employed in community colleges who aspire to administrative appointments as well as those who are in leadership positions and need or desire additional preparation.

#### Course Delivery

The Department of Educational Administration has been a campus leader in reaching out to students who need or wish to study off campus and offers most of the course work for the MEd and EdD online. The primary emphasis in all courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of educational institutions.

Further information about graduate degree programs and about certification programs may be located on the department’s Website, located at cehs.unl.edu/edad.

### Educational Psychology

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology).

**Department Chair:** R. J. De Ayala, Ph.D.

**Graduate Committee Chair:** Edward Daly, Ph.D.

**Website:** edpsyc.unl.edu

The Department of Educational Psychology consists of four program areas: counseling psychology; cognition, learning and development (CLD); quantitative, qualitative, and psychometric methods (QQPM); and school psychology.

#### Masters Degree

The master of arts (MA) degree may be obtained with a specialization in cognition, learning and development (CLD program), or with a concentration in counseling psychology, or research and psychometric methods (QQPM program). Individuals in the CLD program may select the general CLD specialization or an option in health behavior or in college learning center. 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, measurement, counseling psychology, and school psychology through the field of educational specialization called psychological studies in education. For further information, see and contact the chair of the Department’s Graduate Committee.

#### Counseling and School Psychology Clinic

The Counseling and School Psychology Clinic in the Department of Educational Psychology serves the dual function of (1) providing training for qualified graduate students and (2) providing services to individuals, public schools, families, and community agencies. Clinic therapists assist adults, families, children and youth experiencing academic, psychological, and behavioral concerns. In addition to therapeutic services, clinic therapists provide psychological testing and consultation for school related concerns. Therapeutic services are also provided for educational and vocational concerns. Service is provided by appointment.

#### Buros Center for Testing

The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practices. Founded by Oscar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evaluations of commercially available tests. In addition to its international reputation for providing test reviews, BIMM maintains the largest collection of tests and testing materials in the world. The Buros Institute for Assessment Consultation and Outreach (BIACO) was established in 1994 to expand the range of available assessment services to proprietary testing programs that include credentialing, state educational assessment, employment testing, and assessment literacy. Together, the two Buros Institutes advance the goals of the Department of Educational Psychology and the College of Education and Human Sciences by providing consultation and instructional services to graduate programs, by training
Special Education and Communication Disorders

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/programs/SpecialEdAndCommDisorders).

**Department Chair:** Sherri Jones, Ph.D.

**Graduate Committee Chair:** Karen Hux, Ph.D.

The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech–language pathology and the master of arts and master of education degrees in special education. The department administers a PhD in human sciences with a specialization in communication disorders and the PhD or EdD in educational studies with a specialization in special education. The department also offers the professional doctor of audiology (AuD) degree in audiology and a combined AuD/PhD Program. For more information on doctoral programs in education call (402) 472–2141 or visit our website at www.unl.edu/barkley.

The masters degree program in speech–language pathology and the AuD program in audiology are accredited by the Council on Academic Accreditation in Audiology/Speech-Language Pathology.

For more information regarding graduate and professional programs offered by the Department of Special Education and Communication Disorders, please call (402) 472–2141 or visit our website at www.unl.edu/barkley.

**Masters Degree Programs.** Students seeking admission into a masters program should: 1) apply on-line to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Graduate Secretary at special@unl.edu. Three letters of recommendation, preferably from former college instructors, should be submitted to the departmental Graduate Governance Committee Chair along with the departmental application. Each applicant should also arrange to have a current academic transcript and scores for the General Test of the Graduate Record Examination submitted to the Graduate Studies Office at the University of Nebraska-Lincoln. Early submission of the scores is important because the application file cannot be given consideration until the file is complete.

For a master of science degree in speech–language pathology, completion of an appropriate undergraduate or pre–professional program is required for full graduate standing. Students with strong potential but without an academic background in the major may be admitted on a provisional basis until deficiencies have been met. Completion of the masters degree requires a minimum of 48 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure. The application deadline for fall admission into the M.S. program in Speech–Language Pathology is January 15.

**Teacher Certification (licensure) and the Masters Degree.** Masters degrees may be obtained with teaching certificate endorsements for special education and speech–language pathology. Candidates must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.

**Distance Education.** The Department has several special education masters degrees, an educational specialist degree, and/or teaching endorsement programs that are available in part or fully through distance education. These include Early Childhood Special Education, deaf and hearing impairment, mild/moderate disabilities, visual impairments, autism, severe disabilities, and supervisor of special education (joint with educational administration) programs. Distance courses are delivered via the Internet with Blackboard and/or Breeze software. Some distance courses may also require some weekend meetings, telephone or Breeze connections to the on–campus course section, and may have scheduled participation requirements. Field experience and practicum courses can be arranged in or near local communities but may require special fees. Where required courses are not currently available via distance delivery, an equivalent course (either on–campus or at a distance) from another institution may be substituted with the approval of the advisor or may be taken on the UNL campus during the summer. See the department website for information about computer requirements for distance on–line courses and distance course availability.

**Educational Specialist (EdS) Degree.** This program in special education provides opportunity for practitioners in the field to upgrade their skills and/or develop leadership skills as a special educator in a particular area of specialization. Two years successful professional experience as a special educator is a minimum requirement for admission. A minimum of 66 credit hours past the bachelors degree is required, with at least 24 credits to be taken after admission to UNL’s EdS program. These include at least 40 hours of core content courses, 6 credits of electives or practica, and 3 credits of research. Relevant coursework completed as part of a prior masters degree can be used toward this degree. The program also requires a written comprehensive examination. Degree requirements can be used for additional teaching endorsements. Other relevant information and the application form can be found online at: www.unl.edu/barkley/sped/edss.shtml.

**Doctor of Audiology (AuD) Degree.** The Department of Special Education and Communication Disorders offers a professional audiology degree, the Doctor of Audiology (AuD) degree. The AuD program is a four–year course of study post B.A. or B.S. designed to provide students with academic and clinical practicum experiences that will meet or exceed the requirements of the American Speech–Language–Hearing Association (ASHA) for the Certificate of Clinical Competence in Audiology (CCC–AUD) as well as licensure requirements in most states.

Students seeking admission to the AuD program should download the application from www.unl.edu/barkley. Three letters of recommendation, preferably from former college instructors, should be submitted to the AuD program coordinator along with the departmental application. Students do not apply to the Office of Graduate Studies and submission of the Graduate Record Examination is not required for admission. Students should contact the Graduate Support Staff at special@unl.edu for further application instructions.

**PhD/EdD 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. Students seeking admission to one of these programs should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Graduate Support Staff at special@unl.edu. Prospective students 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 departmental 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 an applicant meets the qualifications for entrance into the program and whether a student’s interests are in accord with the type of education and direction the department faculty can provide. Final review of an application is made by the appropriate doctoral field graduate committee in special education or communications disorders.

Teaching, Learning and Teacher Education

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/programs/TeacherEducation).

**Interim Department Chair:** L. James Walter, Ph.D.

**Graduate Committee Chair:** Kathleen Wilson, Ph.D.

The Department of Teaching, Learning and Teacher Education (TLTE) provides masters, specialist and doctoral degree courses and programs for teachers, administrators, and other educational leaders and practitioners with a focus on scholarship and practice in curriculum and instruction in schools and non–school educational settings. Graduate endorsements are also offered in Reading Specialist K–12 and ESL.

**Masters Degrees.**

The aim of the TLTE masters program is to help educators build on their own experience, achieve a broad and deep understanding of educational practice, develop a professional identity, and engage in informed conversations about important teaching and learning issues towards making wise judgments regarding the many complex issues educators face. All candidates must complete a program which conforms to the requirements listed on the TLTE masters program [web page](http://cehs.unl.edu/tlte/graduate/masters). There are two masters degrees available in TLTE: the MA and MED. Both degree programs offer a good deal...
of flexibility to enable the student—in concert with a faculty adviser—to develop a course of study that meets the student’s needs and interests.

If you are interested in earning teacher certification at the elementary level in combination with a master degree, a 14 month full time program (MAet) is available. If instead you see yourself teaching at the middle school or high school level with a specialization in science or mathematics, read about our newest 14 month full time programs (MAmt and MAst) where you can qualify for teacher certification and earn a Master of Arts degree. A limited number of fellowships are available with the MAst and MAmt programs.

**Educational Specialist (EdS) Degree.**

This program in curriculum and instruction provides an opportunity for practitioners in the field to upgrade their professional skills. Two years of successful professional experiences is a minimum requirement for admission. Sixty-six hours beyond the bachelors degree, research competence, practicum experiences, and a written comprehensive examination are basic requirements for the program. It is recommended that you contact the department Graduate Chair before applying.

**Doctoral Programs.**

The EdD and PhD degrees are available under the major heading Educational Studies refer to the web page [doctoral programs in education](http://cehs.unl.edu/tlte/graduate/doctoral.shtml). The EdD is recommended for those whose primary interest is in the application of theory and knowledge to improve educational practice. The PhD is designed for students seeking to conduct research in order to generate new knowledge or reform educational theory. The Department of Teaching, Learning and Teacher Education administers three doctoral–level specializations, available for both the EdD and PhD in Educational Studies. Teaching, Curriculum and Learning focuses on teaching and learning processes; Instructional Technology focuses on using technology as a learning tool in various educational settings; and Internet–based Education focuses on using the Internet as a platform for teaching and learning. The most current information on these specializations is kept up–to–date on the web page for [TLTE doctoral programs](http://cehs.unl.edu/tlte/graduate/doctoral.shtml#tcl).

For additional information, see or of this bulletin. The Graduate Record Examination (GRE) is required for admission to the doctoral programs and foreign students must also submit a TOEFL score.

**Faculty**

**Educational Administration**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration).

**Educational Psychology**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology).

**Special Education and Communication Disorders**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders).

**Teaching, Learning and Teacher Education**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).

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## Education

### Subject Areas

- Education (EDUC) (#EDUC)
- Education and Human Sciences (CEHS) (#CEHS)
- Educational Administration (EDAD) (#EDAD)
- Educational Psychology (EDPS) (#EDPS)
- Special Education (SPED) (#SPED)
- Speech–Language Pathology and Audiology (SLPA) (#SLPA)
- Teaching, Learning and Teacher Education (TEAC) (#TEAC)

## Courses for EDUC (EDUC)

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<thead>
<tr>
<th>SPED 892</th>
<th>Special Topics in Education</th>
<th><a href="http://bulletin.unl.edu/courses/SPED/892">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–3</td>
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<tr>
<td>Max credits per degree: 12</td>
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<td>Course Format: Lecture</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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</table>

**Prereqs:**

[EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or parallel; [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or equivalent

| Aspects of education not covered elsewhere in the curriculum. |

## Courses for CEHS (CEHS)

<table>
<thead>
<tr>
<th>CEHS 467/867</th>
<th>International Cultures Experience in the Local Community</th>
<th><a href="http://bulletin.unl.edu/courses/CEHS/467">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–3</td>
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<td>Course Format: Lecture</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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</table>
Lecture and discussion will be required as part of the field discussion. Field hours will be assigned at the rate of three hours per week.

An international cultural experience in the local community by providing field–based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.

**International Experience in Communities, Schools, and Families** [LINK](http://bulletin.unl.edu/courses/CEHS/494)

Lecture and discussion will be required as part of the field experience. Field hours will be assigned at the rate of two hours per week per student credit hour.

Instructor-guided experiences of a culture in another nation in order to critically examine individual and cross-cultural differences in values, lifestyles, education, history and culture of international families, schools, and communities.

**Courses for EDAD (EDAD)**

**EDAD 421/821 Foundations of Human Resource Development** [LINK](http://bulletin.unl.edu/courses/EDAD/421)

Lays the foundation for further study of Human Resource Development (HRD) by examining the knowledge of HRD professionals, the roles they play, and the organizational settings in which HRD occurs. The design and development of education and training programs, how change occurs in organizations, how career development can optimize the match between individual and organizational goals and needs, and how to improve performance in organizations by analyzing performance opportunities and designing employee training to address these opportunities.

**EDAD 422/822 Instructional Design in Human Resource Development** [LINK](http://bulletin.unl.edu/courses/EDAD/422)

Examines the role of instruction for enhancing human learning and performance in organizations. The analysis of performance problems/opportunities and design of interventions for learning and performance improvement. The essential components of instruction, selecting 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.

**EDAD 801 Cross-Cultural Leadership Studies** [LINK](http://bulletin.unl.edu/courses/EDAD/801)

**Prereqs:**

Permission

For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their 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 through the comparison of cultural
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
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<th>Course Delivery</th>
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<tbody>
<tr>
<td>811</td>
<td>Practicum in Educational Administration and Supervision</td>
<td>Permission</td>
<td>3-4</td>
<td>8</td>
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<td>Classroom</td>
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<tr>
<td>813</td>
<td>Administration in Physical Education and Athletics</td>
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<td>3</td>
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<td>Classroom</td>
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<tr>
<td>814</td>
<td>Risk Management for Sport Facilities</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>830</td>
<td>Administrative Theory in Educational Organizations</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>833</td>
<td>Educational Finance</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>835</td>
<td>Business Management of Schools</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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</tbody>
</table>
Planning for Change

Rationale for planning in a changing environment will be explored; the theoretical base for planning presented; strategic, futuristic planning and operational planning explored; the development of planning strategies, techniques and procedures; the process of evaluation, feedback and revisions explored; and the management of the change process analyzed.

Credit Hours: 2–3
Campus: Classroom

Education Law

Evolution, principles, and practice of education law in relation to local, state, and national units of organization. Education law of Nebraska.

Credit Hours: 1–4
Campus:
Course Delivery: Classroom

Educational Surveys

School systems and its educational program in terms of needs of attendance area served. Organization and interpretation of pertinent data and formulation of recommendations for improvement of educational systems. Long-range planning.

Credit Hours: 2–3
Campus:
Course Delivery: Classroom

Educational Facilities

Techniques for planning educational facilities through use of surveys, educational specifications, and standards. Function of the school administrator in school facilities planning, construction, and utilization.

Credit Hours: 2–3
Campus:
Course Delivery: Classroom

College Students in America

This course is designed to provide students an understanding of a broad range of facts and issues pertaining to undergraduate college students in America.

Credit Hours: 3
Course Format: Lecture 2.33
Course Delivery: Classroom

Counseling Principles for Educational Administrators

This is an introductory level counseling course designed specifically for educational administrators. It is not intended to prepare individuals to become professional counseling practitioners. It offers a broad overview of counsel principles. This is a theory-to-practice course.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom

Faculty and Staff Appraisal

Faculty and support staff in P–12 schools: appraisal, professional learning communities, high standards/high performance and accountability.

Credit Hours: 3
Campus:
School Culture and Student Behavior

Course Delivery: Classroom

Credit Hours: 3

Campus:

Course Delivery: Classroom

School culture and student behavior in P–12 schools. Personalized teaching and learning environments that address student diversity, needs and interests.

Teaching Learners to Learn

Course Delivery: Classroom

Credit Hours: 3

Campus:

Course Delivery: Classroom

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

Supervising Special Education

Course Delivery: Classroom

Credit Hours: 3

Campus:

Course Delivery: Classroom

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

Special Education Administration

Course Delivery: Classroom

Credit Hours: 3

Campus:

Course Delivery: Classroom

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

Special Education Law

Course Delivery: Classroom

Credit Hours: 3

Campus:

Course Delivery: Classroom

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 states and school districts that are grounded in state and federal law.

Constitutional Law I

Course Delivery: Classroom

Credit Hours: 1–4

Campus:

Course Delivery: Classroom

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.
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslist as</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
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<tr>
<td>871</td>
<td>Constitutional Law II</td>
<td>LAW 732G</td>
<td>1-4</td>
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<tr>
<td></td>
<td>Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom of speech, association, and press; and constitutional principles enforcing the first amendment's command that &quot;Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.&quot;</td>
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<tr>
<td>872</td>
<td>Introduction to Law, Legal Process, and Legislation</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>874</td>
<td>Torts I</td>
<td>LAW 503G</td>
<td>1-6</td>
<td>6</td>
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<tr>
<td></td>
<td>Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.</td>
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<tr>
<td>875</td>
<td>Torts II</td>
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<td>1-6</td>
<td>6</td>
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<td>880B</td>
<td>Designing Instructional Technology K–12</td>
<td></td>
<td>1-3</td>
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<tr>
<td>890</td>
<td>Workshop Seminar</td>
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<td>Refer to Workshop Seminars in Education under the &quot;Education&quot; section of this bulletin.</td>
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<tr>
<td>893</td>
<td>Workshop Seminar</td>
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</tbody>
</table>

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.
893

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

EDAD 896

**Independent Study**

Prereqs:
- Permission

Selected topic with the direction and guidance of a staff member.

EDAD 899

**Masters Thesis**

Prereqs:
- Admission to masters degree program and permission of major adviser

EDAD 901

**System-Level School Improvement**

This course is a prerequisite for: [EDAD 902](http://bulletin.unl.edu/courses/EDAD/902)

Knowledge and skills required for system-level leaders to bring about school improvement and enhance student achievement. Creating systems that engage the public, performing in complex political environments, and delivering needed services to schools and classrooms.

EDAD 902

**Data for Action Planning**

Prereqs:
- [EDAD 901](http://bulletin.unl.edu/courses/EDAD/901).
- [EDAD 902](http://bulletin.unl.edu/courses/EDAD/902) requires developing an initial school improvement plan.

Assessment theory and types of assessments used to measure student performance relative to a school improvement goal. Relationships between profile data and baseline data, locally developed classroom assessments, and post data pertaining to school improvement goals and action plans.

EDAD 903

**Issues in Community Relations**

This course is a prerequisite for: [EDAD 904](http://bulletin.unl.edu/courses/EDAD/904)

Principles of community relations and public relations; development of school and community understanding; collaboration of educators and community agents and agencies; communication tools and evaluation.

EDAD 904

**Analysis in Continuous Improvement**

[EDAD 904](http://bulletin.unl.edu/courses/EDAD/904)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>904</td>
<td>EDAD 904: Issues in Governance of Educational Institutions</td>
<td>Prereqs: EDAD 903 [link]</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Requires generating recommendations for proceeding into the next cycle of school improvement and conducting a personal self-analysis of improvement process skills and obtaining information from supervisors and/or colleagues regarding abilities as a staff. Analyze how staff attitudes and behaviors are impacted through the improvement process.</td>
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<tr>
<td>905</td>
<td>EDAD 905: Issues in Governance of Educational Institutions</td>
<td></td>
<td>1-3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Issues in the governance of K-12 schools including administrator-school board roles and relationships.</td>
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<tr>
<td>906</td>
<td>EDAD 906: Issues in System Level Administration</td>
<td>Prereqs: Masters degree or equivalent.</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td></td>
<td>Selected system level issues faced by pre-K to grade 12 school administrators.</td>
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<tr>
<td>907</td>
<td>EDAD 907: Issues in Educational Politics and Policies</td>
<td></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>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 institutional structures with competing interests; understand people as the actors in roles they occupy in the political system.</td>
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<tr>
<td>908/929</td>
<td>EDAD 908/929: Seminar in Adult and Continuing Education</td>
<td>Crosslisted as EDPS 929</td>
<td>1-6</td>
<td>Lecture 3</td>
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<tr>
<td>909</td>
<td>EDAD 909: Seminar in Human Resource Development</td>
<td>Prereqs: EDAD 821 or 822 [link]</td>
<td>1-3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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</tbody>
</table>
Current research and theory within the field of human resource development, broadly defined. Stresses key problems affecting the training, development, and education of human resources within organizational settings.

**EDAD 910 The Higher Education Environment**  
[LINK](http://bulletin.unl.edu/courses/EDAD/910)

Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutions. Environment concepts, components and structures are studied together with analysis techniques and methodological approaches to future study.

**EDAD 912A Educational Leadership in Higher Education**  
[LINK](http://bulletin.unl.edu/courses/EDAD/912A)

Strategic thinking, application of leadership theories in the educational setting. Develop a clear personal philosophy of leadership and engage in collaborative active-learning. Multi-media simulations and/or scenarios and role playing to examine options, consequences, and leadership effectiveness in decision-making.

**EDAD 912B Educational Leadership in Community Colleges**  
[LINK](http://bulletin.unl.edu/courses/EDAD/912B)

Issues facing community college leaders and the knowledge, skills, and competencies necessary to provide effective leadership in the community college setting. Case studies of community colleges, combined with the literature on community college leadership, and active learning opportunities to examine current practices and develop a personal philosophy of leadership.

**EDAD 921 Administrative Issues in Higher Education**  
[LINK](http://bulletin.unl.edu/courses/EDAD/921)

Introduction to contemporary issues in the administration of higher education with a focus on the scholarly literature, a comparative analysis of administration in types of institutions, leadership and planning, institutional and environmental issues, and selected topics.

**EDAD 922 Finance in Higher Education**  
[LINK](http://bulletin.unl.edu/courses/EDAD/922)

Federal and state government funding, institutional planning, technological and community influences, human resources finance, budgeting, and sources of financial support as they relate to higher education institutions and agencies.

**EDAD 923 The Community/Junior College**  
[LINK](http://bulletin.unl.edu/courses/EDAD/923)

Designed particularly for those interested in upper secondary and college
levels. Junior college movement; relationship of movement to provisions 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.

**EDAD 924** Administration of Higher Education Instructional Programs

Administration of higher education instructional programs. Exploration of curricular issues including an assessment of program quality and reputation, program reallocations, retrenchments, and expansions.

**EDAD 925** Law and Higher Education

Examination of legal principles applicable to higher education institutions. Overview of the legal system, higher education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights and responsibilities, institutional and personal liability, and other selected issues.

**EDAD 926** The American Professoriate: An Administrative Perspective

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.

**EDAD 931** Higher Education Information Systems

Foundation in management information systems. Issues in information systems, current research and writings, key terms, and how information systems impacts organizational culture, business processes, work-flow, and overall operations of an institution. The roles in the application, analysis, and management of higher education administration technology.

**EDAD 932** Global Issues in Higher Education

Selected issues affecting global educational policies and practices.

**EDAD 933** Strategic Planning

EDAD 933 requires the student to analyze their respective institution’s planning process and plan, and to participate in a simulation activity that reinforces the principles and
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Description</th>
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<tbody>
<tr>
<td>EDAD 934</td>
<td>Teaching and Learning in the Community College</td>
<td>Develop comprehensive understanding of five aspects of the community college: Curricular missions in general education, transfer education, career education, remedial/developmental education and community education; faculty and student populations; exemplary teaching and assessment of student learning outcomes; program and curriculum development; and human resources aspects related to instructional programs in hiring faculty and providing faculty development programs.</td>
</tr>
<tr>
<td>EDAD 935</td>
<td>Workforce, Economic, and Community Development</td>
<td>Workforce, economic and community development role of higher education within the broader context of recent economic, social, and technological changes in communities, society, and the economy. Applicable to higher education in general with an emphasis on the example of two-year community colleges.</td>
</tr>
<tr>
<td>EDAD 948</td>
<td>Instructional Leadership: Emerging Trends and Practices</td>
<td>Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.</td>
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<tr>
<td>EDAD 956</td>
<td>Employment Law Seminar</td>
<td>Selected current national and state legal issues pertaining to private and public employment.</td>
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<tr>
<td>EDAD 959</td>
<td>Law and Educational Administration</td>
<td>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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.</td>
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<td>Public Employment Law</td>
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Credit Hours: 1–4  
Campus:  
Course Delivery: Classroom

**Legal issues relating to public employment with particular emphasis on public schools and colleges; collective bargaining by public employees, impasse, and 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, wage and hour laws, retirement plans, and public records.**

**Trial Advocacy**  
Prereqs: [LAW 646G](http://bulletin.unl.edu/courses/LAW/646G).  
Students perform weekly exercises which are videotaped and critiqued and will try a case. Fundamentals of trial practice. Emphasis on questioning witnesses, selecting and addressing the jury, and admitting items into evidence.

**Legislation Seminar**  
Crosslisted as [LAW 777G](http://bulletin.unl.edu/courses/LAW/777G).  
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.

**Local Government Law**  
Crosslisted as [LAW 788G](http://bulletin.unl.edu/courses/LAW/788G).  
Law of local government units with emphasis on current problems in the operation and administration of local government, models and theories of local government.

**Seminar in Educational Administration**  
Prereqs: Permission  
Education administration problems with an analysis of research and literature pertaining to these problems.

**Education Law Seminar**  
Crosslisted as [LAW 621G](http://bulletin.unl.edu/courses/LAW/621G).  
Selected current national and state legal issues pertaining to education.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted As</th>
<th>Link</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDAD 970</td>
<td>Criminal Law</td>
<td>LAW 508G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/970">Link</a></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDAD 971</td>
<td>Evidence</td>
<td>LAW 646G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/971">Link</a></td>
<td>1-4</td>
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<td>Classroom</td>
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<td>Relevancy and admission of evidence, including hearsay, opinions, privileges, other exclusionary rules, examination of witnesses, judicial notice, and physical evidence.</td>
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<tr>
<td>EDAD 973</td>
<td>Jurisprudence</td>
<td>LAW 672G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/973">Link</a></td>
<td>3</td>
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<td>Classroom</td>
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<td>What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.</td>
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<tr>
<td>EDAD 976</td>
<td>Legal Control of Discrimination</td>
<td>LAW 680G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/976">Link</a></td>
<td>1-4</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Selected legal issues pertaining to the legal control of discrimination.</td>
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<tr>
<td>EDAD 977</td>
<td>Constitutional History</td>
<td>LAW 619/619G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/977">Link</a></td>
<td>1-4</td>
<td>Lecture</td>
<td>Classroom</td>
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<td>American constitutional history with a focus on &quot;transformative&quot; moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.</td>
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<tr>
<td>EDAD 978</td>
<td>Mass Communications Law</td>
<td>LAW 649G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/978">Link</a></td>
<td>1-4</td>
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<td>In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.</td>
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<tr>
<td>EDAD 979</td>
<td>Seminar in College Student Personnel Work</td>
<td>EDPS 979</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/979">Link</a></td>
<td>2-3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Current professional issues related to the organization and administration of student personnel within higher education. Exploration of research.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Prereqs</td>
<td>Max credits per degree</td>
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<tr>
<td>EDAD 981</td>
<td><strong>Introduction to Research</strong></td>
<td>1–6</td>
<td>A written report is required. Investigation and analysis of current problems in education administration and supervision.</td>
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<tr>
<td>EDAD 988</td>
<td><strong>Dissertation Proposal Development</strong></td>
<td>3</td>
<td>Prereqs: Admission to a doctoral program</td>
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<tr>
<td>EDAD 989</td>
<td><strong>Survey of Administrative Research</strong></td>
<td>3</td>
<td>Intended primarily for students of education who are candidates for doctoral degrees. Readings, discussions, and an analysis of educational problems and research.</td>
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<tr>
<td>EDAD 990</td>
<td><strong>Workshop Seminar</strong></td>
<td></td>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
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<tr>
<td>EDAD 991</td>
<td><strong>Field Studies in Education</strong></td>
<td>1–3</td>
<td>Prereqs: Permission</td>
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<td></td>
<td>Crosslisted as NUTR 991, TEAC 991</td>
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<td>Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.</td>
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<tr>
<td>EDAD 993</td>
<td><strong>Workshop Seminar</strong></td>
<td></td>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
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Campus: Classroom
Course Delivery: Classroom
**Doctoral Seminar**

**Prereqs:** Permission  
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. Intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

**Credit Hours:** 3  
**Max credits per degree:** 18  
**Campus:**  
**Course Delivery:** Classroom

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**Seminar: Internship in Educational Administration**

**Prereqs:** Permission  
Opportunity for educational administrators to gain an understanding of administering changes or innovations, and to obtain supervised field experience. Consideration will be given antecedents of change, change models, the role of government, forces that restrict or stimulate change, tools to implement change, and evaluation.

**Credit Hours:** 1–6  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom

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**Doctoral Dissertation**

**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1–24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom

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**Historical Methods in Educational Research**

Crosslisted as EDAD 900J  
**Prereqs:** EDPS *800 or equivalent; EDPS 459  
Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

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**Seminar in College Student Development**

Crosslisted as EDAD 980  
Special field experiences and research projects are available to students for additional credit.  
Current knowledge, theories, and practices, and related issues in the area of college student development.

**Credit Hours:** 2–3  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom

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**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

**Credit Hours:**  
**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Prereqs</th>
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<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>425/825</td>
<td>Coordination in Occupational Training Programs</td>
<td>EDPS 859 (or parallel; EDPS 859 or equivalent)</td>
<td>1-3</td>
<td>12</td>
<td>Lecture</td>
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<td></td>
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<td>Aspects of education not covered elsewhere in the curriculum.</td>
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<tr>
<td>478/878</td>
<td>Pro-seminar in Latin American Studies</td>
<td>Junior standing and permission.</td>
<td>3</td>
<td>6</td>
<td>Classroom</td>
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<td></td>
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<td>An interdisciplinary analysis of topical issues in Latin American Studies.</td>
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<td>855</td>
<td>Teaching Learners to Learn</td>
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<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
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<tr>
<td>908/929</td>
<td>Seminar in Adult and Continuing Education</td>
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<td>979</td>
<td>Seminar in College Student Personnel Work</td>
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<td>Classroom</td>
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<td>Current professional issues related to the organization and administration of student personnel within higher education. Exploration of research</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Max credits per degree</td>
<td>Campus:</td>
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<td>Literature, some field experiences, and in-depth examination of special topics.</td>
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<tr>
<td>EDPS 451/851</td>
<td>Psychology of Adolescence</td>
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<td>Classroom</td>
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<td>Mental, social, and emotional development of boys and girls during the adolescent period.</td>
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<tr>
<td>EDPS 454/854</td>
<td>Human Cognition and Instruction</td>
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<td>Classroom</td>
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<td>Cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.</td>
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<tr>
<td>EDPS 459/859</td>
<td>Statistical Methods</td>
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<td>Classroom</td>
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<td>Computation and interpretation of measures of central position, variability, and correlation; introduction to sampling, probability, and tests of significance.</td>
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<tr>
<td>EDPS 462/862</td>
<td>Psychology of Disability</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.</td>
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<tr>
<td>EDPS 463/863</td>
<td>Introduction to Applied Behavior Analysis</td>
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<td>Classroom</td>
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<td>Research methods and findings, concepts, and principles of operant conditioning as related to the experimental analysis of human behavioral events and to the development of behavior engineering technologies.</td>
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<tr>
<td>EDPS 465/865</td>
<td>Practices in Counseling and Personnel Services</td>
<td>1-8</td>
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<td></td>
<td>Basic practices and related research in counseling and helping practices in</td>
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</tbody>
</table>
educational or other youth-serving agencies. Specialized applications to populations presenting unique problems are offered in sections B through L. B. Special Practices for Handicapped Children and Youth (1 cr) Prereq or parallel: EDPS 465A (http://bulletin.unl.edu/courses/EDPS/465A)
D. Special Practices for Exceptionally Talented and Gifted (1 cr) Prereq or parallel: EDPS 465A (http://bulletin.unl.edu/courses/EDPS/465A)
E. Special Practices in the Elementary School (1 cr) Prereq or parallel: EDPS 465A (http://bulletin.unl.edu/courses/EDPS/465A)
F. Special Practices for Vocational Education/Development Programs (1 cr) Prereq or parallel: EDPS 465A (http://bulletin.unl.edu/courses/EDPS/465A)
G. Special Practices for Community Helpers Working with Adults (1 cr) Prereq or parallel: EDPS 465A (http://bulletin.unl.edu/courses/EDPS/465A)

EDPS 469/869  Psychopathological Disorders of Childhood and Adolescence  LINK (http://bulletin.unl.edu/courses/EDPS/469)
Credit Hours: 3
Course Delivery: Classroom
Investigation of the genesis, course, classification, and treatment of function and organic pathologies found in children and adolescents.

EDPS 470/870  Introduction to Educational and Psychological Measurement  LINK (http://bulletin.unl.edu/courses/EDPS/470)
Credit Hours: 3
Course Delivery: Classroom
Introduction to the construction, 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.

EDPS 496/896  Directed Field Experience  LINK (http://bulletin.unl.edu/courses/EDPS/496)
Credit Hours: 1-24
Course Delivery: Classroom
Prereqs: Permission.

EDPS 498/898  Special Topics  LINK (http://bulletin.unl.edu/courses/EDPS/498)
Credit Hours: 1-6
Max credits per semester: 6
Course Delivery: Classroom
Prereqs: Permission.
Seminar on current issues or topics in educational psychology. Topics vary.

EDPS 800  Foundations of Educational Research  LINK (http://bulletin.unl.edu/courses/EDPS/800)
Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom
Prereqs: EDPS 459 (http://bulletin.unl.edu/courses/EDPS/459) or equivalent or parallel EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)
Purposes 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.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>845</td>
<td>Computer-Assisted Research Data Analysis</td>
<td>One statistics course beyond EDPS 859</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Pass/No Pass only.</td>
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<td></td>
<td></td>
<td>Statistical software packages for both mainframe and microcomputers. How to develop and manage data files; how to transfer data files between computers; and principles of data transformation and selection.</td>
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<tr>
<td>846</td>
<td>Foundations of Health Behavior</td>
<td>Crosslisted as NUTR 846</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education.</td>
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<td>847</td>
<td>Theoretical Models of Health Behavior Change</td>
<td>Crosslisted as NUTR 847</td>
<td>3</td>
<td>Classroom</td>
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<td>Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks.</td>
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<tr>
<td>850</td>
<td>Child Psychology</td>
<td></td>
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<td>Classroom</td>
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<td></td>
<td></td>
<td>Advanced study of the behavior and development of preschool and elementary school children.</td>
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<tr>
<td>853</td>
<td>Psychological Assessment I</td>
<td></td>
<td>3</td>
<td>Classroom</td>
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<td></td>
<td></td>
<td>Prereqs: EDPS 870 or equivalent</td>
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<td></td>
<td>This course is a prerequisite for EDPS 960, EDPS 961, EDPS 962, EDPS 963, EDPS 964</td>
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<td>Basic assessment and testing skills including &quot;behavioral observation&quot;, 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.</td>
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<tr>
<td>860</td>
<td>Applications of Selected Advanced Statistics</td>
<td></td>
<td>3</td>
<td>Classroom</td>
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</tbody>
</table>
**EDPS 860**

**Prereqs:**
[EDPS 859](http://bulletin.unl.edu/courses/EDPS/859)

Variety of parametric and nonparametric 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. Appropriate mainframe and microcomputer statistical packages utilized to assist in the numerical analysis of data.

**EDPS 866**

**Counseling Pre–Practicum**

Counseling skills required for basic, entry-level clinical work. Practicing skills, receiving peer/instructor performance feedback, and role-playing clinical situations.

**EDPS 867**

**Roles and Functions in School Psychological Services**

Foundations, models, and practices of contemporary school psychology and an exploration of transitions and future developments in the profession. Investigations of the major legal and ethical systems affecting specialists in the schools and the application of standards for ethical professional practice.

**EDPS 868**

**Multicultural Counseling**

**Prereqs:**
[EDPS *866 or comparable course or permission](http://bulletin.unl.edu/courses/EDPS/866)

Ethnic subcultures in the US, cross-cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity in the counseling relationship.

**EDPS 890**

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**EDPS 893**

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
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<tbody>
<tr>
<td>EDPS 897J</td>
<td>Gifted/Talented</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/897J">http://bulletin.unl.edu/courses/EDPS/897J</a>)</td>
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<tr>
<td>EDPS 899</td>
<td>Masters Thesis</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/899">http://bulletin.unl.edu/courses/EDPS/899</a>)</td>
<td>6-10</td>
<td>Classroom</td>
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<tr>
<td>EDPS 900A</td>
<td>Correlational and Experimental Methods in Educational Research</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/900A">http://bulletin.unl.edu/courses/EDPS/900A</a>)</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>EDPS 900B</td>
<td>Single Case/Small N Methods in Educational Research</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/900B">http://bulletin.unl.edu/courses/EDPS/900B</a>)</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>EDPS 900D</td>
<td>Survey Methods in Educational Research</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/EDPS/900D">http://bulletin.unl.edu/courses/EDPS/900D</a>)</td>
<td>3</td>
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<tr>
<td>EDPS 900J</td>
<td>Historical Methods in Educational Research</td>
<td>Crosslisted as EDAD 900J</td>
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</table>
### EDPS 900J

**Prereqs:**
- EDPS *800 or equivalent; EDPS 459
- EDPS 859 or equivalent

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

### Qualitative Approaches to Educational Research

**Prereqs:**
- EDPS 459 or equivalent; EDPS *800 or equivalent

Uses of qualitative research methods in education. The theoretical premises of research using qualitative methods and the application of this information through critique and planning research. Qualitative methods for data collection.

### EDPS 900K

**Prereqs:**
- EDPS 459 or equivalent; EDPS *800 or equivalent

### Research and Evaluation Literature on Health Promotion

Crosslisted as NUTR 905

Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care–based health promotion and education programs.

### EDPS 905

Crosslisted as TEAC 935

Seminar intended for doctoral–level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

### EDPS 936

**Prereqs:**
- EDUC 800 or equivalent, and EDUC 900K

Mixed Methods Research is for students already familiar with quantitative and qualitative research. An introduction to mixed methods research as a distinct methodology in social science research. Topics include the value and use of this approach, philosophical assumptions, various types of design, and approaches to designing and conducting mixed methods research.

### Intermediate Statistics: Experimental Methods
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>941</td>
<td>Crosslisted as SRAM 941</td>
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<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Computation, interpretation, and application of analysis of variance techniques, including factorial and mixed model designs. Computer and microcomputer software accessed.</td>
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<tr>
<td>942</td>
<td><strong>Intermediate Statistics: Correlational Methods</strong> Link (<a href="https://bulletin.unl.edu/courses/EDPS/942">https://bulletin.unl.edu/courses/EDPS/942</a>)</td>
<td><a href="https://bulletin.unl.edu/courses/EDPS/859">EDPS 859</a> or equivalent</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Various correlational–based statistical procedures presented, including linear and nonlinear regression, multiple regression, statistical control, analysis of interactions, the general linear model, factor analysis, and discriminant analysis.</td>
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<td>948</td>
<td><strong>Multicultural Issues in School Psychological Service Delivery</strong> Link (<a href="https://bulletin.unl.edu/courses/EDPS/948">https://bulletin.unl.edu/courses/EDPS/948</a>)</td>
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<td></td>
<td>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.</td>
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<td>949</td>
<td><strong>Cognitive and Behavioral Therapy with Children and Adolescents</strong> Link (<a href="https://bulletin.unl.edu/courses/EDPS/949">https://bulletin.unl.edu/courses/EDPS/949</a>)</td>
<td><strong>Permission</strong></td>
<td>3</td>
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<td>Cognitive and behavioral techniques. Theoretical issues, application and evaluation of major empirically-validated therapeutic treatments that represent best practices in child and adolescent therapy.</td>
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<td>950</td>
<td><strong>Intellectual Assessment</strong> Link (<a href="https://bulletin.unl.edu/courses/EDPS/950">https://bulletin.unl.edu/courses/EDPS/950</a>)</td>
<td>Prereqs: <a href="https://bulletin.unl.edu/courses/EDPS/859">EDPS 859</a> or coreq: <a href="https://bulletin.unl.edu/courses/EDPS/859">EDPS 859</a>, <a href="https://bulletin.unl.edu/courses/EDPS/870">870</a>, and permission</td>
<td>1–4</td>
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<td>Classroom</td>
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<td>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.</td>
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<tr>
<td>951</td>
<td><strong>Academic and Behavioral Assessment</strong> Link (<a href="https://bulletin.unl.edu/courses/EDPS/951">https://bulletin.unl.edu/courses/EDPS/951</a>)</td>
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</table>
Advanced study of the theory and practice in the assessment of educational and psychological problems of children and youth to include assessment of systems that impact on the behavior of children and youth. Assessment techniques include environmental observation, interviewing, standardized assessment procedures for academic skills, adaptive behavior, social and emotional problems, curriculum based assessment, and functional analysis and assessment. Ecological-behavioral basis of assessment is explored. A complete psychological and educational evaluation is conducted in a school or other relevant setting.

### EDPS 952 Systems of Consultation in School Psychology

- **Prereqs:** EDPS 863
- **Credit Hours:** 3
- **Campus:** Classroom

Intensive analysis of the theory and practice of various systems of mental health consultation in the schools with special emphasis and practicum with mental health service models other than conventional clinical, psychometric, and direct psychoeducational remediation models.

### EDPS 953 Psychological Assessment II

- **Prereqs:** EDPS 853 or equivalent
- **Credit Hours:** 4
- **Campus:** Classroom

Advanced assessment and testing skills. Selection, administration and interpretation of a battery of psychological tests and integration and synthesis of relevant test and non-test data into an accessible report writing format. Development of effective consultation and test interpretation feedback skills.

### EDPS 954 Interventions in School Psychology

- **Prereqs:** EDPS 463/863, EDPS 951 or parallel; and permission
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:** Classroom

Prepares school psychologists to plan and provide evidence-based psychoeducational interventions for children, youth, families and schools. Application of ecobehavioral theory, models of school mental health, the scientist-practitioner model, the practice of psychotherapy, and empirical evidence of the effectiveness of interventions for culturally and linguistically diverse students.

### EDPS 955 Child Therapy

- **Prereqs:** EDPS 949
- **Credit Hours:** 4
- **Max credits per degree:** 12
- **Campus:** Classroom

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.

**EDPS 956**  
**Projective Psychological Assessment**

Prereqs:  
[EDPS 853](http://bulletin.unl.edu/courses/EDPS/853), and [EDPS 953](http://bulletin.unl.edu/courses/EDPS/953). Permission may be granted by Instructor to take Psychological Assessment II after Projective Psychological Assessment.

The primary goal of this course is to assist doctoral students in developing their ability to utilize projective assessment techniques to integrate information from a variety of sources about a person (an adult or older adolescent) into an integrated, useful psychological report. The broad array of data will include not only the results of formal tests (e.g., the Rorschach), but also personal and family history, and behavioral observations.

**EDPS 958B**  
**Practicum in School Psychology Consultation Techniques**

Prereqs:  
[EDPS 863](http://bulletin.unl.edu/courses/EDPS/863), [952](http://bulletin.unl.edu/courses/EDPS/952), [997D](http://bulletin.unl.edu/courses/EDPS/997D) or equivalent, and permission

Practicum experience in ecological/behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/feedback sessions each week.

**EDPS 960**  
**Problem Solving and Concept Learning in Humans**

Prereqs:  
[EDPS 850](http://bulletin.unl.edu/courses/EDPS/850) or [851](http://bulletin.unl.edu/courses/EDPS/851) and [854](http://bulletin.unl.edu/courses/EDPS/854)

Critical examination of the non-Piagetean research literature and theory which examines higher mental processes in humans through the lifespan.

**EDPS 961**  
**Cognitive Development**

Prereqs:  
[EDPS 850](http://bulletin.unl.edu/courses/EDPS/850) or [851](http://bulletin.unl.edu/courses/EDPS/851) and permission

Critical examination of theories and research on cognitive development throughout the lifespan, including Piagetean and alternative perspectives.

**EDPS 962**  
**Research Literature in Personality and Social Development**

Prereqs:  
[EDPS 850](http://bulletin.unl.edu/courses/EDPS/850) or [851](http://bulletin.unl.edu/courses/EDPS/851)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credits</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 963</td>
<td>Developmental Psychobiology</td>
<td>EDPS 850 or 851 and permission</td>
<td>3</td>
<td>Classroom</td>
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<td>Biologcial foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.</td>
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<tr>
<td>EDPS 964</td>
<td>Counseling Theories and Intervention Techniques</td>
<td>EDPS *866</td>
<td>3</td>
<td>Classroom</td>
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<td>Parallel: EDPS 997A and permission of counseling area. Overview of theoretical approaches to counseling. Close examination of selected theories and intervention procedures.</td>
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<tr>
<td>EDPS 965A</td>
<td>Group Counseling: Social Psychological Aspects</td>
<td>EDPS *866</td>
<td>3</td>
<td>Classroom</td>
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<td>Parallel: EDPS 964 and 997A. Develops student competencies in analyzing organizational contexts, designing group counseling experiences, and evaluating group experiences.</td>
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<tr>
<td>EDPS 966</td>
<td>Psychology of Learning</td>
<td>EDPS 854 and 870</td>
<td>3</td>
<td>Classroom</td>
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<td>Theories of learning and experimental investigation in the field of animal and human behavior and their application to the classroom.</td>
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<td>EDPS 967</td>
<td>Psychology of Motivation in Education</td>
<td>Graduate standing EDPS 854</td>
<td>3</td>
<td>Classroom</td>
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<td>Psychology of Motivation focuses on understanding and impacting students' motivation to learn. Theories discussed in this class are applicable to a wide array of achievement settings (e.g., math, science, writing, health education) as well as more general motivational concerns (e.g., studying, addiction, video games). Content covered includes drive theory, behaviorism as</td>
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motivation, achievement motivation, goal theory, self-determination theory, social cognitive theory, and ecological theories of motivation.

### EDPS 968 Gender and Counseling Psychology

**Prereqs:**
Admitted as a graduate student in the Counseling Psychology program.

The major purpose of this course is for students to learn about gender issues within the field of counseling psychology from a multicultural and feminist perspective and to gain the essential knowledge and techniques in working with gender issues in diverse settings.

### EDPS 969 Nonparametric Statistical Methods

**Prereqs:**
EDPS 859 or equivalent

Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi Square tests, rank tests of location (Wilcoxon, Mann Whitney, Kruskal-Wallis, Friedman), tests of goodness of fit (Chi Square, Kolmogorov-Smirnoff), tests of randomness (Runs).

### EDPS 97 College Major Forum

This course is a prerequisite for EDPS 973B and EDPS 978.

EDPS 97 is Pass/No Pass only.

This is an eight week seminar course for first semester students in the General Studies Learning Community. Students will complete activities to identify interests, research majors that match their interests and complete a “Guided Professional Shadowing” experience to gain first-hand knowledge about a career of their choice.

### EDPS 970 Theory and Methods of Educational Measurement

**Prereqs:**
EDPS 859 and 870; EDPS/SRAM 941; or equivalent

Presentation of various measurement theories and concepts, including classical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion-referenced tests.

### EDPS 971 Structural Equation Modeling

**Prereqs:**
EDPS/SRAM 942 and 970; or equivalent

Introduction to the techniques of path analysis, confirmatory factor analysis,
and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

### Multivariate Analysis

**Course Code:** EDPS 972  
Crosslisted as SRAM 972

**Prereqs:**  
EDPS/SRAM 941 [link](http://bulletin.unl.edu/courses/SRAM/941) and 942 [link](http://bulletin.unl.edu/courses/SRAM/942)

Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

### Evaluation Theory and Practice

**Course Code:** EDPS 973A

This course is a prerequisite for [EDPS 973B](http://bulletin.unl.edu/courses/EDPS/973B)

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.

### Evaluation Practicum

**Course Code:** EDPS 973B

Prereqs:  
EDPS 973A [link](http://bulletin.unl.edu/courses/EDPS/973A) or permission

Actual supervised evaluation of a program or project.

### Guidance and Counseling in Schools

**Course Code:** EDPS 974


### Occupations and Vocational Psychology

**Course Code:** EDPS 975

Evaluation and uses of occupational and educational information; job analysis; psychological and behavioral attributes relating to work and lifestyles; occupational taxonomies; career development theories; impact of accelerating changes on personal and social planning; investigations of value-oriented expectations as sources of work satisfaction and dissatisfaction; critical assessment of the concept of vocational choice. For counselors and educators.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPS 976</td>
<td>Advanced Counseling Psychology I: Counseling Theory and Practice</td>
<td>Doctoral level counseling students and others by permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>This course is a prerequisite for: EDPS 978</td>
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<td></td>
<td>Counseling methodology in relationship to personality theory and research. Consideration of various theories and research in relation to counseling practice.</td>
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<tr>
<td>EDPS 977</td>
<td>Seminar in College Student Development</td>
<td>Crosslisted as EDAD 980</td>
<td>2-3</td>
<td>6</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Special field experiences and research projects are available to students for additional credit.</td>
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<tr>
<td></td>
<td>Current knowledge, theories, and practices, and related issues in the area of college student development.</td>
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<tr>
<td>EDPS 978</td>
<td>Advanced Counseling Psychology II: Research in Counseling</td>
<td>EDPS 976 (<a href="http://bulletin.unl.edu/courses/EDPS/976">http://bulletin.unl.edu/courses/EDPS/976</a>); EDUC 900A (<a href="http://bulletin.unl.edu/courses/EDUC/900A">http://bulletin.unl.edu/courses/EDUC/900A</a>) and either EDUC 900B (<a href="http://bulletin.unl.edu/courses/EDUC/900B">http://bulletin.unl.edu/courses/EDUC/900B</a>) or 900K (<a href="http://bulletin.unl.edu/courses/EDUC/900K">http://bulletin.unl.edu/courses/EDUC/900K</a>)</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Research strategies appropriate for counseling psychology. Identification of researchable problem and completion of research proposal including literature review, design, and proposed data analysis procedures.</td>
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<tr>
<td>EDPS 980</td>
<td>Item Response Theory</td>
<td>EDPS 870 (<a href="http://bulletin.unl.edu/courses/EDPS/870">http://bulletin.unl.edu/courses/EDPS/870</a>) and 970 (<a href="http://bulletin.unl.edu/courses/EDPS/970">http://bulletin.unl.edu/courses/EDPS/970</a>); or permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Principles of item response theory (IRT) and its application to a variety of issues in educational and psychological measurement. Theoretical foundations of IRT discussed along with its assumptions and varied applications. Experience using IRT calibration and scoring computer software.</td>
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<tr>
<td>EDPS 981</td>
<td>School Practice in School Psychology</td>
<td>by permission of course instructor</td>
<td>2-4</td>
<td>8</td>
<td>Field, Lab, Lecture</td>
</tr>
<tr>
<td></td>
<td>Supervised practice in local school districts related to academic, social, behavioral and emotional disorders of children and adolescents.</td>
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<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Max credits per semester</td>
<td>Max credits per degree</td>
<td>Course Format</td>
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<tr>
<td>EDPS 982</td>
<td>Clinical Practice in School Psychology</td>
<td>2–4</td>
<td>4</td>
<td>16</td>
<td>Field, Lab, Lecture</td>
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<tr>
<td></td>
<td><em>Prereqs:</em> by permission of course instructor</td>
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<tr>
<td></td>
<td>Supervised clinical practice related to academic, social, behavioral and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasized.</td>
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<tr>
<td>EDPS 983</td>
<td>Community Practice in School Psychology</td>
<td>2–4</td>
<td>4</td>
<td>16</td>
<td>Field, Lab, Lecture</td>
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<td></td>
<td><em>Prereqs:</em> Doctoral standing in professional psychology program and permission</td>
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<td></td>
<td>Supervised clinical experience working with children, adolescents and families in a variety of school and community settings.</td>
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<tr>
<td>EDPS 984</td>
<td>Ethics and Ethical Decision Making in Counseling and Education</td>
<td>3</td>
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<tr>
<td></td>
<td>Ethical principles in the practice of counseling. Application of ethical guidelines and development of ethical decision-making models relevant to school and mental health contents.</td>
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<tr>
<td>EDPS 985</td>
<td>Couple and Family Counseling</td>
<td>3</td>
<td></td>
<td></td>
<td>Lecture 3</td>
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<td></td>
<td><em>Prereqs:</em> EDPS *866 or equivalent</td>
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<td></td>
<td>Couple and family systems and change strategies. Active, brief forms of couple and family counseling and enrichment formats.</td>
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<tr>
<td>EDPS 987</td>
<td>Developmental Perspectives on Gender and Sexuality in Counseling</td>
<td>3</td>
<td></td>
<td></td>
<td>Lecture 3</td>
</tr>
<tr>
<td>EDPS 989</td>
<td>Psychology of Reading</td>
<td>3</td>
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<tr>
<td></td>
<td>Crosslisted as TEAC 989</td>
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<td><em>Prereqs:</em> TEAC *811 or 841 or SPED 886</td>
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<tr>
<td></td>
<td>Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and</td>
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</tbody>
</table>
models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

**Workshop Seminar (EDPS 990)**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Seminar in Educational Psychology and Measurements (EDPS 991)**

Prereqs: Permission

Credit Hours: 1-12
Max credits per degree: 12
Course Format: Lecture
Campus: Course Delivery: Classroom

**Workshop Seminar (EDPS 993)**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Doctoral Seminar (EDPS 995)**

Prereqs: Permission

EDPS 995 is intended primarily for EDPS 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Research Other Than Thesis (EDPS 996A)**

Independent operational research under faculty supervision.

**Readings in Educational Psychology (EDPS 996B)**

Prereqs: Permission

Readings on selected problems in educational psychology.
### Practicum in Counseling (EDPS 997A)

**Credit Hours:** 2-4  
**Campus:** Classroom  
**Prereqs:** Masters admission in educational psychology or permission of counseling area, EDPS *866*  

This course is a prerequisite for:  
[EDPS 997B](http://bulletin.unl.edu/courses/EDPS/997B),  
[EDPS 997G](http://bulletin.unl.edu/courses/EDPS/997G)  

Parallel: EDPS 964. Supervised laboratory clinic-based experiences in counseling.

### Field Placement in Counseling (EDPS 997B)

**Credit Hours:** 2-4  
**Campus:** Classroom  
**Prereqs:** EDPS 997A  

Supervised field experiences in school counseling, college student personnel, and community social service agencies.

### Practicum in Behavior Management Technologies (EDPS 997D)

**Credit Hours:** 3  
**Max credits per degree:** 6  
**Campus:** Classroom  
**Prereqs:** EDPS 863 and permission  

Supervised practicum in the design, implementation, evaluation, and reporting of various behavior modification technologies for individuals and groups; social systems engineering.

### Practicum in Counselor Supervision and Consultation (EDPS 997E)

**Credit Hours:** 2  
**Campus:** Classroom  
**Prereqs:** EDPS 997G or equivalent  

Supervised counseling supervision and consultation experience emphasizing process methods and evaluation.

### Advanced Practicum in Counseling (EDPS 997G)

**Credit Hours:** 2-4  
**Campus:** Classroom  
**Prereqs:** EDPS 997A and permission  

This course is a prerequisite for:  
[EDPS 997E](http://bulletin.unl.edu/courses/EDPS/997E)  

Supervised counseling experience in university, schools, and community agencies.

### Advanced Practicum in Gifted Education (EDPS 997J)

Crosslisted as SPED 997J

[SPED 997J](http://bulletin.unl.edu/courses/SPED/997J)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Max Credits per Semester</th>
<th>Max Credits per Degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 997K</td>
<td>Supervision in School Psychology</td>
<td>3</td>
<td>8</td>
<td>8</td>
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<td>Classroom</td>
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<td><strong>Prereqs:</strong></td>
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<td></td>
<td>Permission</td>
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<td></td>
<td>Advanced practicum in the education of the gifted/talented child. Psychodiagnostic procedures; theory and research; and program organization, operation, and evaluation in a field setting.</td>
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<td>Doctoral standing in professional psychology program and permission.</td>
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<td></td>
<td>Supervised experience in supervising graduate students in practicum settings. Refinement of consultation, assessment, diagnosis, and treatment skills.</td>
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<tr>
<td>PSYC 471/871</td>
<td>Human Sexuality and Society</td>
<td>3</td>
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<td>Field, Lab, Lecture</td>
<td>Classroom</td>
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<td><strong>Prereqs:</strong></td>
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<td>Junior standing and 12 hrs in one of the departments in which the course is listed.</td>
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<td>Open to advanced students planning careers in the professions in which knowledge of human behavior and society is important (e.g., helping professions, medicine, law, ministry, education, etc.).</td>
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<td></td>
<td>Interdisciplinary approach to the study of human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.</td>
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<tr>
<td>SPED 892</td>
<td>Special Topics in Education</td>
<td>1–3</td>
<td></td>
<td>12</td>
<td>Lecture</td>
<td>Classroom</td>
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<td><strong>Prereqs:</strong></td>
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<tr>
<td></td>
<td>EDPS 859 or EDPS 859 or parallel; EDPS 859 or EDPS 859 or equivalent</td>
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<td></td>
<td>Aspects of education not covered elsewhere in the curriculum.</td>
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<tr>
<td>TEAC 930</td>
<td>Sociological/Anthropological Research Methods in Education</td>
<td>1–3</td>
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<td><strong>Prereqs:</strong></td>
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<td>Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.</td>
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</table>
Courses for SPED (SPED)

**Teaching Learners to Learn**

Crosslisted as **EDPS 855**, **NUTR 855**, **SPED 855**, **TEAC 855**

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

**Supervising Special Education**

Crosslisted as **SPED 856**

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

**Special Education Administration**

Crosslisted as **SPED 857**

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

**Special Education Law**

Crosslisted as **SPED 858**

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 states and school districts that are grounded in state and federal law.

**Advanced Practicum in Gifted Education**

Crosslisted as **SPED 997J**

Prereqs:
Permission
Speech and Language Development of the Hearing Impaired

Crosslisted as SPED 884

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 skills.

Language Study of Teachers of Deaf and Hard of Hearing (DHH)

Crosslisted as SPED 956


Characteristics of Exceptional Persons

This course is a prerequisite for SPED 406, SPED 406A, SPED 809, SPED 884.

Etiology, growth and development, and characteristics of children and youth who deviate from the norm.

Accommodating Exceptional Learners in the Elementary School Classroom

Prereqs:
Admission to the Teacher Education Program; EDPS 362; TEAC 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.

Accommodating Exceptional Learners in the Secondary School Classroom

Prereqs:
Admission to the Teacher Education Program; EDPS 362; TEAC 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.

### Code-based Reading Instruction

**SPED 405/805**

**Prereqs:**
Parallel SPED 405A [link](http://bulletin.unl.edu/courses/SPED/405A) / 805A [link](http://bulletin.unl.edu/courses/SPED/805A).

This course is a prerequisite for [SPED 405](http://bulletin.unl.edu/courses/SPED/405).

**Credit Hours:** 1–3  
**Max credits per semester:** 6  
**Course Format:** Lecture  
**Course Delivery:** Classroom

Direct, systematic, multi-sensory techniques for teaching reading, writing and spelling to students who have severe reading problems.

### Reading Center Practicum I

**SPED 405A/805A**

**Prereqs:**  
Permission.

This course is a prerequisite for [SPED 405](http://bulletin.unl.edu/courses/SPED/405).

**Credit Hours:** 1–3  
**Max credits per semester:** 3  
**Course Format:** Field  
**Course Delivery:** Classroom

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, lesson planning and teaching using direct instruction, code-based instructional strategies.

### Reading and Writing Disabilities: Adolescents

**SPED 406/806**

**Crosslisted as TEAC 806**

**Prereqs:**
SPED 400 [link](http://bulletin.unl.edu/courses/SPED/400) / 800 [link](http://bulletin.unl.edu/courses/SPED/800), SPED 412 [link](http://bulletin.unl.edu/courses/SPED/412) / 812 [link](http://bulletin.unl.edu/courses/SPED/812), and TEAC 441 [link](http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate students only. Parallel SPED 406A [link](http://bulletin.unl.edu/courses/SPED/406A) / 806A [link](http://bulletin.unl.edu/courses/SPED/806A).

This course is a prerequisite for [SPED 406](http://bulletin.unl.edu/courses/SPED/406) / 806 [link](http://bulletin.unl.edu/courses/SPED/806).

**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

### Reading Center Practicum II

**SPED 406A/806A**

**Crosslisted as TEAC 806A**

**Prereqs:**
SPED 400 [link](http://bulletin.unl.edu/courses/SPED/400) / 800 [link](http://bulletin.unl.edu/courses/SPED/800), 412 [link](http://bulletin.unl.edu/courses/SPED/412) / 812 [link](http://bulletin.unl.edu/courses/SPED/812), and TEAC 441 [link](http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate students only. Taken parallel with SPED 406 [link](http://bulletin.unl.edu/courses/SPED/406) / 806 [link](http://bulletin.unl.edu/courses/SPED/806).

**Credit Hours:** 2  
**Course Format:** Lab 2  
**Course Delivery:** Classroom
This course is a prerequisite for SPED 406(http://bulletin.unl.edu/courses/SPED/406) SPED 406A(http://bulletin.unl.edu/courses/SPED/406A)/806A(http://bulletin.unl.edu/courses/SPED/806A) requires two hours per week in a Reading Center.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

SPED 407/807

Teaching Students with Disabilities in the Secondary School

Prereqs:
SPED 201(http://bulletin.unl.edu/courses/SPED/201) or 400(http://bulletin.unl.edu/courses/SPED/400)/800(http://bulletin.unl.edu/courses/SPED/800).

This course is a prerequisite for: SPED 408(http://bulletin.unl.edu/courses/SPED/408)

Information about the mildly/moderately disabled secondary-level student; including characteristics, assessment, models for programs, social skill training, behavior management, working with parents, and curriculum modification.

SPED 408/808

Issues in Secondary Programs for Students with Mild Disabilities

Prereqs:
Special Education Professional Semester and SPED 407(http://bulletin.unl.edu/courses/SPED/407).

Issues in secondary education for students with mild disabilities based on current literature and needs of individual students.

SPED 412/812

Assessment Techniques for Diverse Learners

Prereqs:
Sophomore standing; SPED 201(http://bulletin.unl.edu/courses/SPED/201) and 303(http://bulletin.unl.edu/courses/SPED/303).

This course is a prerequisite for: SPED 406(http://bulletin.unl.edu/courses/SPED/406), SPED 415(http://bulletin.unl.edu/courses/SPED/415)

The role of general education teachers in the primary purposes of assessment of learners with diverse needs. Knowledge and experience with interpreting norm-referenced test information as related to planning educational programs. Use of assessment information for instructional planning and evaluation. Testing accommodations and classroom grading.

SPED 414/814

Instructional Methods for Students with Diverse Needs

Prereqs:
Sophomore standing; SPED 201(http://bulletin.unl.edu/courses/SPED/201) and 303(http://bulletin.unl.edu/courses/SPED/303).

This course is a prerequisite for: SPED 415(http://bulletin.unl.edu/courses/SPED/415)

Instructional methods and accommodations for special education and
general education teachers necessary to work successfully with students with disabilities or who are at-risk for academic failure. Curriculum modification, classroom management, strategy instruction, and instructional modifications for content areas.

### Reading and Writing Disabilities: Elementary Students

**SPED 415/815**  
**Prereqs:**  
SPED 201, TEAC 311 (http://bulletin.unl.edu/courses/TEAC/311), TEAC 313 (http://bulletin.unl.edu/courses/TEAC/313) for elementary education majors; SPED 412 (http://bulletin.unl.edu/courses/SPED/412), and SPED 414 (http://bulletin.unl.edu/courses/SPED/414) (or equivalent) for SPED majors. Must be taken with: SPED 415A (http://bulletin.unl.edu/courses/SPED/415A) or SPED 815A (http://bulletin.unl.edu/courses/SPED/815A).

This course is a prerequisite for: SPED 415 (http://bulletin.unl.edu/courses/SPED/415).

**Description:** Theory and techniques for assessing and teaching early literacy skills in small groups and one-on-one for children who struggle with literacy.

### Career Education for the Special Needs Student

**SPED 436/836**  
**Prereqs:** SPED 434 (http://bulletin.unl.edu/courses/SPED/434)/834 (http://bulletin.unl.edu/courses/SPED/834) or permission.

Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject areas.

### Medically Fragile Infants

**SPED 463/863**  
**Prereqs:** Major in Special Education, Speech-Language Pathology or Child Youth and Family Studies. Senior status or permission of instructor.

Unique needs, family-coping strategies, specialized medical staff and various health care settings for chronically ill infants, toddlers and preschool age children. Overview of etiology, characteristics and developmental implications of selected medical conditions related to developmental disabilities.

### Psychology and Sociology of Deafness

**SPED 472/872**

Education of the hearing impaired including history of, professional roles in, and educational programming within this field. Social/psychological theories as related to the hearing impaired. Patterns of social/emotional development, psychological characteristics, issues of family stress and social adaptation and discussion of counseling techniques.

### Educating Students with Intellectual Impairments & Developmental Disabilities

**SPED 480/880**
Concepts related to history, definitions, identification, etiology, and assessment of students with intellectual impairments and developmental disabilities. Examine attitudes, assumptions, and stereotypes concerning persons with intellectual impairments and other developmental disabilities. Instructional methods, adaptations and teaming to provide individualized interventions and include students in least restrictive environments/general education settings. Applied assignments will be conducted in field experience and student teaching.

**Independent Study in Special Education**

**Credit Hours:** 3  
**Course Delivery:** Classroom, Web

**Prereqs:**  
Prior arrangements with faculty member and permission.

Special research or reading project under direction of a staff member in the department.

**Directed Field Experience**

**Credit Hours:** 1–3  
**Course Delivery:** Classroom

**Prereqs:**  
Permission.

Pass/No Pass only for SPED 496 section. SPED 896 is graded.

E. Field Experience: General Special Education (1–6 cr, max 12)  
M. Field Experience: Mild/Moderate (1–6 cr, max 12)  
Y. Field Experience: Inclusion (1–6 cr, max 12)

**Directed Field Experience: Inclusion**

**Credit Hours:** 1–6  
**Max credits per semester:** 12  
**Course Format:** Field  
**Course Delivery:** Classroom

**Prereqs:**  
Permission.

Pass/No Pass only for SPED 496 section. SPED 896 is graded.

**Advanced Assessment Techniques**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
SPED 800 or equivalent; or permission

Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school resource personnel.

**Effective Instruction for Learners with Special Needs**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
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.

### Managing Challenging Behavior

**SPED 804**

**Prereqs:**
- SPED 800, 802, or 803; or permission

Functional approaches that can be used by teachers and mental health practitioners for assessing, preventing, and managing children’s challenging behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

### Autism Spectrum Disorders (ASDs): Effective Assessment and Intervention

**SPED 809**

**Prereqs:**
- SPED 400 or 400/800 or equivalent

SPED 809 requires observation in schools and applied assignments.

Designed for educators of children and youth with Autism Spectrum Disorders (ASDs) in school settings. Assessment strategies to identify characteristics of ASDs focused on individual needs and strengths-based outcomes. Knowledge and skills regarding evidence-based practices and individualized educational programs.

### Autism Spectrum Disorders (ASDs): Methods and Program Planning

**SPED 810**

**Prereqs:**
- SPED 809 or equivalent


### Mathematics Instruction for Diverse Learners

**SPED 820**

**Prereqs:**
- SPED 201 or 400 or 800

SPED 820 and associated practicum is designed to meet professional standards (i.e., Council for Exceptional Children, Teacher Education Accreditation Council) for teachers in the area of instruction for diverse learners.

Supplemental basic skills and concepts instruction for diverse learners within a response to intervention models and on mathematics instruction.
Selection, delivery, and evaluation of standard protocol and individualized interventions to diverse learners.

### Functional Behavioral Assessment

**Department**: SPED

**Credit Hours**: 3

**Course Format**: Lecture 3

**Campus**: Classroom

**Course Delivery**: Classroom

**Prereqs:**
- SPED 303
- Equivalent or approved

This course is a prerequisite for SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

**Description**
Functional behavioral assessments (FBAs) and development of behavior intervention plans (BIPs) based on the assessments. Contextual and curriculum manipulations, and replacement behavior training.

### Practicum in Functional Behavioral Assessment

**Department**: SPED

**Credit Hours**: 2

**Course Format**: Field

**Campus**: Classroom

**Course Delivery**: Classroom

**Prereqs:**
- SPED 303
- Parallel SPED 824 (http://bulletin.unl.edu/courses/SPED/824)

This course is a prerequisite for SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

**Description**
Opportunities to engage in the activities and practice the skills associated with SPED 824 (http://bulletin.unl.edu/courses/SPED/824). Culmination of the practicum is performing a complete functional behavioral assessment and developing a behavior intervention plan for a student who displays challenging behaviors.

### Behavioral Systems and Interventions

**Department**: SPED

**Credit Hours**: 3

**Course Format**: Lecture 3

**Campus**: Classroom

**Course Delivery**: Classroom

**Prereqs:**
- SPED 813
- Equivalent

Three-tier models for encouraging and maintaining students' appropriate behaviors. Evaluation and implementation of interventions at the school-wide, classroom and/or small group, and individual levels. Presentation of different models i.e., Response to Intervention (RtI) and School-Wide Positive Behavior Support (SWPBS).

### Introduction to Special Vocational Needs

**Department**: SPED

**Credit Hours**: 3

**Course Format**: Lecture 3

**Campus**: Classroom

**Course Delivery**: Classroom

Foundational course emphasizing the characteristics and identification of special needs learners in vocational settings. Determines needs, interests, and abilities of these students.

### Emotional and Behavioral Disorders

**Department**: SPED

**Credit Hours**: 3

**Course Format**: Classroom

**Campus**: Classroom

**Course Delivery**: Classroom

**Prereqs:**
- SPED 800

### Characteristics of Emotional and Learning Disorders

**Prereqs:**
SPED 400 [link](http://bulletin.unl.edu/courses/SPED/400/800)

Learning, academic, behavioral, social-emotional and language characteristics of students who are classified as having disabilities for purposes of special education. Definitions, classification systems, assessment and verification criteria, and medications for students with learning and emotional disabilities.

### Foundations of Visual Impairment: Programs and Services for Individuals with Visual Impairments

**Prereqs:**
Admission to visually impaired program; hold or concurrently earn subject/field endorsement

Current educational programs and services for children with visual impairments, as well as children with multiple disabilities. History of educational services, developmental characteristics, psycho-social aspects, history of legislation, and grade I Braille.

### Introduction to Eye Anatomy of Students with Visual Impairments

**Prereqs:**
SPED *846 or permission

Structure and function of the visual system, conditions that affect visual ability, and the functional and environmental implications of low vision. Strategies for enhancing visual ability in children with visual impairments and children who have additional disabilities.

### Braille Codes and Material Adaptations for Students with Visual Impairments

**Prereqs:**
SPED *846 and *847, or permission

Basic skills in literary Braille transcription and codes. Acquire competence in reading and writing Braille and using the Perkins braillewriter and slate/stylus.

### Intermediate Braille Codes and Instructional Material Adaptations for Students with Visual Impairments

**Prereqs:**
SPED *846, *847, and *849

Advanced skills in Nemeth (mathematics code) and/or Literary code. Basic activities in braille formatting, foreign language, music and identification of braille technology devices and resources.
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SPED 852</td>
<td>Instructional Methods for Teachers of Students with Visual Impairments</td>
<td>SPED *846, *847, *849, and *851</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Methods and materials for educating children who are totally blind or have low vision, including students with multiple impairments. Practical skills in selecting, designing, and/or modifying materials for content area subjects: mathematics, science, social studies, creative arts, foreign language, and other subjects.</td>
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<tr>
<td>SPED 852A</td>
<td>Applied Technology Methods for Students with Visual Impairments</td>
<td>SPED *846 and *847, or equivalents</td>
<td>1</td>
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<td>Classroom</td>
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<td></td>
<td>Theory and skill development in the selection and use of technology for students with visual impairments. Technology assessments, data collection, equipment feature, source of equipment, funding sources, writing technology instructional plans, and demonstration of using various equipment and technology.</td>
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<tr>
<td>SPED 852B</td>
<td>Applied Instructional Methods to Teach Students with Visual Impairments</td>
<td>SPED *846, *847, *849, *851, and *852; or equivalents</td>
<td>2</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Practice using appropriate instructional methods and materials for educating the blind and low vision child.</td>
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<tr>
<td></td>
<td>Theory and applied practice in basic orientation and mobility techniques for use with students with visual impairments. Practical methods for work in concept development, orientation skills, travel skills and techniques, personal safety and independent travel. Needs of specific populations such as people with low vision and individuals with additional disabilities. Vision simulators and occluders. An introduction to the history and development of the profession.</td>
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<tr>
<td>SPED 860</td>
<td>Issues in Early Childhood Special Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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, transitions, service delivery systems, teamwork and assessment for young children.</td>
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<tr>
<td>SPED 861</td>
<td>Infants with Disabilities and Home Visiting</td>
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<td>Classroom</td>
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</tbody>
</table>
SPED *861 requires a practicum in home visiting.

Assessment and intervention strategies for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, and transdisciplinary services.

**Prereqs:**
[SPED 960](http://bulletin.unl.edu/courses/SPED/960) and permission.

**Preschool Children with Disabilities in a Classroom**

**Prereqs:**
An assessment and behavior management course; and permission.

**SPED *862 requires an applied experience.**

Selection, design and implementation of developmentally appropriate, activity-based interventions for preschool-age children with disabilities. Ecological assessments. Instructional factors, such as classroom environments, activity planning, selection, use and modification of strategies, home-school communications, and consulting to staff in inclusive settings.

**SPED 862**

**Teaching the Content Areas to the Hearing Impaired**

**SPED 873 (http://bulletin.unl.edu/courses/SPED/873) is for all students in the hearing impaired program.**

Methods for teaching content areas (science, math, and social studies) to hearing impaired students from preschool through grade 12. Adapting curricula and materials from these areas for the hearing impaired students.

**SPED 873**

**Language Arts and Literacy for the Hearing Impaired**

Assessment instruments, curricula and instructional methods for developing language and literacy in classrooms for hearing impaired children, preschool through grade 12. Methods for coordinating speech and/or language and/or auditory training program in the classroom with that in the speech and/or language therapy program.

**SPED 874**

**Itinerant Teaching Methods for Students who are Deaf or Hard of Hearing**

Methods for providing services for students with hearing loss, using itinerant and consultative models. Professional and parent in-service development, team-based problem solving, curriculum based pull-out services. Ecological assessment and management of deafness related technology in inclusive settings. Supervision of interpreters and paraprofessionals.

**SPED 875**

**Language Development for Teachers**

Introduction to the foundations of normal speech and language development and potential difficulties in both early stages and in the classroom. Analysis of child language samples. Strategies for explaining language development

**SPED 876**
### Methods for Students with Intellectual and Severe Disabilities

**Course Code:** SPED 881  
**Prereqs:**  
- SPED 480  
- SPED 881 requires observations in schools and applied assignments.  

Planning, implementing, and evaluating effective longitudinal education for individuals with intellectual impairments and severe disabilities. Knowledge and skills regarding best practices within inclusive education settings for these learners emphasizing an ecological and functional model that addresses useful skills in current and future environments.

### Specialized Instruction for Students with Severe and Multiple Disabilities

**Course Code:** SPED 882  
**Prereqs:**  
- SPED *881 for the Severely/Multihandicapped endorsement program or  
- SPED *862 for Preschool Handicapped endorsement program; and  
- permission. Majors in severe disabilities must parallel with SPED 896P (http://bulletin.unl.edu/courses/SPED/896P) (1 cr).  

This course is a prerequisite for: SPED 881 (http://bulletin.unl.edu/courses/SPED/881)  

Selection, design, and implementation of best practice instruction for students with severe disabilities, multiple disabilities, or deaf–blindness.

### Assessment, Evaluation, and Instruction of

**Crosslisted as:** TEAC 886  
**Prereqs:**  
- EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)  

TEAC/SPED *886 includes case study and planning for special student populations.  

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.  

- Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.  
- Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)

### Workshop Seminar

**Prereqs:**  
- Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

### Special Topics in Education

**Crosslisted as:** EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892  
**Prereqs:**  
- EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel;  
- EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.
Workshop Seminar

- **Course Delivery:** Classroom
- **Campus:** Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

Student Teaching: Exceptional Learners

- **Prereqs:** Permission
- Laboratory and teaching experience in the area(s) of specialization.
  - A. Mainstream (1–12 cr)
  - B. Behavior Disorders
  - D. Deaf/Hard of Hearing
  - E. General Special Education
  - J. Gifted/Talented (EDPS *897J)
  - L. Learning Disabilities
  - M. Mildly/Moderate Disabilities
  - P. Severe Disabilities
  - Q. Early Childhood Special Education
  - V. Visual Impairments
  - Y. Inclusion
  - Z. Multicultural Education

- **Credit Hours:** 1–9
- **Max credits per degree:** 15
- **Campus:** Classroom

Masters Thesis

- **Prereqs:** Admission to masters degree program and permission of major adviser
- **Credit Hours:** 1–10
- **Campus:** Classroom

Seminar in Special Education

- **Prereqs:** Permission
- B. Behavior Disorders
  - D. Deaf/Hard of Hearing
  - E. General Special Education
  - J. Gifted/Talented
  - L. Learning Disabilities
  - M. Mildly/Moderate Disabilities
  - P. Severe Disabilities
  - Q. Early Childhood Special Education
  - V. Visual Impairments

- **Credit Hours:** 1–3
- **Max credits per degree:** 12
- **Campus:** Classroom

Resource Consultation Services

- **Prereqs:** SPED 800 (http://bulletin.unl.edu/courses/SPED/800), and one of the following: *831, *851, *861, *881; or permission
- Roles and functions of school resource personnel in serving as educational

- **Credit Hours:** 3
- **Campus:** Classroom
- **Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Course Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 932</td>
<td>Cognitive Strategy Instruction</td>
<td>3</td>
<td>SPED 800, *803, and *831 or permission</td>
<td>How to implement cognitive strategy instruction with students learning difficulties. Practical model which allows students to successfully teach cognitive strategies. Metacognition, attribution training, and attention deficit disorders.</td>
</tr>
<tr>
<td>SPED 942</td>
<td>Strategic Approaches for EBD</td>
<td>1-3</td>
<td>SPED 800, *804, and *841; or permission</td>
<td>Strategic therapy techniques for assessment and treatment of EBD. A. Special Topics in EBD (1-3 cr)</td>
</tr>
<tr>
<td>SPED 960</td>
<td>Family and School Collaboration in Special Education</td>
<td>3</td>
<td>Professional experience or completion of one practicum and/or field experience with young children (birth to age 5) or other individuals ages 5 to 21 years who have disabilities</td>
<td>Functions and interactions of both family and education systems. Impact of having a child with a disability on the normal and stressed family system. Promote family-professional partnerships in assessment and intervention for the child and/or student with an IFSP/IEP. Communication skills are reviewed and practiced for effective teaming among educators and for interviewing, consulting, collaborating and coaching with family members and other community team members.</td>
</tr>
<tr>
<td>SPED 980</td>
<td>Assessment of Students with Severe, Sensory, and Developmental Disabilities</td>
<td>2</td>
<td>SPED *881 and *882; and permission</td>
<td>Designed to meet the needs of educators who conduct assessment of students with low incidence disabilities in school settings. Strategies emphasize assessing capabilities and needs in relationship to valued life outcomes. Processes of instructional outcomes. Some assessment conducted in schools and community settings. Learning outcomes individualized to match special education certification program.</td>
</tr>
<tr>
<td>SPED 981</td>
<td>Functional Assessment and Behavioral Support for Students with Severe Developmental Disabilities</td>
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</tbody>
</table>
Assessment and intervention strategies for developing positive behavior support for students with severe disabilities or developmental disabilities who have challenging behavior. Rationale and principles for using an educative approach, functional behavior analysis, and a variety of individualized ecological and curricular interventions. Process of assessment conducted in school settings.

**Seminar in Special Education (SPED 987E)**

- **Prereqs:** 
  - SPED 882 (http://bulletin.unl.edu/courses/SPED/882) and permission.
  - Majors in severe disabilities must parallel with SPED 896P (http://bulletin.unl.edu/courses/SPED/896P) (1 cr).
  - SPED 981 (http://bulletin.unl.edu/courses/SPED/981) requires observation in schools and applied assignments.

**Workshop Seminar (SPED 990)**

- **Prereqs:**
  - SPED 980 (http://bulletin.unl.edu/courses/SPED/980) and 981 (http://bulletin.unl.edu/courses/SPED/981)

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Doctoral Seminar (SPED 995)**

- **Prereqs:**
  - 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Research Other Than Thesis (SPED 996A)**

- **Prereqs:** Permission
  - (1–12, max 12) Independent operational research under faculty supervision.

**Readings in Special Education (SPED 996B)**

- **Prereqs:** Permission
  - (1–12, max 12) Readings on selected problems in special education.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>997E</td>
<td>Extensive practicum experience in school settings for individuals preparing to serve as school resource teachers and consultants.</td>
<td>SPED *802, *803</td>
<td>1-6</td>
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<td>Classroom</td>
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<tr>
<td>SPED 999</td>
<td>Doctoral Dissertation</td>
<td>admission to doctoral degree program and permission of supervisory committee chair</td>
<td>1-24</td>
<td>55</td>
<td>Classroom</td>
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<tr>
<td>CYAF 891</td>
<td>Special Topics in Human Sciences</td>
<td>Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891</td>
<td>1-3</td>
<td>12</td>
<td>Classroom</td>
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<tr>
<td>SLPA 450/850</td>
<td>Audiology for Educators of the Deaf or Hard of Hearing</td>
<td></td>
<td>3</td>
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<td>Web</td>
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<tr>
<td>SLPA 452/852</td>
<td>Normal Language Development During School Years</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>SLPA 454/854</td>
<td>Research Methodology in Speech-Language Pathology and Audiology</td>
<td>Speech-language pathology and audiology major.</td>
<td>3</td>
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<tr>
<td>Course Code</td>
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<tr>
<td>461/861</td>
<td>Language Disorders: Preschool Level</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/461">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Prereqs:</td>
<td>Parallel <a href="http://bulletin.unl.edu/courses/SLPA/461">SLPA 461</a>/861L</td>
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<td></td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/461L">SLPA 461L</a></td>
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<td></td>
<td></td>
<td>This course is a prerequisite for <a href="http://bulletin.unl.edu/courses/SLPA/461">SLPA 461</a>.</td>
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<td><a href="http://bulletin.unl.edu/courses/SLPA/461L">SLPA 461L</a></td>
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<td><a href="http://bulletin.unl.edu/courses/SLPA/461L">SLPA 461L</a></td>
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<tr>
<td></td>
<td>Characteristics of language impaired preschool children and the nature of their disorders. Introduction to principles of assessment and treatment.</td>
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<tr>
<td>461L/861L</td>
<td>Language Disorders: Preschool Level Lab</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/461L">Link</a></td>
<td>1</td>
<td>Lab</td>
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<td>Prereqs:</td>
<td>Parallel with <a href="http://bulletin.unl.edu/courses/SLPA/461">SLPA 461</a>/861</td>
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<td><a href="http://bulletin.unl.edu/courses/SLPA/461">SLPA 461</a></td>
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<td>This course is a prerequisite for <a href="http://bulletin.unl.edu/courses/SLPA/461">SLPA 461</a>.</td>
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<td><a href="http://bulletin.unl.edu/courses/SLPA/461L">SLPA 461L</a></td>
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<tr>
<td></td>
<td>Practical application of language assessment and intervention in preschool children with language disorders.</td>
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<tr>
<td>486/886</td>
<td>Augmentative Communication</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/486">Link</a></td>
<td>2-3</td>
<td>Classroom</td>
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<td></td>
<td>Speech pathology students must register for 3 cr only; specil education students may rights for 2-3</td>
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<td></td>
<td>Introduction to the augmentative communication options for persons unable to speak or write because of physical, language, or cognitive disability.</td>
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<tr>
<td>488/888</td>
<td>Linguistic Needs of Bilingual and Culturally Different Students</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/488">Link</a></td>
<td>3</td>
<td>Classroom</td>
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<td>Prereqs:</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/250">SLPA 250</a> and <a href="http://bulletin.unl.edu/courses/SLPA/251">251</a> or permission.</td>
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<td>Theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicapping conditions, socio-economic status, and cultural-ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.</td>
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<tr>
<td>496/896</td>
<td>Readings and Research in Speech-Language Pathology and Audiology</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/496">Link</a></td>
<td>1-3</td>
<td>Classroom</td>
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<td></td>
<td>Prereqs:</td>
<td>Permission.</td>
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<tr>
<td>851</td>
<td>Clinical Phonology: Assessment and Management</td>
<td><a href="http://bulletin.unl.edu/courses/SLPA/851">Link</a></td>
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</tbody>
</table>
### 853 Neurological Foundations of Speech and Language

- **Credit Hours:** 3
- **Campus:** 
- **Course Delivery:** Classroom

Theoretical foundations; applied clinical phonology.

### 862 Language Disorders in Special Populations

- **Credit Hours:** 2–3
- **Campus:** 
- **Course Delivery:** Classroom

Basic concepts of neurology, protection and blood supply of the Central Nervous System (CNS), anatomical structures of the CNS, neuromotor control of speech, cranial nerves for speech production and neuron motor disorders.

### 863 Language Disorders in Elementary School-aged Population

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:** 
- **Course Delivery:** Classroom

Advanced information about language disorders, assessment, and intervention in various populations.

- A. Birth to Three: Communication Assessment and Intervention
- E. Preadolescents and Adolescents
- J. Severe Disabilities and Autism: Communication Assessment and Intervention
- K. Special Topics in Language Disorders

### 865 Voice Disorders

- **Credit Hours:** 2
- **Campus:** 
- **Course Delivery:** Classroom

Etiology and symptoms of voice disorders, procedures used in clinical evaluation, and methods and procedures used in therapy.

### 884 Speech and Language Development of the Hearing Impaired

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:** 
- **Course Delivery:** Classroom

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 skills.

### 885 Fluency Disorders

- **Credit Hours:** 3
- **Campus:** 
- **Course Delivery:** Classroom

Crosslisted as SPED 884

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 skills.
Research related to the nature, diagnosis and clinical management of stuttering is considered. Therapy models are presented along with data bearing on the efficacy of particular approaches. Specific rehabilitation procedures.

### Language and Learning Disorders

**SLPA 887**

**Prereqs:**
- For non-SLPA majors only

Review of prominent theories relating language to cognitive development and learning; student interaction on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials and classrooms to accommodate a child that has a language and learning disorder.

### Workshop Seminar

**SLPA 890**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Counseling and Behavior Issues in Speech Language Pathology

**SLPA 892**

Basic skills in counseling and behavior management as applied to the field of communication disorders. Practical, direct application to students' clinical work with individuals with a variety of communication disorders.

### Clinical Decision Making

**SLPA 893**

Critical Thinking skills necessary for decision-making during the assessment and treatment of individuals with communication disorders. Understanding and applying clinical processes related to the practice of speech-language pathology.

### Advanced Practicum

**SLPA 897**

**Prereqs:**
- Completion of the undergraduate preprofessional program

Supervised practicum experiences provided with difficult speech, language and/or hearing problems in a variety of clinical, medical, geriatric, rehabilitational and public school settings.

- A. Audiology (1–3 cr per sem)
- B. Speech/Language Pathology (1–3 cr per sem)
- E. Externship (1–3 cr per sem)
- G. Public Schools (1–3 cr per sem)
- T. Externship in Audiology (1–6 cr per sem, max 12)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>SLPA 898</td>
<td>Special Topics in Speech Pathology and Audiology</td>
<td>1–24</td>
<td></td>
<td>Classroom</td>
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<td>Prereqs: Permission</td>
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<tr>
<td></td>
<td>Special topics in speech pathology and audiology</td>
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<tr>
<td>SLPA 899</td>
<td>Masters Thesis</td>
<td>1–10</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: Admission to masters degree program and permission of major adviser</td>
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<tr>
<td>SLPA 902</td>
<td>Advanced Clinical Evaluation</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Instruction and practice in understanding, applying, and interpreting advanced clinical tests. Understanding the use of differential diagnostic tests used in assessment of peripheral and central lesions.</td>
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<tr>
<td>SLPA 904</td>
<td>Basic Instrumentation</td>
<td>3</td>
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<td>Lab, Lecture</td>
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<tr>
<td></td>
<td>Basic electrical theory and practical electronic information for the audiologist. Basic electrical and electronic information applicable to hearing, perception and acoustics. Basic electronics and electronic components, analog and digital circuits, transducers, calibration of audiometric instruments, amplifiers, attenuators and test equipment.</td>
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<td></td>
<td>Classroom</td>
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<tr>
<td>SLPA 906</td>
<td>Advanced Clinical Assessment II</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>SLPA 908</td>
<td>Physiological Acoustics</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Pneumatic/mechanical/hydraulic/electrical interfaces involved in the transduction of acoustic energy through the auditory system. Investigation of external ear biophysics, the middle ear transfer function, cochlear hydrodynamics and hydro–mechanics, and auditory biopotentials.</td>
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<tr>
<td>SLPA 910</td>
<td>Auditory Signal Processing</td>
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<td>Classroom</td>
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</tbody>
</table>
Principles of signal processing relevant to tests of hearing and to theories of functioning of the auditory system. Introduction of concepts in mathematics, vibration and acoustics. Time- and frequency-domain representations of signals, digital filtering, analysis of lumped-element circuits, linear and nonlinear signal analyses, modulation theory, and the effect of noise on measurements. Applications relevant to audiology including hearing aid performance and measurements, middle-ear transmission, cochlear mechanics, and auditory-nerve firing patterns. Application of these models to understanding physiological sources of conductive and sensorineural hearing loss.

### SLPA 912 Psychoacoustics

Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking level differences, psychoacoustical scaling, difference limen 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.

### SLPA 916 Medical Aspects of Audiology

Effects of, and principles of, medical management of disorders of the cochlea, retrocochlear region, and central auditory mechanism. Anatomy and physiology of the inner ear and central auditory pathways, function and physiology of the vestibule and labyrinth, and histology and biochemistry of the inner ear and ascending auditory tracts.

### SLPA 918 Auditory Assessment of Infants and Children

**Prereqs:**
SLPA 271 or equivalent

Development of the auditory system in infants and young children. Techniques used in differential diagnosis, and screening of auditory disorders in the pediatric population.

### SLPA 920 Electrophysiological Assessment of Hearing

Instrumentation and procedures for electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography, Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.

### SLPA 922 Pharmacology for Audiology

Introduction to pharmacological chemistry, drugs, and drug interactions. Ototoxic drugs and other drugs frequently seen in patients in audiology practice settings.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>SLPA 924</td>
<td>Sensory Technology and Rehabilitation for the Hearing Impaired I</td>
<td>4</td>
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<td>Classroom</td>
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<td></td>
<td>Prereqs: SLPA 271 or equivalent</td>
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<td></td>
<td>Students will initiate and carry out directed laboratory assignments. Conventional analog hearing aids which includes: the design and operation of hearing aids, electroacoustic measurements and accompanying instrumentation, earmold and plumbing acoustics, evaluation and selection procedures (adults), orientation.</td>
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<tr>
<td>SLPA 926</td>
<td>Sensory Technology and Rehabilitation for the Hearing Impaired II</td>
<td>1-3</td>
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<td>Classroom</td>
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<td>Prereqs: SLPA 271 or equivalent</td>
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<td></td>
<td>Students will be expected to engage in class presentations. Various assistive technologies, other than conventional analog hearing aids, utilized by persons who are deaf and hard of hearing. Technologies such as cochlear implants, tactile devices, radio frequency systems, digital hearing aids, and telephone, television and alerting devices. Information regarding pediatric amplification, counseling, and speechreading introduced.</td>
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<tr>
<td>SLPA 928</td>
<td>Hearing Conservation and Industrial Audiology</td>
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<td>Theories and basic resources for participation in industrial, government, or community hearing conservation programs.</td>
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<tr>
<td>SLPA 930</td>
<td>Genetics of Hearing Loss</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
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<tr>
<td></td>
<td>The genetic basis for hearing loss.</td>
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<tr>
<td>SLPA 932</td>
<td>Vestibular Assessment I</td>
<td>4</td>
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<td>Students will initiate and carry out directed laboratory assignments. The first of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Normal anatomy and physiology of the balance and ocular motor systems, contrasted with a wide range of pathological conditions. Electronystagmography (video–nystagmography two– and three–dimensional recordings) and assessment of the otolith organs.</td>
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<tr>
<td>SLPA 934</td>
<td>Vestibular Assessment II</td>
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<td>The second of a two–course series on the normal and pathophysiology of</td>
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SLPA: Speech Language Pathology and Audiology
the human balance system and tools for its investigation and treatment. Advanced techniques for patient assessment using rotational chair and posturography protocols. Techniques for full assessment in an office situation without extensive equipment. Options for treatment and management of this group of patients. Vestibular and balance rehabilitation therapy program development.

### SLPA 936 Implantable Prosthetics

Design, operation, candidacy, assessment, surgical procedures, fitting, verification, and rehabilitation procedures related to implantable prosthetic devices for individuals who are deaf and hard of hearing. Cochlear implants, bone anchored hearing aids, implantable middle ear devices, and auditory brainstem implants.

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<tr>
<th>Credit Hours:</th>
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<tr>
<td>Course Format:</td>
<td>Lecture 2</td>
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<td>Campus:</td>
<td>Classroom</td>
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### SLPA 938 Private Practice and/or Clinic Management

Principles and procedures for starting and surviving as an independent practitioner in audiology. Practice management strategies for use in any audiological setting.

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<th>Credit Hours:</th>
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<tbody>
<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
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<tr>
<td>Campus:</td>
<td>Classroom</td>
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### SLPA 940 Aural Rehabilitation Across the Lifespan

Habilitation (for pre-lingual deaf and hard of hearing infants and toddlers) and rehabilitation efforts for individuals of all ages who are deaf or hard of hearing.

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<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
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<td>Campus:</td>
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### SLPA 942 Seminar in Audiology

Research and clinical procedures; findings and implications in audiology and hearing science.

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

### SLPA 956 Language Study of Teachers of Deaf and Hard of Hearing (DHH)


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<th>Credit Hours:</th>
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<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
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<td>Campus:</td>
<td>Classroom</td>
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### SLPA 964 Speech Perception and Processing

Prereqs: [SLPA 250](http://bulletin.unl.edu/courses/SLPA/250) and [456](http://bulletin.unl.edu/courses/SLPA/456)
### Swallowing Disorders

**SLPA 966**


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<th>Credit Hours:</th>
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<td>Classroom</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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**Prereqs:**

SLPA 464 or equivalent

### Cleft Palate

**SLPA 967**

Communication, dental, medical, and associated problems related to cleft palate.

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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**Prereqs:**

SLPA 464 or equivalent

### Motor Speech Disorders

**SLPA 968**

Motor speech disorders resulting from neuropathology of the central and peripheral nervous systems as found in cerebral palsy, Parkinsonism, and other developmental and acquired neuromotor problems of children and adults.

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<td>Classroom</td>
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<td>Course Delivery:</td>
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**Prereqs:**

SLPA 464 or equivalent

### Seminar in Speech Physiology

**SLPA 980A**

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

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<th>Credit Hours:</th>
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<tr>
<td>Campus:</td>
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<td>Course Delivery:</td>
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**Prereqs:**

SLPA 455 and 456 or equivalent

### Seminar in Speech Acoustics

**SLPA 980B**

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

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<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

### Seminar in Speech Pathology
Seminar in Language

Prereqs: SLPA *851, *865, 967, and/or 968

Credit Hours: 1–3
Max credits per degree: 6
Campus: 
Course Delivery: Classroom

Seminar in Augmentative Communication

Prereqs: SLPA 251 or 852

Credit Hours: 3
Max credits per degree: 6
Campus: 
Course Delivery: Classroom

Traumatic Brain Injury

Prereqs: SLPA *853

Credit Hours: 2
Max credits per degree: 6
Campus: 
Course Delivery: Classroom

Aphasia in Adults

Prereqs: SLPA *853

Credit Hours: 2
Course Format: Lecture 2
Max credits per degree: 6
Campus: 
Course Delivery: Classroom

Workshop Seminar

Link to course page

SLPA 981

Prereqs: SLPA *851, *865, 967, and/or 968

Research procedures, findings and clinical implications in the following areas:
B. Fluency Disorders (1–3 cr)
D. Voice Disorders (1–3 cr)
E. Motor Speech Disorder (1–3 cr)

SLPA 983

Seminar in Language

Link to course page

SLPA 984

Seminar in Augmentative Communication

Link to course page

SLPA 985

Traumatic Brain Injury

Link to course page

SLPA 987

Aphasia in Adults

Link to course page

SLPA 990

Workshop Seminar

Link to course page
Campus:
Course Delivery: Classroom

**SLPA 994**

**Doctoral Capstone Thesis**

Selection of the topic for this project should take place no later than the summer of the third year by consultation with the project adviser. Enrollment in SLPA 994 is required during each semester that the project is underway. Capstone experience prepared in the form of a research project paper containing a significant treatment of some aspect of audiology.

**SLPA 995**

**Doctoral Seminar**

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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**SLPA 996**

**Research Problems Other Than Thesis**

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments,

**SLPA 999**

**Doctoral Dissertation**

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments,

**Courses for TEAC (TEAC)**

**BIOC 869**

**Chemistry for Secondary School Classrooms**

Crosslisted as BIOS 883, CHEM 869, TEAC 869

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments,
Topics in Chemical Pedagogy
Crosslisted as TEAC 874

Credit Hours: 1-3
Max credits per degree: 12
Campus: Classroom

A maximum combined total of 12 hours from TEAC *869 and/or *874 may be counted toward a masters degree. Credit in this course will not count towards a graduate degree in chemistry. Courses are Web–based. Topical chemistry content for high school teachers organized according to the National Science Education Standards.

- Green Chemistry (2-3 cr)
- Demonstrations for High School Chemistry (1-3 cr)
- Experiments for High School Chemistry (1-3 cr)
- Developing a Safety Culture (1 cr)
- Chemistry of Life Processes: Biomolecules (1-3 cr)
- Addressing Misconceptions (1-3 cr)
- Mathematics Integration (MATH 874M) (2-3 cr) May be counted towards the MAT and MScT degrees in mathematics and statistics, not the MA, MS, or PhD.
- Inquiry Strategies (1-3 cr)
- Chemistry in the Workplace (1-3 cr)
- Graphing Calculator Activities (2-3 cr)

Chemical Pedagogy in the High School Laboratory
Crosslisted as TEAC 875

Credit Hours: 1-3
Max credits per degree: 6
Campus: Classroom

Credit 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.

- Small–scale Experiments (1–3 cr)
- Technology Integration (3–6 cr)
- Inquiry Experiments (1–3 cr)
- At-home Experiments (1–3 cr)
- Probe Experiments (1–3 cr)
- Traditional Experiments (1–3 cr)

Instructional Communication
Crosslisted as TEAC 429/829

Credit Hours: 3
Course Delivery: Classroom

Prereqs:
Junior/senior standing; College of Education and Human Sciences major;
COMM 200 (http://bulletin.unl.edu/courses/COMM/200), 201 (http://bulletin.unl.edu/courses/COMM/201); or permission.
Advanced introductory course in instructional communication, focusing on understanding variables associated with the communication process in instructional settings and managing instructional communication more effectively. Provides an experimental and a cognitive understanding of the role of communication in the instructional process.

### Evaluation in Career and Technical Education

**CYAF 814**

Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.

**Crosslisted as TEAC 814**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Special Topics in Human Sciences

**CYAF 891**

Aspects of human sciences not covered elsewhere in the curriculum.

**Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891**

**Credit Hours:** 1-3  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom

### Teaching Learners to Learn

**EDAD 855**

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

**Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Instructional Leadership: Emerging Trends and Practices

**EDAD 948**

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**Crosslisted as TEAC 948**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Field Studies in Education

**EDAD 991**

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

**Crosslisted as NUTR 991, TEAC 991**

**Prereqs:** Permission

**Credit Hours:** 1-3  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom
Seminar in Qualitative Research
Crosslisted as TEAC 935

Prereqs:
EDUC 900K or permission

Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

Psychology of Reading
Crosslisted as TEAC 989

Prereqs:
TEAC *811 or 841 or SPED 886

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Nebraska Writing Project Internship
Crosslisted as TEAC 895A

Prereqs:
Permission

Theory and practice of teaching writing, literature, and rhetoric in connection with local place, region, and community.

Nebraska Humanities Project
Crosslisted as TEAC 992

Exploration of the historical, social, and cultural context of late 19th and 20th century America through learning to play jazz and popular music on the guitar to provide an authentic, performance-based encounter in music.
### Approaches to Middle School General Music

**Course Code:** MUED 473/873  
**Crosslisted as:** TEAC 873  

**Prereqs:**  
MUED 344 or permission.

*For prospective new and experienced general music/middle school teachers.*  
Characteristics of middle school students, materials, methodology, guitar and recorder techniques, and curriculum development.

**Credit Hours:** 3  
**Max credits per degree:** 3

### Historical and Philosophical Foundations of American Music Education

**Course Code:** MUED 845  
**Crosslisted as:** TEAC 845  

**Prereqs:**  
Undergraduate degree in MUED.

*MUED 845 is required for a graduate degree in music education.*  
Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylton, Richmond and others are considered.

**Credit Hours:** 2-3  
**Max credits per degree:** 3

### Reading and Writing Disabilities: Adolescents

**Course Code:** SPED 406/806  
**Crosslisted as:** TEAC 806  

**Prereqs:**  
SPED 400, SPED 412, or TEAC 441  
Parallel SPED 406A is required for undergraduate students only.

This course is a prerequisite for SPED 406.  
Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom

### Reading Center Practicum II

**Course Code:** SPED 406A/806A  
**Crosslisted as:** TEAC 806A  

**Prereqs:**  
SPED 400, SPED 412, or TEAC 441  
Parallel SPED 406A is required for undergraduate students only.  
Taken parallel with SPED 406.

This course is a prerequisite for SPED 406.  
Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

**Credit Hours:** 2  
**Course Format:** Lab 2  
**Course Delivery:** Classroom
This course is a prerequisite for: SPED 406

SPED 406A requires two hours per week in a Reading Center.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

**Assessment, Evaluation, and Instruction of**

Crosslisted as TEAC 886

**Credit Hours:** 1–3

**Course Delivery:** Classroom

This course is a prerequisite for: EDPS 899

**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

**Prereqs:** EDPS 859 or parallel; EDPS 859 or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Contemporary Children's Literature: Principles and Practices**

Crosslisted as TEAC 402

**Prereqs:** TEAC 302 and successful completion of student teaching or permission.

Contemporary literature for children, all forms and genres; development of meaningful and creative learning activities for children; professional readings and research related to children’s literature.

**Improvement of Instruction in School Mathematics**


**Credit Hours:** 3

**Max credits per degree:** 12

**Course Format:** Lecture 3

**Course Delivery:** Classroom, Web

**Reading Processes and Practices**

Crosslisted as TEAC 411

**Techniques, plans, and procedures for improving instruction in reading. Development of diagnostic reading inventories and evaluative instruments. Evaluation of research and instructional methods. A. Special Topics (3 cr) B. Internship in Reading Assessment and Instruction (SPED 886B) (1–3 cr)**

**Credit Hours:** 1–3

**Course Delivery:** Classroom
Overview of reading processes and programs with attention to strategies for comprehension and word identification, approaches, and materials. A. Teaching Reading (3 cr) B. Special Topics in Reading (1–6 cr)

**TEAC 413/813**

**Studies in Teaching English as a Second Language**

[LINK](http://bulletin.unl.edu/courses/TEAC/413)

Preparation for teaching K–12 learners whose language of nurture is not English. A. ESL: Acquisition (1–3 cr) B. ESL: Teaching and Curriculum (1–3 cr) D. ESL: Assessment (1–3 cr) E. Special Topics in Teaching ESL (1–6 cr)

Credit Hours: 3

Course Delivery: Classroom

**TEAC 413M/813M**

**Teaching English Language Learners (ELLs) in Content Areas**

[LINK](http://bulletin.unl.edu/courses/TEAC/413M)

Theory and pedagogy in the teaching of English Language Learners (ELLs) in course content areas at all levels of K–12 education. Identify and design linguistically and culturally responsive instruction for English learners in the disciplines (e.g. language arts, science, mathematics, social sciences).

Credit Hours: 1–15

Max credits per degree: 15

Course Delivery: Classroom

**TEAC 413P/413X/813P**

**Teaching English Overseas**

[LINK](http://bulletin.unl.edu/courses/TEAC/413P)

Methodologies for teaching English to speakers of other languages (TESOL) in international settings.

Credit Hours: 3

Course Format: Lecture 3

Course Delivery: Classroom

**TEAC 416/816**

**Inclusive Early Childhood Methods**

[LINK](http://bulletin.unl.edu/courses/TEAC/416)

The creation and practice of developmentally appropriate instruction in curricular areas for K to 3rd grades. Role of the teacher and/or facilitator in relationship to the primary curriculum and learning environment. A. Literacy Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel TEAC 397D. B. Social Studies and Science Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel TEAC 397D. D. Mathematics Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel Math 200.

Credit Hours: 3

Max credits per semester: 9

Course Format: Lecture

Course Delivery: Classroom

**TEAC 418/818**

**Teaching Writing in the Elementary School**

[LINK](http://bulletin.unl.edu/courses/TEAC/418)

Learning and teaching of writing with consideration given to developmental factors of children and adolescents.

Credit Hours: 3

Course Delivery: Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 420/820</td>
<td>Teaching Foreign Language in the Elementary School</td>
<td>3</td>
<td>Theory, research and practice of most recent foreign language models and strategies.</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 425/825</td>
<td>Coordination in Occupational Training Programs</td>
<td>1–3</td>
<td>Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 430/830</td>
<td>Introduction to Philosophy of Education</td>
<td>3</td>
<td>Open to advanced undergraduates and graduate students</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 432/832</td>
<td>Higher Education in America</td>
<td>3</td>
<td>History and development of America's colleges and universities and recent trends and problems in higher education.</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 433/833</td>
<td>Comparative Education</td>
<td>3</td>
<td>Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Comparative Education Survey</td>
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</tr>
</tbody>
</table>
**Comparative Education: Special Topics/Travel Study**

**433B/833B**

**Prereqs:** None

This course could be taken more than once for additional credits assuming the student uses it for travel-study to different places. For example, a student could not visit South Korea twice with the same professor teaching the same syllabus, but could visit South Korea once (as one 3-hour course) and South Africa (as another 3-hour course).

Course investigates origins, goals, organization, challenges, and accomplishments of various countries' school systems with intentional comparisons to American practices. The 'B' format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

**Ethics and Education**

**434/834**

Open to advanced undergraduates and graduate students

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equality, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.

**Latin American Education**

**436/836**

**Prereqs:** 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.

**Linguistics for the Classroom School Teacher**

**438/838**

**Prereqs:** Admission to the Teacher Education Program.

Analysis of various aspects of linguistic study including dialects, usage, modern grammar, semantics, lexicography, etc., and their application in the K–12 school English classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the
**Literature for Adolescents**

**TEAC 439/839**

**Prereqs:**
Admission to a Teacher Education Program.

Wide range of young adult literature available for use in schools. Critical and rhetorical tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; consideration for readers aged 11-16.

**Content Area Reading, Grades 4–12**

**TEAC 441/841**

This course is a prerequisite for: SPED 406 [here](http://bulletin.unl.edu/courses/SPED/406), SPED 406A [here](http://bulletin.unl.edu/courses/SPED/406A)

Simultaneous teaching of academic content and functional teaching of reading in the content areas; assessment of comprehension, vocabulary/concept attainment; analyses of text; improvement of content area learning through reading/writing development.

**Learning and Teaching Principles and Practices**

**TEAC 451/851**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 [here](http://bulletin.unl.edu/courses/TEAC/306) or 406 [here](http://bulletin.unl.edu/courses/TEAC/406); TEAC 406/806 [here](http://bulletin.unl.edu/courses/TEAC/406). Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline–based art education. Planning and incorporation of innovative approaches embracing the diversity of students. K. Career and Technical Education Prereq: As listed above. Procedures for writing, selecting and organizing subject matter for instruction. L. Methods of Teaching Information Technology (3 cr) Prereq: As listed above and TEAC 397L [here](http://bulletin.unl.edu/courses/TEAC/397L) or 894L [here](http://bulletin.unl.edu/courses/TEAC/894L). Objectives, teaching materials, and methods of presentation emphasizing the organization and management of computer science instruction. [IS]N. Secondary Language Arts (3 or 4 cr) Prereq: As listed above, including ENGL 357 [here](http://bulletin.unl.edu/courses/ENGL/357), 377 [here](http://bulletin.unl.edu/courses/ENGL/377) and TEAC 438 [here](http://bulletin.unl.edu/courses/TEAC/438). Investigates issues in second language learning and teaching from the perspective of proficiency: contextualized practice in reading, writing, speaking, listening, and culture. Methodological approaches, review of research, testing guidelines, accuracy, the affective and cognitive needs of students, and the incorporation of authentic materials/languag. [IS]P. Secondary Mathematics Prereq: As listed above. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners. [IS]R. Secondary Modern Languages Prereq: As listed above. Investigates issues in second language learning and teaching from the perspective of proficiency: contextualized practice in reading, writing, speaking, listening, and culture. Methodological approaches, review of research, testing guidelines, accuracy, the affective and cognitive needs of students, and the incorporation of authentic materials/languag. [IS]V. Secondary Science Prereq: As listed above and parallel with TEAC 397 [here](http://bulletin.unl.edu/courses/TEAC/397).
Learning and Teaching Principles and Practices: Career and Technical Education

**TEAC 451K/851K**

**Learning and Teaching Principles and Practices: Secondary Mathematics**

**TEAC 451P/851P**

**Learning and Teaching Principles and Practices: **

**TEAC 451V/851V**

**Curriculum Principles and Practices**

**TEAC 452/852**
**The Middle Level Professional Methods**

**Prereqs:**
Admission to the Teacher Education Program.

Development of competence in planning, teaching, classroom management and assessment. Covers the scope, content, and organization of curriculum and instructional materials. I. Art (2 cr) N. Language Arts (2 cr) P. Mathematics (2 cr) T. Reading (2 cr) V. Science (2 cr) W. Social Science (2 cr)

**Credit Hours:** 1–12

Max credits per semester: 12

Course Delivery: Classroom

**Literature in Education**

Comparative analyses of literature and the role of the reader as meaning maker in educational settings. A. Literary Response and Analysis (3 cr) B. Multicultural Literature for Children and Adolescents (3 cr) E. Special Topics (3 cr)

**Credit Hours:** 3–9

Max credits per semester: 9

Course Format: Lecture

Course Delivery: Classroom

**Teaching with Technology**


**Credit Hours:** 1–3

Max credits per semester: 15

Course Delivery: Classroom

**Instructional Applications of Computers–Practicum**

**Credit Hours:**

Max credits per semester:

Course Delivery:
A task-oriented practicum in instructional application of computer to provide an opportunity for repetition and/or demonstration of fundamental practice skills. Combines discussion and demonstration with supervised task-centered field experiences.

**Prereqs:**
Permission.

**Credit Hours:** 2–3

**Course Delivery:** Classroom

**Inquiry into Teaching and Learning**

This course is a prerequisite for TEAC 888

Contemporary educational research from multiple theoretical perspectives.

**Prereqs:**
Parallel TEAC 897

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Student Teaching Internship Seminar**

Prereqs:
Parallel TEAC 897

**Credit Hours:** 1–2

**Campus:**
Analysis of school programs with attention to teacher certification, teacher/student rights/responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communicating with parents and community members, and current issues.

A. Elementary (K–6) (1–2 cr) Parallel TEAC 897A
B. Elementary Art (1–2 cr) Parallel TEAC 897B
C. Elementary Foreign Language (1–2 cr) Parallel TEAC 897C
D. Secondary Art (1–2 cr) Parallel TEAC 897D
E. Secondary Language Arts (1–2 cr) Parallel TEAC 897E
F. Secondary Mathematics (1–2 cr) Parallel TEAC 897F
G. Elementary Foreign Language (1–2 cr) Parallel TEAC 897G
H. Secondary Mathematics (1–2 cr) Parallel TEAC 897H
I. Secondary Art (1–2 cr) Parallel TEAC 897I
J. Secondary Language Arts (1–2 cr) Parallel TEAC 897J
K. Secondary Mathematics (1–2 cr) Parallel TEAC 897K
L. Secondary Science (1–2 cr) Parallel TEAC 897L
M. Secondary Social Science (1–2 cr) Parallel TEAC 897M
N. Secondary Language Arts (1–2 cr) Parallel TEAC 897N
O. Secondary Mathematics (1–2 cr) Parallel TEAC 897O
P. Secondary Social Science (1–2 cr) Parallel TEAC 897P
Q. Secondary Modern Language (1–2 cr) Parallel TEAC 897Q
R. Secondary Modern Language (1–2 cr) Parallel TEAC 897R
S. Secondary Science (1–2 cr) Parallel TEAC 897S
T. Secondary Social Science (1–2 cr) Parallel TEAC 897T
U. Mainstreaming (1–2 cr) Parallel TEAC 897U
V. Multicultural (1–2 cr) Parallel TEAC 897V
W. Multicultural (1–2 cr) Parallel TEAC 897W
X. Multicultural (1–2 cr) Parallel TEAC 897X
Y. Mainstreaming (1–2 cr) Parallel TEAC 897Y
Z. Multicultural (1–2 cr) Parallel TEAC 897Z

**Advanced Teaching Strategies**

This course is a prerequisite for ALEC 400

Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs, public schools, and other settings. Students 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.

**Improvement of Instruction in Elementary School Science**

Prereqs:
- 12 hrs education including TEAC 315 or permission; teaching experience or student teaching

Techniques, plans, and procedures for improving instruction in elementary school science. Current practices, issues, and trends; evaluation of instructional materials.

**Intercultural Communication**

Introduction to intercultural communication and the theoretical and methodological tools needed to understand the tenets and implications of intercultural communication for application in personal and professional practices. Readings will deal with misunderstandings and the impact of cultural factors on the making of meaning, as well as discrimination and the impact of unequal power relations on communication, media impact in a globalized world, language, identity and communication, and intercultural competence.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credits</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 817</td>
<td>Emerging Reading and Language</td>
<td>Elementary endorsement</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Research, theory and practice associated with literacy development in children from birth to age 8. Language and concept development, emerging reading and writing behaviors, appropriate materials and evaluation within a holistic view teaching and learning.</td>
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<tr>
<td>TEAC 822</td>
<td>Principles and Practices in Social Studies Education</td>
<td></td>
<td>1-3</td>
<td>9</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Current issues and trends in the curriculum and teaching of social studies. A. Special Topics (1–3 cr)</td>
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<tr>
<td>TEAC 828</td>
<td>Improvement of Instruction in Industrial Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.</td>
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<tr>
<td>TEAC 833</td>
<td>Comparative Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.</td>
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<tr>
<td>TEAC 835</td>
<td>Ethnic Minorities and American Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Chronological entry of European immigrant groups into an American society during the formative years of the development of the American public school system. Record of American social and educational history is replete with examples of inter- and intra-group human conflict as each immigrant group attempted to carve out its niche in a New World setting during a period of mass migration from Europe. Historical, sociological, and psychological barriers that became inherent during a dynamic period of nation building.</td>
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<tr>
<td>TEAC 840</td>
<td>Culture and Schooling</td>
<td></td>
<td>1-3</td>
<td>15</td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Description and explanation of cultural values as they relate to education. A. Gender (1–3 cr) B. Gender and Science (1–3 cr) D. Special Topics (1–6 cr) E. Rural Education (1–3 cr)</td>
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</tr>
</tbody>
</table>
Objectives and Methods of Science Teaching (TEAC 842)


A. Elementary
B. Middle School
D. Secondary and Community College
E. Special Topics (1–6 cr)

School Media Programs (TEAC 844)

Role of the media specialist as a member of the instructional team.

A. Administration (3 cr)
B. Reference (3 cr)
D. Cataloguing (3 cr)
E. Selection (3 cr)
J. Special Topics in School Media

Studies in Middle Level Schooling (TEAC 846)

Historical development, philosophy, and current literature of the middle school.

A. Curriculum (1–3 cr, max 3)
B. Leadership (1–3 cr, max 3)
D. Teacher-Based Advisory (1–3 cr, max 3)
E. Special Topics (1–3 cr, max 9)

Principles of Business Education (TEAC 847)


Introduction to Curriculum Studies (TEAC 848)

Historical development and philosophy of high school curricula. Review of research on schooling, curriculum trends, and school organizational structures.

A. Elementary Schools
B. Middle Schools
D. Secondary Schools
E. Special Topics in Curriculum (1–6 cr)

Studies in Assessment and Leadership for Learning (TEAC 849)

Preparation for assessing K–12 learners and leading K–12 Teacher Learning Communities.
A. Classroom Assessment (3 cr)
B. Large-scale Assessment (3 cr)
E. Leadership in Assessment (3 cr)
J. Leading Classroom Assessment (3 cr)
K. Special Topics in Assessment and Leadership for Learning (3 or 6 cr, max 6)

TEAC 857B Nebraska Writing Project
Crosslisted as ENGL 857B
Topics in writing instruction, explored via the National Writing Project Institute model, for K-12 and college teachers of writing in all curricular areas.

TEAC 858 Utilization of Modern Technology
Strategies of incorporating modern technology into the professional workplace; provides a thorough understanding of the operation and evaluation of integrating technology into the curriculum.

TEAC 859 Instructional Message Design
Using selected principles from behavior science (perception, memory, attitudes, concepts), students analyze and design instructional messages. Systematic process for instructional development.

TEAC 860 Production and Utilization of Instructional Materials
This course is meant to be taken after and in sequence with TEAC 859. Unique characteristics and contributions of selected instructional media and technologies to the teaching/learning and communication processes. Students produce materials for specific instructional messages.

TEAC 861 Education for a Pluralistic Society: Foundation and Issues
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. Critique of curricular materials and resources promoting a multicultural perspective.

TEAC 881 Music in Early Childhood Education
Crosslisted as MUED 881
Prereqs:
MUED 344 (http://bulletin.unl.edu/courses/MUED/344) or 370 (http://bulletin.unl.edu/courses/MUED/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.

### TEAC 887  
**Effecting High School Improvement**

The relationships and interactions among the high school student, a teacher, and the curriculum to the issues of school district, higher education, philanthropy, state department of education, and federal involvement in high school improvement efforts. The imperative and challenges for improving high schooling for all students.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

### TEAC 888  
**Teacher as Scholarly Practitioner**

Prereqs:  
- TEAC 800 [Link](http://bulletin.unl.edu/courses/TEAC/800) and 801 [Link](http://bulletin.unl.edu/courses/TEAC/801), or permission  

Seminar on the principles of practitioner inquiry and development of a proposal for an inquiry project.

A. Special Topics in Inquiry

**Credit Hours:** 1-3  
**Max credits per degree:** 3  
**Campus:**  
**Course Delivery:** Classroom

### TEAC 889  
**Masters Seminar**

Prereqs:  
- Permission  

Working with a faculty mentor on either an individual or small-group basis, the student plans, conducts, and reports a summative work project.

**Credit Hours:** 1-3  
**Max credits per degree:** 9  
**Campus:**  
**Course Delivery:** Classroom

### TEAC 890  
**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Campus:**

### TEAC 893  
**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Campus:**

### TEAC 894  
**Professional Practicum Experiences**

Prereqs:  
- Admission to Teacher Education Program  

TEAC 894 does not count toward the MA or MEd degree. P/N only. Guided observations and/or clinical experiences in schools and/or agencies offering programs for children/youth.

A. Elementary (K-6) (1–10 cr)
Student Teaching Internship

Course Delivery: Classroom

Prereqs:
Admission by application only

Credit Hours: 1–10

This course is a prerequisite for TEAC 803 (http://bulletin.unl.edu/courses/TEAC/803)

Masters Thesis

Course Delivery: Classroom

Prereqs:
Admission to masters degree program and permission of major adviser

Credit Hours: 6–10

Supervision and Administration in Vocational Education

Course Delivery: Classroom

For course description, see ALEC 901 (http://bulletin.unl.edu/courses/ALEC/901)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 902</td>
<td>Colloquium in Educational Policy and Practice</td>
<td>1-3</td>
<td>6</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Educational policy and practice and their interconnection.</td>
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<tr>
<td></td>
<td>A. Special Topics in Educational Policy and Practice (1-3 cr)</td>
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<tr>
<td>TEAC 903</td>
<td>Current Trends in the Education of Young Children</td>
<td>2-3</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Participation in special problems of teachers in service. Guidance, evaluations, research.</td>
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<tr>
<td>TEAC 905</td>
<td>Practicum in Postsecondary Teaching Crosslisted as ALEC 905</td>
<td>1-3</td>
<td></td>
<td>Lab</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: ALEC *805 or permission</td>
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<td>Work with a faculty mentor in a discipline of choice and an instructional supervisor to prepare instruction and teach students in a postsecondary setting. Practicum students are assisted in arranging for the practicum and are provided consultation and feedback during the practicum. Lesson planning and reflective papers are part of the practicum experience.</td>
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<tr>
<td>TEAC 907</td>
<td>Seminar in Elementary School Mathematics</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: TEAC 808 or equivalent</td>
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<td></td>
<td>Theories, literature, and research procedures relative to elementary mathematics education.</td>
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<tr>
<td>TEAC 908</td>
<td>Seminar in Teacher Education</td>
<td>1-12</td>
<td>12</td>
<td></td>
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<td>Classroom</td>
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<td></td>
<td>Overview of literature and scholarship in teacher education.</td>
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<td></td>
<td>A. Supervision of Pre-service Teachers (1-3 cr)</td>
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<td></td>
<td>B. Teacher Development (3 cr)</td>
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<td></td>
<td>D. Initial Teacher Preparation (1-3 cr)</td>
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<tr>
<td></td>
<td>E. Special Topics in Teacher Education (1-3 cr)</td>
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<tr>
<td>TEAC 911</td>
<td>Seminar in Elementary School Science</td>
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<td>Classroom</td>
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<td></td>
<td>Prereqs: 12 hrs laboratory science including courses in both physical and biological fields; TEAC 403 or 804 or equivalent; teaching experience</td>
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<td></td>
<td>Literature which deals with research and experimentation in science for the elementary school. Aspects of the teaching and supervision of elementary</td>
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</tbody>
</table>
### Seminar in Curriculum and Teaching of Career and Technical Education

**TEAC 920**

Current research and theory within the curriculum and teaching of career and technical education.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**[Link](http://bulletin.unl.edu/courses/TEAC/920)**

### Seminar in Literacy Studies

**TEAC 921**

Research in literacy and schooling.

- **A. Curriculum and Teaching (3 cr)**
- **B. Special Topics (1–3 cr)**
- **D. Language, Culture, and Education (1–3 cr)**

- **Credit Hours:** 1–3
- **Max credits per degree:** 9
- **Course Format:** Lecture
- **Campus:**
- **Course Delivery:** Classroom

**[Link](http://bulletin.unl.edu/courses/TEAC/921)**

### Seminar in the Learning and Teaching of Foreign Languages

**TEAC 922**

- **Prereqs:** Undergraduate teaching major in a foreign language and teaching experience in a foreign language
- **Critical review and evaluation of current literature, research and theory.**
- **A. Reading in the Foreign Language Classroom (1–3 cr, max 3)**
- **B. Writing in the Foreign Language Classroom (1–3 cr, max 3)**
- **D. Listening in the Foreign Language Classroom (1–3 cr, max 3)**
- **E. Speaking in the Foreign Language Classroom (1–3 cr, max 3)**
- **J. Planning in the Foreign Language Classroom (1–3 cr, max 3)**
- **K. Technology-Enhanced Language Instruction (1–3 cr, max 3)**

- **Credit Hours:** 1–21
- **Max credits per degree:** 21
- **Course Delivery:** Classroom

**[Link](http://bulletin.unl.edu/courses/TEAC/922)**

### Seminar in the Curriculum and Teaching of Secondary School Mathematics

**TEAC 923**

- **Prereqs:** Undergraduate teaching major and teaching experience in mathematics
- **Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of mathematics.**

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**[Link](http://bulletin.unl.edu/courses/TEAC/923)**

### Seminar in the Curriculum and Teaching of Science

**TEAC 924**

- **Prereqs:** Undergraduate teaching major and teaching experience in science, and TEAC 842 [Link](http://bulletin.unl.edu/courses/TEAC/842) and EDPS 859 [Link](http://bulletin.unl.edu/courses/EDPS/859)
- **Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.**
- **A. Elementary**
- **B. Middle School**
- **D. Secondary**
- **E. Inclusive Science Teaching**
- **J. Special Topics (1–6 cr)**

- **Credit Hours:** 1–3
- **Campus:**
- **Course Delivery:** Classroom

**[Link](http://bulletin.unl.edu/courses/TEAC/924)**
Seminar in the Curriculum and Teaching of Social Sciences

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)

Credit Hours: 3
Max credits per degree: 12
Campus:
Course Delivery: Classroom

Seminar in Individualized Instruction for Gifted, Talented, and Creative Students

Nature of curricular and instructional programs and practices for gifted, talented, and creative students in elementary and secondary schools. Range of learner outcomes, identification of instructional principles, personalizing instruction for this group of learners.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Sociological/Anthropological Research Methods in Education
Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
A. Ethnographic Methods (1–3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
D. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
E. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
J. Hermeneutic Traditions in Education (1–3 cr, max 3)
K. Quantitative Research Traditions in Education (1–3 cr, max 3)

Credit Hours: 1–3
Max credits per degree: 15
Campus:
Course Delivery: Classroom

Research in the History of Education

Historical research methods in education culminating in the research and writing of a historical article as publication report.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Contract Studies in International Education

Prereqs: Permission

Student proposed course of studies in international education: may include field experiences, individual/group research, participation in mini-seminars, etc.

Credit Hours: 1–6
Campus:
Course Delivery: Classroom

Seminar in College Teaching

Credit Hours: 3
Campus:
Course Delivery: Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>TEAC 937</td>
<td>Philosophy of Science and Educational Research</td>
<td>1-3</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Major themes in philosophy of science and relates these to conceptions of</td>
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<td>research on human beings and social institutions, particularly as this is</td>
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<td>applied to schooling. Students consider such fundamental issues as whether</td>
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<td>educational research is a science, the form and purpose of educational</td>
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<td>research, and what research might imply for practice.</td>
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<tr>
<td>TEAC 944</td>
<td>Seminar in Curriculum Studies</td>
<td>1-3</td>
<td>15</td>
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<td>Classroom</td>
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<td></td>
<td>Critical examination of issues in curriculum development with an analysis of</td>
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<td>research and literature on the subject.</td>
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<td></td>
<td>A. Curriculum as Aesthetic Text (1-3 cr)</td>
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<td>B. Special Topics in Curriculum (1-3 cr)</td>
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<td>D. Curriculum Evaluation (1-3 cr)</td>
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<td>E. Curriculum as Spatial Text (1-3 cr)</td>
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<tr>
<td>TEAC 946</td>
<td>Instructional Improvement and Decision Making</td>
<td>1-3</td>
<td>1</td>
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<td>Classroom</td>
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<td></td>
<td>Study and application of teaching models and techniques based on research,</td>
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<td>theory, and exemplary practice.</td>
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<tr>
<td></td>
<td>A. Instructional Assessment</td>
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<tr>
<td></td>
<td>B. Special Topics in Instruction</td>
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<tr>
<td>TEAC 949</td>
<td>Seminar in Education</td>
<td>1-3</td>
<td>9</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Critical analysis of literature and research on teaching, learning, and</td>
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<td>schooling.</td>
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<tr>
<td></td>
<td>A. Special Topics in Education (1-3 cr)</td>
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<tr>
<td>TEAC 950</td>
<td>Contextual Research in English/Language Arts</td>
<td>3</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Uses of qualitative research in English language arts; interpreting, planning,</td>
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<td>conducting, and reporting contextual research results.</td>
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<tr>
<td>TEAC 951</td>
<td>Seminar in Reading Education</td>
<td>3-9</td>
<td>9</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Scholarship in reading education, including the nature, results and</td>
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<td>implications of past and present research and non-research and</td>
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<tr>
<td>Course</td>
<td>Title</td>
<td>Description</td>
<td>Prerequisites</td>
<td>Credit Hours</td>
<td>Course Format</td>
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<tr>
<td>TEAC 952</td>
<td><strong>Language and Learning</strong></td>
<td>Role that language plays in empowering and constraining children as they attempt to make sense of their world. Consideration of application of language scholarship for general instruction.</td>
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<td>3</td>
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<tr>
<td>TEAC 953</td>
<td><strong>Seminar on Writing in the Curriculum</strong></td>
<td>Writing development, writing instruction, and the use of writing in the content areas. Consideration of application of scholarship in writing for general learning and instruction.</td>
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<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>TEAC 957B</td>
<td><strong>Nebraska Writing Project</strong></td>
<td>Summer institute for K–12 and college teachers of writing in all curricular areas, taught on the National Writing Project model.</td>
<td></td>
<td>6</td>
<td>Lecture 6</td>
</tr>
<tr>
<td>TEAC 959</td>
<td><strong>Portfolio in Instructional Technology Competencies</strong></td>
<td>No more than six credits of TEAC 959 may be counted towards a masters degree. Portfolio components represent a significant contribution to the solution of an instructional problem and reflect broadly the major competencies of instructional technology: problem definition, learner analysis, media selection and message design, production, and evaluation.</td>
<td>Permission</td>
<td>1–12</td>
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</tr>
<tr>
<td>TEAC 960</td>
<td><strong>Topical Seminar in Instructional Technology</strong></td>
<td>Critical analysis of research in a delimited problem area within instructional technology (e.g., ITV, CAI, videodisc, simulations, programmed instruction). Empirically testable research questions related to the topic.</td>
<td>Permission</td>
<td>1–3</td>
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</tr>
<tr>
<td>TEAC 961</td>
<td><strong>Current Approaches to Elementary Music Education</strong></td>
<td>Crosslisted as MUED 961</td>
<td>Teaching experience</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
### Workshop Seminar

**TEAC 990**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Credit Hours:** 1–12  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom

### Workshop Seminar

**TEAC 993**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Credit Hours:** 1–12  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom

### Doctoral Seminar

**TEAC 995**

**Prereqs:** Permission

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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Credit Hours:** 3  
**Max credits per degree:** 18  
**Campus:**  
**Course Delivery:** Classroom

### Individual Research Projects

**TEAC 996**

**Prereqs:** Permission

Individual research under faculty supervision.

**Credit Hours:** 1–10  
**Max credits per degree:** 10  
**Campus:**  
**Course Delivery:** Classroom

### Minor Research

**TEAC 997**

Individual research on approved topics in Elementary Education.

**Credit Hours:** 1–6  
**Campus:**  
**Course Delivery:** Classroom

### Doctoral Dissertation

**TEAC 999**

**Prereqs:**

Individual research under faculty supervision.

**Credit Hours:** 1–24  
**Campus:**  
**Course Delivery:** Classroom
Certificate of Specialization

Degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency. There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in general higher education program. The majority of students interested in K-12 education intend to satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, at either the standard or professional level, with administrative endorsements that will qualify them for employment as administrators in K-12 school systems. Students interested in higher education administration have the opportunity to pursue specializations in student affairs or human resource development or complete a general higher education program.

Doctoral degree programs

There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency.

Certificates of Specialization

# Contents

- 1 Description
- 2 Faculty

## Description

The College of Education and Human Sciences (CEHS) offers graduate degree programs through its seven CEHS departments: Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design. In addition to graduate degree programs, CEHS also offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

### 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 focused interest but which are not included in other professional education courses. 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.

CEHS offers three masters degrees in nine majors and the education specialist degree in three majors. The MEd is offered only in Educational Administration; Special Education and Communication Disorders; and Teaching, Learning, and Teacher Education. The following requirements for the MEd are College requirements. Departmental requirements may exceed these. In work for the master of education degree, at least 6 semester hours selected from College of Education and Human Sciences courses outside the major must be included and supporting work may be substituted for the minor(s). For information on masters and specialist degree programs, consult the relevant department's listing in this bulletin.

CEHS offers two doctoral degrees, both the EdD and the PhD, under three majors: educational studies, human sciences, and psychological studies in education. In addition, CEHS participates in two additional doctoral majors.

The Educational Studies major includes six specializations. Instructional Technology; Internet-based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education is sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co-hosts, with Architecture, Architecture Education.

The College of Education and Human Sciences offers graduate, non-degree programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization. The MEd is offered only in Educational Administration; and the Department of Nutrition and Health Sciences participates in the Interdepartmental Nutrition major.

Specific program and application information is available under each department’s listing in this bulletin. Up-to-date information is also available on-line at cehs.unl.edu. Inquiries may be directed to cehsgrad@unl.edu or to (402) 472-5333.

### Educational Administration

For a brief description of the program, application requirements and contact information, view the graduate program summary, [http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration)

**Interim Department Chair:** Brent D. Cejda, Ph.D.

**Graduate Committee Chair:** Jody Isernhagen, Ph.D.

The Department of Educational Administration offers programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization.

### Masters degree programs

The Masters Degree program meets the academic requirements for either a Master of Arts (MA) or a Master of Education (MEd) degree with a major in Educational Administration. The MA degree requires the completion of a thesis. Students enrolled in the Masters Degree program are interested in both K-12 and higher education administration.

The majority of students interested in K-12 education intend to satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, at either the standard or professional level, with administrative endorsements that will qualify them for employment as administrators in K-12 school systems. Students interested in higher education administration have the opportunity to pursue specializations in student affairs or human resource development or complete a general higher education program.

### Doctoral degree programs

There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency.

### Certificates of Specialization

For a brief description of the program, application requirements and contact information, view the graduate program summary, [http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration)
In addition to masters and doctoral degrees, the department offers four certificates of specialization.

Individuals who already have a Masters Degree in education can pursue a certificate endorsement program that will satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, a requirement for employment as an administrator in a K–12 school system.

The Certificate of Specialization in Educational Administration is designed to meet the requirements of a Nebraska Professional and Administrative Supervisory Certificate with an endorsement of superintendent.

The School Improvement Certificate Program that focuses on the K–12 school improvement process. The School Improvement Program benefits you—the teacher, by preparing you as a school leader while gaining the specialist credential, allowing you to increase your skills and build career opportunities.

The Community College Leadership Certificate is designed for those already employed in community colleges who aspire to administrative appointments as well as those who are in leadership positions and need or desire additional preparation.

Course Delivery

The Department of Educational Administration has been a campus leader in reaching out to students who need or wish to study from off campus and offers most of the course work for the MEd and EdD online. The primary emphasis in all courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of educational institutions.

Further information about graduate degree programs and about certification programs can be located on the department’s Website, located at cehs.unl.edu/edad.

Educational Psychology

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: R. J. De Ayala, Ph.D.
Graduate Committee Chair: Edward Daly, Ph.D.
Website: edp@unl.edu

The Department of Educational Psychology consists of four program areas: counseling psychology; cognition, learning and development (CLD); quantitative, qualitative, and psychometric methods (QQPM); and school psychology.

Masters Degree

The master of arts (MA) degree may be obtained with a specialization in cognition, learning and development (CLD program), or with a concentration in counseling psychology, or research and psychometric methods (QQPM program). Individuals in the CLD program may select the general CLD specialization or an option in health behavior or in college learning center. 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, measurement, counseling psychology, and school psychology through the field of educational specialization called psychological studies in education. For further information, see and contact the chair of the Department’s Graduate Committee.

Counseling and School Psychology Clinic

The Counseling and School Psychology Clinic in the Department of Educational Psychology serves the dual function of (1) providing training for qualified graduate students and of (2) providing services to individuals, public schools, families, and community agencies. Clinic therapists assist adults, families, children and youth experiencing academic, psychological, and behavioral concerns. In addition to therapeutic services, clinic therapists provide psychological testing and consultation for school related concerns. Therapeutic services are also provided for educational and vocational concerns. Service is provided by appointment.

Buros Center for Testing

The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practices. Founded by Oscar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evaluations of commercially available tests. In addition to its international reputation for providing test reviews, BIMM maintains the largest collection of tests and testing materials in the world. The Buros Institute for Assessment Consultation and Outreach (BIACO) was established in 1994 to expand the range of available assessment services to proprietary testing programs that include credentialing, state educational assessment, employment testing, and assessment literacy. Together, the two Buros Institutes advance the goals of the Department of Educational Psychology and the College of Education and Human Sciences by providing consultation and instructional services to graduate programs, by training and supporting graduate students in current assessment practices, and by serving assessment outreach needs both within and outside the state of Nebraska.

Special Education and Communication Disorders

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Sherri Jones, Ph.D.
Graduate Committee Chair: Karen Hux, Ph.D.

The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech-language pathology and the master of arts and master of education degrees in special education. The department administers a PhD in human sciences with a specialization in communication disorders and the PhD or EdD in educational studies with a specialization in special education. The department also offers the professional doctor of audiology (AuD) degree in audiology and a combined AuD/PhD Program. For more information on doctoral programs in education call (402) 472-2141 or visit our website at www.unl.edu/barkley.

The masters degree program in speech-language pathology and the AuD program in audiology are accredited by the Council on Academic Accreditation in Audiology/Speech-Language Pathology.

For more information regarding graduate and professional programs offered by the Department of Special Education and Communication Disorders, please call (402) 472–2141 or visit our website at www.unl.edu/barkley.

Masters Degree Programs

Students seeking admission into a masters program should: 1) apply on-line to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the web site at www.unl.edu/barkley or by emailing the Graduate Secretary at special@unl.edu. Three letters of recommendation, preferably from former college instructors, should be submitted to the departmental Graduate Governance Committee Chair along with the departmental application. Each applicant should also arrange to have a current academic transcript and scores for the General Test of the Graduate Record Examination submitted to the Graduate Studies Office at the University of Nebraska–Lincoln. Early submission of the scores is important because the application file cannot be given consideration until the file is complete.

For a master of science degree in speech–language pathology, completion of an appropriate undergraduate or pre–professional program is required for full graduate standing. Students with strong potential but without an academic background in the major may be admitted on a provisional basis until deficiencies have been met. Completion of the masters degree requires a minimum of 48 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure. The application deadline for fall admission into the M.S. program in Speech–Language Pathology is January 15.

Teacher Certification (licensure) and the Masters Degree. Masters degrees may be obtained with teaching certificate endorsements for special education and
speech–language pathology. Candidates must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.

**Distance Education.** The Department has several special education masters degrees, an educational specialist degree, and/or teaching endorsement programs that are available in part or fully through distance education. These include Early Childhood Special Education, Deaf and Hard of Hearing, Mild/Moderate Disabilities, Visual Impairments, Autism, Severe Disabilities, and Supervisor of Special Education (joint with Educational Administration) programs. Distance courses are delivered via the Internet with Blackboard and/or Breeze software. Some distance courses may also require some weekend meetings, telephone or Breeze connections to the on–campus course section, and may have scheduled participation requirements. Field experience and practicum courses can be arranged in or near local communities but may require special fees. Where required courses are not currently available via distance delivery, an equivalent course (either on–campus or at a distance) from another institution can be substituted with the approval of the advisor or may be taken on the UNL campus during the summer. See the department website for information about computer requirements for distance on–line courses and distance course availability.

**Educational Specialist (EdS) Degree.** This program in special education provides opportunity for practitioners in the field to upgrade their skills and/or develop leadership skills as a special educator in a particular area of specialization. Two years successful professional experience as a special educator is a minimum requirement for admission. A minimum of 66 credit hours past the bachelors degree is required, with at least 24 credits to be taken after admission to UNL’s EdS program. These include at least 40 hours of core content courses, 6 credits of electives or practica, and 3 credits of research. Relevant coursework completed as part of a prior masters degree can be used toward this degree. The program also requires a written comprehensive examination. Degree requirements can be used for additional teaching endorsements. Other relevant information and the application form can be found online at: www.unl.edu/barkley/sped/eds.shtml.

**Doctor of Audiology (AuD) Degree.** The Department of Special Education and Communication Disorders offers a professional audiology degree, the Doctor of Audiology (AuD) degree. The AuD program is a four–year course of study post B.A. or B.S. designed to provide students with academic and clinical practicum experiences that will meet or exceed the requirements of the American Speech–Language–Hearing Association (ASHA) for the Certificate of Clinical Competence in Audiology (CCC–AUD) as well as licensure requirements in most states.

Students seeking admission to the AuD program should download the application from www.unl.edu/barkley. Three letters of recommendation, preferably from former college instructors, should be submitted to the AuD program coordinator along with the departmental application. Students do not apply to the Office of Graduate Studies and submission of the Graduate Record Examination is not required for admission. Students should contact the Graduate Support Staff at special@unl.edu for further application instructions.

**PhD/EdD 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. Students seeking admission into one of these programs should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Graduate Support Staff at special@unl.edu. Prospective students 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 departmental 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 an applicant meets the qualifications for entrance into the program and whether a student’s interests are in accord with the type of education and direction the department faculty can provide. Final review of an application is made by the appropriate doctoral field graduate committee in special education or communications disorders.

Teaching, Learning and Teacher Education

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).

**Interim Department Chair: L. James Walter, Ph.D.**

**Graduate Committee Chair: Kathleen Wilson, Ph.D.**

The Department of Teaching, Learning and Teacher Education (TLTE) provides masters, specialist and doctoral degree courses and programs for teachers, administrators, and other educational leaders and practitioners with a focus on scholarship and practice in curriculum and instruction in schools and non–school educational settings. Graduate endorsements are also offered in Reading Specialist K–12 and ESL.

**Masters Degrees.** The aim of theTLTE masters program is to help educators build on their own experience, achieve a broad and deep understanding of educational practice, develop a professional identity, and engage in informed conversations about important teaching and learning issues towards making wise judgments regarding the many complex issues educators face. All candidates must complete a program which conforms to the requirements listed on the TLTE masters program web page. There are two masters degrees available in TLTE: the MA and MEd. Both degree programs offer a good deal of flexibility to enable the student—in concert with a faculty adviser—to develop a course of study that meets the student’s needs and interests.

If you are interested in earning teacher certification at the elementary level in combination with a master degree, a 14 month full time program (MAet) is available. If instead you yourself teaching at the middle school or high school level with a specialization in science or mathematics, read about our newest 14 month full time programs (MAmt and MAst) where you can qualify for teacher certification and earn a Master of Arts degree. A limited number of fellowships are available with the MAst and MAmt programs.

**Educational Specialist (EdS) Degree.** This program in curriculum and instruction provides an opportunity for practitioners in the field to upgrade their professional skills. Two years of successful professional experiences is a minimum requirement for admission. Sixty–six hours beyond the bachelors degree, research competence, practicum experiences, and a written comprehensive examination are basic requirements for the program. It is recommended that you contact the department Graduate Chair before applying.

**Doctoral Programs.** The EdD and PhD degrees are available under the major heading Educational Studies refer to the web page doctoral programs in education. The EdD is recommended for those whose primary interest is in the application of theory and knowledge to improve educational practice. The PhD is designed for teachers seeking to conduct research in order to generate new knowledge or reform educational theory. The Department of Teaching, Learning and Teacher Education administers three doctoral–level specializations, available for both the EdD and PhD in Educational Studies. Teaching, Curriculum and Learning focuses on teaching and learning processes; Instructional Technology focuses on using technology as a learning tool in various educational settings; and Internet–based Education focuses on using the Internet as a platform for teaching and learning. The most current information on these specializations is kept up–to–date on the web page for TLTE doctoral programs. For additional information, see or of this bulletin. The Graduate Record Examination (GRE) is required for admission to the doctoral programs and foreign students must also submit a TOEFL score.

**Faculty**

**Educational Administration**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration).

**Educational Psychology**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology).
### Engineering

#### Subject Areas

- Agricultural Engineering (AGEN) (#AGEN)
- Architectural Engineering (AREN) (#AREN)
- Biological Systems Engineering (BSEN) (#BSEN)
- Biomedical Engineering (BIME) (#BIME)
- Chemical and Biomolecular Engineering (CHME) (#CHME)
- Civil Engineering (CIVE) (#CIVE)
- Construction (CNST) (#CNST)
- Construction Engineering (CONE) (#CONE)
- Electrical Engineering (ELEC) (#ELEC)
- Engineering (ENGR) (#ENGR)
- Engineering Mechanics (ENGM) (#ENGM)
- Environmental Engineering (ENVE) (#ENVE)
- Industrial and Management Systems Engineering (IMSE) (#IMSE)
- Mechanical Engineering (MECH) (#MECH)
- Metallurgical Engineering (METL) (#METL)

### Courses for AGEN (AGEN)

#### Machine Design in Agricultural Engineering

**AGEN 424/824**  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Credit Hours:** 3

- **Prereqs:** Senior standing and **ENGM 325** ([link](http://bulletin.unl.edu/courses/ENGM/325)).

  Design of machine elements. Definition, analysis, and solution of a design problem in agricultural engineering.

#### Irrigation and Drainage Systems Engineering

**AGEN 453/853**  
Crosslisted as **BSEN 453/853**

- **Course Format:** Lecture  
- **Course Delivery:** Classroom  
- **Credit Hours:** 3

- **Prereqs:** **CIVE 310** ([link](http://bulletin.unl.edu/courses/CIVE/310)) or **MECH 310** ([link](http://bulletin.unl.edu/courses/MECH/310)); **AGEN 344** ([link](http://bulletin.unl.edu/courses/AGEN/344)) or **BSEN 344** ([link](http://bulletin.unl.edu/courses/BSEN/344)); or permission.

  Analytical and design consideration of evapotranspiration, soil moisture, and water movement as related to irrigation and drainage systems; analysis and design of components of irrigation and drainage systems including water supplies, pumping plants, sprinkler systems, and center pivots.

#### Special Problems

**AGEN 896**  
Crosslisted as **BSEN 896**

- **Course Format:** Lecture  
- **Course Delivery:** Classroom  
- **Credit Hours:** 1–6

- **Prereqs:** Permission

  Investigation and written report on engineering problems not covered in sufficient depth through existing courses. Topic varies by semester.
**AGEN 899**  
**Masters Thesis**  
Prereqs:  
Admission to masters degree program and permission of major adviser  
Credit Hours: 6–10  
Campus:  
Course Delivery: Classroom

**AGEN 923**  
**Advanced Design in Agricultural Engineering**  
Prereqs:  
Agricultural engineering or permission  
The use of theories of failure, fatigue, stress concentrations, shock and impact analysis in the design of machine members. Laboratory work includes an in-depth study of the testing and analysis of machine components.  
Credit Hours: 3  
Course Format: Lab 3, Lecture 2  
Campus:  
Course Delivery: Classroom

**AGEN 941**  
**Agricultural Waste Management**  
Crosslisted as BSEN 941  
Prereqs:  
Permission  
Aerobic, anaerobic, and physical–chemical treatment, energy recovery and protein synthesis processes for high–strength organic materials; agricultural applications including composting, ammonia stripping, nitrification, denitrification, and land disposal of organic and chemically treated materials.  
Credit Hours: 3  
Course Format: Lecture 3  
Campus:  
Course Delivery: Classroom

**AGEN 953**  
**Advanced Irrigation and Drainage Systems Engineering**  
Prereqs:  
[AGEN 853](http://bulletin.unl.edu/courses/AGEN/853), [MATH 821](http://bulletin.unl.edu/courses/MATH/821) 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.  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom

**AGEN 954**  
**Hydrologic Modeling of Small Watersheds**  
Prereqs:  
[AGEN 854](http://bulletin.unl.edu/courses/AGEN/854) and [CIVE 822](http://bulletin.unl.edu/courses/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 ungaged watersheds; hydrograph synthesis; composite hydrographs; and frequency relationships of rainfall and runoff.  
Credit Hours: 2  
Course Format: Lecture 2  
Campus:  
Course Delivery: Classroom

**AGEN 998**  
**Advanced Topics**  
Crosslisted as BSEN 998  
Prereqs:  
Credit Hours: 1–6
Permission

Individual study in advanced engineering topics that are not covered in regular course work or thesis. Topic varies by term.

**Doctoral Dissertation**

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1-24
Max credits per degree: 55
Campus: Classroom

**Animal Waste Management**

Crosslisted as AGEN 441/841

Prereqs: Senior standing.

Characterization of wastes from animal production. Specification and design of collection, transport, storage, treatment, and land application systems. Air and water pollution, regulatory and management aspects.

**Unit Operations of Biological Processing**

Crosslisted as AGEN 446/846

Prereqs: AGEN 225 or BSEN 225 and CHEM 332 or equivalent.

Application of heat, mass, and moment transport in analysis and design of unit operations for biological and agricultural materials. Evaporation, drying, distillation, extraction, leaching, thermal processing, membrane separation, centrifugation, and filtration.

**Instrumentation and Controls**

Crosslisted as AGEN 460/860

Prereqs: Senior standing or 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 electrical control circuits, and the interfacing of computers with instruments and controls. Emphasis on signal analysis and interpretation for improving system performance.

**Seminar I**

Crosslisted as AGEN 889

All entering biological systems engineering students and all agricultural engineering students are required to register for *889.

Introduction into departmental and campus resources, professionalism, preparation and delivery of presentations, technical writing, and additional topics as arranged by enrolled students.
## Internship

Crosslisted as AGEN 898

**Prereqs:** Permission

Students required to write an internship report of their creative accomplishments after completion of the internship. Students may spend up to nine months at the cooperating partner’s workplace.

Solution of engineering or management problems through a non-academic experience within the private sector or a government agency. The experience entails all or some of the following: research, design, analysis, and testing on an engineering problem. A plan, which documents how the individual will demonstrate creativity during the internship must be approved prior to the internship.

### Credit Hours: 1–6
### Campus:
### Course Delivery: Classroom

## Seminar II

Crosslisted as AGEN 989

All PhD students in biological systems engineering or agricultural engineering must register for 989.

Developing a graduate program, orientation to research, grant and research proposal preparation, experimental design and analysis, manuscript preparation and review, preparations and delivery of technical presentations, and research management.

### Credit Hours: 1
### Campus:
### Course Delivery: Classroom

## Solute Movement in Soils

Crosslisted as CIVE 955, AGRO 955, AGEN 955

**Prereqs:**
- MATH 208
- AGRO 861 (UNO)
- or
- GEOL 888
- or
- MSYM 852
- or
- CIVE 858

Knowledge of a programming language. MATH 821 recommended. Offered even-numbered calendar years.

Examination of the theory and experimental evidence available to characterize the movement of chemicals in soil. Both saturated and unsaturated flow conditions examined. Initial presentation of basic theoretical concepts. Remainder of class a discussion of the literature.

### Credit Hours: 3
### Course Format: Lecture 3
### Course Delivery: Classroom

## Courses for AREN (AREN)

### Indoor Air Quality Engineering

Crosslisted as AENR 3120 (UNO).

Indoor air quality. Codes, standards, HVAC equipment, commissioning, operation, maintenance, investigation, and remediation.

### Lighting II: Theory, Design and Application
Design and analysis of lighting systems; the integration between the lighting design process and the technical foundations for building lighting; design criteria; lighting design procedures lighting modes and subjective effects; and calculation tools.

**Graduate Design Project I**

**Prereqs:**
(UNO) AE 3200.

This course is a prerequisite for: AREN 809 [AREN/809](http://bulletin.unl.edu/courses/AREN/809)

AREN 420 [AREN/420](http://bulletin.unl.edu/courses/AREN/420) lab sessions include photometric measurements and computer applications.

Design and analysis of lighting systems; the integration between the lighting design process and the technical foundations for building lighting; design criteria; lighting design procedures lighting modes and subjective effects; and calculation tools.

**Graduate Design Project II**

**Prereqs:**
AREN *801/(UNO) AE *8010; and permission

Second of a two-course capstone design project for the MAE degree. AREN *802/(UNO) AE *8020 requires a professionally-written report and oral presentation that demonstrates both mastery of the subject and a high level of writing and oral communication skills.

Complete a detailed investigation in the Option Area of the master of architectural engineering degree. Students are permitted to enroll in this course twice. Those who fail to earn a passing grade after enrolling in this course a second time will be referred to the AE Graduate Committee, and this may result in termination of their program of graduate studies.

**Building Communication Systems**

**Prereqs:**
AE 3220

Integration of voice, data and video systems into overall building design. Scalability; wireless systems; interference; project management; current industry standards and protocols.

**Sustainable Building Design**

**Prereqs:**
CIVE 341 [CIVE/341](http://bulletin.unl.edu/courses/CIVE/341) or ARCH 332
Integrates building design with the principles of minimum resource use, energy conservation and healthy indoor environments.

### AREN 806 Architectural Engineering Professional Practice I

**Prereqs:**
- ISMG 2060

Investigation of issues related to the integration of building design processes with professional architectural engineering practice. Aspects of building design project finance, budgets, contracts, legal issues, professional licensure, professional responsibility and professional ethics. The perspective of life-cycle costing.

### AREN 807 Architectural Engineering Professional Practice II

**Prereqs:**
- IMSE 206
- IMSG 2060
- AREN 806

Continuation of investigation of issues related to the integration of building design processes with professional architectural engineering design practice. Building design specifications, estimating, bidding, building construction contract negotiations, building design project management, project team personnel management, project risk, and key regulatory measures.

### AREN 808 Applied Experimental Design and Statistical Analysis

**Prereqs:**
- STAT 380

Overview of advanced experimental design methods and statistical analysis techniques. Application of these to the planning, execution, analysis, and description of research in architectural engineering.

### AREN 809 Interdisciplinary Team Design Project

**Prereqs:**
- For Acoustics and/or Mechanical option: AREN 412
- For Electrical and/or Lighting option: AREN 420
- Structural option: CET 4410

AREN 809 is the capstone design course in architectural engineering.

Develop and design the electrical, lighting, mechanical, and structural systems for a building, from programming through construction documents, as an interdisciplinary team effort.
Solar Energy Systems

Prereqs:
MECH 820 or permission

Fundamentals of solar energy system modeling analysis and design. Solar radiation modeling, surface properties of opaque and glazing materials, flat-plate collector design, solar energy storage, solar system thermal calculation, system application and design.

Building Control and Automation Systems

Prereqs:
MATH 3350; AE 3100, AE 4120, AE 4120

This course is a prerequisite for AREN 913, AREN 915, AREN 916, and AREN 917.

Fundamental concepts of building control theory and automation. Building control: state-variable plant and closed-loop system representation, time and frequency response, stability, root-locus methods and design of building control systems. Automation: thermostats, dampers, valves, direct digital control, control of air handling units, terminal units, primary building systems, supervisory control and system optimization, communication systems, BACnet, and DDC system design and implementation.

Building III: Advanced Systems

Prereqs:
MECH 300 and MECH 420 and AREN 310 and AREN 412 and AE 3100 and AE 4120 and permission.

This course is a prerequisite for AREN 917.

Advanced analysis, design, and modeling of building energy systems. Mass transfer and exchangers, vapor compression chillers, absorption chillers, central cooling plants, boilers systems and heating plants, cooling storage systems and plants, and cogeneration systems and plants.

Building Energy Simulation and Performance Contracting

Prereqs:
AE 3100, AE 4120, AE 4140, and AE 4400 (UNO)

Integrated approach to deliver energy improvement retrofit projects that provide economical and ecological benefits. Proficiency in EnergyPlus or DOE-2 and in retrofit cost estimation will be attained and integrated into an engineering economic analysis. Partnering configurations, contracts, financing, and measurement and verification. Concepts applied to a practical class project.

Theory and Application of Thermal Systems Measurement
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>817</td>
<td></td>
<td>Prereqs: STAT 8805 or equivalent</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Analysis, theory, and methods of instrumentation for thermal system energy consumption measurement and scientific research testing. Emphasis on sensors, traducers, and error analysis.</td>
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<tr>
<td>AREN 818</td>
<td>Indoor Air Quality Design</td>
<td>Prereqs: AREN 811 or permission</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Fundamentals of project management within the mechanical and electrical contracting industry. Emphasis on codes, contract documents, productivity, coordination, project control and administration, scheduling, safety, and project closeout, all from a specialty contracting perspective.</td>
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<tr>
<td>AREN 821</td>
<td>Lighting II: Advanced Design Practice</td>
<td>Prereqs: AREN 820</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Design and analysis of lighting for outdoor sports, floodlighting and interior applications; economic analysis; modeling algorithms; advanced photometrics.</td>
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<tr>
<td>AREN 822</td>
<td>Electrical Systems for Buildings II</td>
<td>Prereqs: AE 3220</td>
<td>3</td>
<td>UNO</td>
<td>Lab, Lecture</td>
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<td></td>
<td>Power systems analysis and design, integration of electrical system components into functional, safe and reliable power distribution systems for commercial and industrial facilities. Per unit analysis, fault analysis, power quality, grounding, overcurrent protection coordination and complete power system design.</td>
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<td>Classroom</td>
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<tr>
<td>AREN 823</td>
<td>Light Sources</td>
<td>Prereqs: AREN 820</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Fundamental science and principles of light generation in modern electric light sources; characteristics that influence applications of light sources.</td>
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<tr>
<td>AREN 824</td>
<td>Lighting Metrics</td>
<td>Prereqs: AE 3200 or equivalent</td>
<td>3</td>
<td>UNO</td>
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</table>
Critical survey and application of measures developed to characterize the effects of lighting systems on human perception and performance. Contrast, visibility, visual performance (Relative Visual Performance, Visibility Level); visual comfort probability; discomfort glare rating system; and unified glare rating system.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREN 825</td>
<td>Daylighting</td>
<td>AREN 820</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>AREN 830</td>
<td>Advanced Noise Control</td>
<td>AE 3300 or equivalent</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>AREN 833</td>
<td>Advanced Architectural Acoustics</td>
<td>AE 3300 or equivalent</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>AREN 835</td>
<td>Electroacoustics</td>
<td>AE 3300 or equivalent</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
</tr>
<tr>
<td>AREN 841</td>
<td>Building Energy and Acoustical Systems</td>
<td>Admission to MEng program or permission</td>
<td>3</td>
<td>UNO</td>
<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
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<tr>
<td>AREN 851</td>
<td>Masonry and Timber Design</td>
<td>CIVE 440 (Reinforced Concrete Design) or equivalent; CIVE 441 (Steel Design) or equivalent.</td>
<td>3</td>
<td>Lecture 3</td>
<td>UNO</td>
</tr>
<tr>
<td>AREN 880</td>
<td>Graduate Seminar in Architectural Engineering and Construction</td>
<td>The objectives of this course are to broaden student knowledge on engineering topics, improve presentation and professional skills, as well as learn about professional development resources available on campus. To pass the course, a student must attend a minimum of 15 Durham School Graduate Student Seminars, MAE project presentations, and/or MS/PhD thesis presentations in the College of Engineering. The student must also present one seminar within the Durham School Graduate Student Seminar series, prior to the final oral examination. All MS and PhD graduate students in architectural engineering must enroll within their first 3 semesters of matriculation.</td>
<td>1</td>
<td>Independent Study 1</td>
<td>UNO</td>
</tr>
<tr>
<td>AREN 892</td>
<td>Individual Instruction in Architectural Engineering</td>
<td>Permission</td>
<td>1-3</td>
<td>Independent Study</td>
<td>UNO</td>
</tr>
<tr>
<td>AREN 899</td>
<td>Masters Thesis</td>
<td>Admission to AREN/AE (UNO) masters degree program and permission of major adviser</td>
<td>6-10</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>AREN 913</td>
<td>Dynamic Programming and Optimal Control</td>
<td>AE 3100, AE 4120, AE 4140; AREN 812 (Reinforced Concrete Design) or equivalent; CIVE 441 (Steel Design) or equivalent.</td>
<td>3</td>
<td>Lecture</td>
<td>UNO</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Prereqs</td>
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<tr>
<td>AREN 915</td>
<td>Modern Building Control Applications</td>
<td>AE 3100, AE 4120, AE 4140; AREN 812</td>
<td>3</td>
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<td>Neuro-dynamic programming/reinforcement learning methodology, fuzzy logic methods, and evolutionary/genetic algorithms (GA) to building control problems. Concepts applied to case studies from problem areas.</td>
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<td>AREN 916</td>
<td>Building Energy Systems Modeling, Control and Optimization</td>
<td>AE 420 and AREN 812 <a href="http://bulletin.unl.edu/courses/AREN/812">link</a>; or permission</td>
<td>3</td>
<td>Lab, Lecture</td>
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<td>Modeling, control, and optimization of the secondary building energy systems: building envelope, room comfort zones, air handling units, cooling and heating water loops.</td>
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<tr>
<td>AREN 917</td>
<td>Primary Energy Systems Modeling, Control and Optimization</td>
<td>AREN 812 <a href="http://bulletin.unl.edu/courses/AREN/812">link</a>, AREN 814 <a href="http://bulletin.unl.edu/courses/AREN/814">link</a> or permission</td>
<td>3</td>
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<tr>
<td></td>
<td>Modeling, control, and optimization of the primary building energy systems: central distribution systems, chiller systems, boiler systems, central coding plants, central heating plants, and thermal storage systems.</td>
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<tr>
<td>AREN 918</td>
<td>Computational Fluid Dynamics Modeling of Indoor Environments</td>
<td>AREN 811 <a href="http://bulletin.unl.edu/courses/AREN/811">link</a>, MECH 810 <a href="http://bulletin.unl.edu/courses/MECH/810">link</a>, or permission</td>
<td>3</td>
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<td></td>
<td>Application of computational fluid dynamics software to modeling of indoor environments. Turbulence modeling, boundary conditions, natural and forced convection flows, species transport, and fire modeling.</td>
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<tr>
<td>AREN 920</td>
<td>Color Theory</td>
<td>AREN 820 <a href="http://bulletin.unl.edu/courses/AREN/820">link</a></td>
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<td></td>
<td>Theories of color vision; theoretical and mathematical basis for chromaticity, color temperature, color rendering metrics, color matching functions, and color spaces; spectral weighing functions; and measurement of color.</td>
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<tr>
<td>AREN 921</td>
<td>Current Research in Illumination Engineering</td>
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<tr>
<td></td>
<td>Current research in illumination engineering. Experimental methodologies</td>
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<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Prereqs</td>
<td>Campus</td>
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<tr>
<td>AREN 922</td>
<td>Behavioral Sciences for Lighting Research</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Experimental design methods and statistical analysis techniques, specifically as these are applied to the planning, execution, analysis and description of lighting experiments.</td>
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<tr>
<td>AREN 923</td>
<td>Psychological Aspects of Lighting</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Review of research investigating the effects of light and color on human physiology, psychological processes, and human subjective response to lighting.</td>
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<tr>
<td>AREN 930</td>
<td>Current Topics in Architectural Acoustics</td>
<td>3</td>
<td>Prereqs: AREN 833</td>
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<td>Classroom</td>
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<td></td>
<td>Current topics in architectural acoustics. Objective versus subjective measures in performance spaces, electronic enhancement of rooms, advanced computational modeling techniques, and auralization.</td>
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<tr>
<td>AREN 997</td>
<td>Research Other Than Thesis</td>
<td>1–6</td>
<td>Prereqs: Permission</td>
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<td>Classroom</td>
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<td></td>
<td>Supervised non-thesis research and independent study.</td>
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<tr>
<td>AREN 998</td>
<td>Special Topics</td>
<td>1–3</td>
<td>Prereqs: Permission</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Advanced topics in architectural engineering.</td>
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<tr>
<td>AREN 999</td>
<td>Doctoral Dissertation</td>
<td>1–24</td>
<td>Prereqs: Admission to doctoral degree program and permission of supervisory committee chair</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>The primary source of light and electrical energy for the design of building systems and the control of the environment for human occupancy.</td>
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</tbody>
</table>
Irrigation and Drainage Systems Engineering

Crosslisted as BSEN 453/853

Analytical and design consideration of evapotranspiration, soil moisture, and water movement as related to irrigation and drainage systems; analysis and design of components of irrigation and drainage systems including water supplies, pumping plants, sprinkler systems, and center pivots.

Special Problems

Crosslisted as BSEN 896

Investigation and written report on engineering problems not covered in sufficient depth through existing courses. Topic varies by semester.

Agricultural Waste Management

Crosslisted as BSEN 941

Aerobic, anaerobic, and physical–chemical treatment, energy recovery and protein synthesis processes for high-strength organic materials; agricultural applications including composting, ammonia stripping, nitrification, denitrification, and land disposal of organic and chemically treated materials.

Advanced Topics

Crosslisted as BSEN 998

Individual study in advanced engineering topics that are not covered in regular course work or thesis. Topic varies by term.

Medical Imaging Systems

Crosslisted as BSEN 414/814

Underlying physics, instrumentation, and signal analysis of biomedical and biological imaging modalities. MRI, X-ray, CT, ultrasound, nuclear medicine, and the human visual system. Energy–tissue interactions. Resolution, point spread function, contrast, diffraction, comparisons. Information content in images for biological systems.
Introduction to Biomaterials

**Prereqs:**
BSEN/AGEN 225 or BIOC 321 or BIOC/BIOS/CHEM 431/831.

This course is a prerequisite for: BSEN 418.

BSEN 416 requires the evaluation of current primary literature in the field.

Introduction to all types of bio-materials, metals, ceramics, polymers, and natural materials. Characterization of biomaterials, mechanical and physical properties, cell–biomaterials interactions, degradation, and host reaction to biomaterials. FDA testing and applications of biomaterials, implants, tissue engineering scaffolds, artificial organs, drug delivery, and adhesives.

Tissue Engineering

**Prereqs:**
BSEN 416 or equivalent.

BSEN 418 uses case studies to demonstrate clinical implementation of engineered tissues.

Introduction to engineering biological substitutes that can restore, maintain or improve organ function in therapy of diseases. Engineering methods and principles to design tissues and organs, cell and tissue biology, tissue growth and development, biomaterial scaffolds, growth factor and drug delivery, scaffold–cell interactions, and bioreactors.

Animal Waste Management

**Prereqs:**
Senior standing.

Characterization of wastes from animal production. Specification and design of collection, transport, storage, treatment, and land application systems. Air and water pollution, regulatory and management aspects.

Unit Operations of Biological Processing

**Prereqs:**
AGEN 225 or BSEN 225 and CHEM 332 or equivalent.

Application of heat, mass, and moment transport in analysis and design of unit operations for biological and agricultural materials. Evaporation, drying, distillation, extraction, leaching, thermal processing, membrane separation, centrifugation, and filtration.

Nonpoint Source Pollution Control Engineering

**Prereqs:**
AGEN 225 or BSEN 225 and CHEM 332 or equivalent.

Crosslisted as CIVE 455/855.

Application of heat, mass, and moment transport in analysis and design of unit operations for biological and agricultural materials. Evaporation, drying, distillation, extraction, leaching, thermal processing, membrane separation, centrifugation, and filtration.
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>BSEN 460/860</td>
<td>Instrumentation and Controls</td>
<td>BSEN 326 or CIVE 326 or BSEN 350 (CIVE 326) or AGEN 350 or CIVE 352</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
</tr>
<tr>
<td>BSEN 889</td>
<td>Seminar I</td>
<td>Senior standing or permission</td>
<td>1</td>
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<td>Classroom</td>
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<tr>
<td>BSEN 898</td>
<td>Internship</td>
<td>Permission</td>
<td>1–6</td>
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<tr>
<td>BSEN 899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6–10</td>
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<td>Classroom</td>
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<tr>
<td>BSEN 912</td>
<td>Advanced Ultrasound Imaging</td>
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</table>

Identification, characterization, and assessment of nonpoint source pollutants; transport mechanisms and remediation technologies; design methodologies and case studies.

Analysis and design of instrumentation and controls for agricultural and biological production, management and processing. Theory of basic sensors and transducers, analog and digital electrical control circuits, and the interfacing of computers with instruments and controls. Emphasis on signal analysis and interpretation for improving system performance.

All entering biological systems engineering students and all agricultural engineering students are required to register for *889.

Solution of engineering or management problems through a non-academic experience within the private sector or a government agency. The experience entails all or some of the following: research, design, analysis, and testing on an engineering problem. A plan, which documents how the individual will demonstrate creativity during the internship must be approved prior to the internship.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>BSEN 935</td>
<td>Analysis of Engineering Properties of Biological Materials</td>
<td>BSEN 311 or ELEC 304</td>
<td>3</td>
<td>Lab 2, Lecture 2</td>
<td>Classroom</td>
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<tr>
<td>BSEN 943</td>
<td>Bioenvironmental Engineering</td>
<td>BSEN 846 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>BSEN 951</td>
<td>Advanced Mathematical Modeling in Biological Engineering</td>
<td>MATH 821 or Mech 310 or NRES 808 or BIOS 857 or equivalent permission</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>BSEN 954</td>
<td>Turbulent Transfer in the Atmospheric Surface Layer</td>
<td>MATH 821, MECH 310 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>BSEN 989</td>
<td>Seminar II</td>
<td>All PhD students in biological systems engineering or agricultural engineering must register for 989.</td>
<td>1</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</table>

Beamforming, diffraction, wave space, scattering, imaging. Interactions of mechanical energy and tissue. Linear and phased arrays. Doppler estimation of blood flow velocity. Tumor and cyst characterization. Other modern research topics in medical ultrasound.

Current and relevant mechanical, rheological, thermal, electrical, and optical properties as related to the engineering of processing, storage, handling, and utilization systems for biological materials are selected for analysis.

An engineer analysis of livestock, their environment and the interaction between the two; mathematical models, heat transfer, energy balances, environmental measurements, physiological measurements, calorimetry.

Advanced mathematical modeling techniques and applications. Specific topics from current literature and vary depending on research interests.

Offered spring semester of odd-numbered calendar years.

Developing a graduate program, orientation to research, grant and research proposal preparation, experimental design and analysis, manuscript preparation and review, preparations and delivery of technical presentations,
and research management.

**BSEN 999**

**Doctoral Dissertation**

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

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<th>Credit Hours:</th>
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<tr>
<td>Max credits per degree:</td>
<td>55</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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**CIVE 422/822**

**Pollution Prevention: Principles and Practices**

Crosslisted as BSEN 422/822

Prereqs:
Permission.

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<tr>
<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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</table>

Introduction to pollution prevention (P2) and waste minimization methods. Practical applications to small businesses and industries. Legislative and historical development of P2 systems analysis, waste estimation, P2 methods, P2 economics, and sources of P2 information.

**CIVE 458/858**

**Groundwater Engineering**

Crosslisted as BSEN 458/858

Prereqs:
CIVE 352 or AGEN 350 or BSEN 350 or equivalent.

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<th>Credit Hours:</th>
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<td>Course Format:</td>
<td>Lecture</td>
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<td>Course Delivery:</td>
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Application of engineering principles to the movement of groundwater. Analysis and design of wells, well fields, and artificial recharge. Analysis of pollutant movement.

Courses for BIME (BIME)

**BIME 999**

**Doctoral Dissertation**

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

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<tr>
<th>Credit Hours:</th>
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<td>Max credits per degree:</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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Courses for CHME (CHME)

**CHME 460/860**

**Automatic Process Control Laboratory**

Prereqs:
CHME 462 or parallel.

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<th>Credit Hours:</th>
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<tr>
<td>Course Format:</td>
<td>Lecture 3, Lab 3</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

Selected laboratory experiments to demonstrate the theory of the dynamics...
Biochemical Separations

475/875

Prereqs:
CHME 333

Separation and purification of compounds of biological origin from an analytical perspective. Application of unit operations for these separations.

Air Pollution, Assessment and Control

489/889

Prereqs:
Senior standing or permission.

Survey of the present status of the air pollution problem and the application of engineering and scientific principles to its practical and effective coordinated control.

Multiple Contact Separation Processes

805

Prereqs:
CHME 823

Application of the principles of physical kinetics and the equilibrium stage to separation processes such as absorption, extraction, and distillation.

Advanced Chemical Engineering Analysis

815

Prereqs:
CHME 833, MATH 820 or MATH 821

Application of advanced mathematics to chemical engineering design, with emphasis upon the derivation of differential equations describing physical situations as well as upon the solution of these equations. Design methods for tubular and stirred tank reactors, ion exchange units, pebble heaters, gas absorbers, mixers, etc.

Chemical Engineering Thermodynamics II

823

Prereqs:
CHME 223

Application to multi-component systems; thermodynamics, phase equilibria,
Theoretical and Applied Thermodynamics for Chemical Engineers

CHME 825

Prereqs: CHME 823 or CHEM 982, MATH 820 or 821

Application of classical engineering and chemical thermodynamics to problems in chemical engineering.

Chemical Engineering Laboratory II

CHME 830

Prereqs: CHME 331, CHME 333, CHEM 442, or equivalent

Selected experiments in chemical engineering. Emphasis on experimental design, interpretation of results, and formal oral and written presentation.

Transport Operations I

CHME 832

Prereqs: MATH 208; a grade of C- or better in CHME 202

Mass, momentum, and energy transport phenomena and their applications in chemical engineering.

Transport Operations

CHME 833

Prereqs: CHME 832

Chemical engineering 832 continued.

Diffusional Operations

CHME 834

Prereqs: CHME 823 and CHME 833
Application of diffusional theory to the design of processing equipment required for absorption, adsorption, leaching, drying, and chemical reactions.

CHME 835  
**Transport Phenomena I**

**Prereqs:**
MATH 821, CHME 832, CHME 833

This course is a prerequisite for CHME 836.

Advanced consideration of molecular and turbulent momentum, energy and mass transport.

CHME 836  
**Transport Phenomena II**

**Prereqs:**
CHME 835

Continuation of Transport Phenomena I.

CHME 842  
**Chemical Reactor Engineering and Design**

**Prereqs:**
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.

CHME 845  
**Advanced Chemical Engineering Kinetics**

**Prereqs:**
CHME 815, CHME 823, CHME 842

Kinetics of chemical reactions in several categories of reactors for interpretation of experimental data and design of equipment.

CHME 847  
**Principles and Applications of Catalysis in Reaction Engineering**

**Prereqs:**
CHME 842 or equivalent

Kinetics of chemical reactions in several categories of reactors for
interpretation of experimental data and design of equipment.

**Chemical Engineering Process Economics and Optimization**

Credit toward the degree may be earned in only one of: IMSE 206 (http://bulletin.unl.edu/courses/IMSE/206) or CHME 452 (http://bulletin.unl.edu/courses/CHME/452)/852 (http://bulletin.unl.edu/courses/CHME/852).

Criteria of chemical process engineering economics: cost and asset accounting, time value of money, profitability, alternative investments, minimum attractive rate of return, sensitivity and risk analysis. Process optimization in: plant operations, cyclic operations, unit operations, using successive calculations, linear programming and dynamic programming.

**Chemical Engineering Process Design**

Prereqs:
- CHME 331 (http://bulletin.unl.edu/courses/CHME/331), CHME 333 (http://bulletin.unl.edu/courses/CHME/333), CHME 442 (http://bulletin.unl.edu/courses/CHME/442), and CHME 452 (http://bulletin.unl.edu/courses/CHME/452)

Design and evaluation of chemical engineering process applications.

**Chemical Process Engineering**

Prereqs:
- CHME 830 (http://bulletin.unl.edu/courses/CHME/830); CSCE 855 (http://bulletin.unl.edu/courses/CSCE/855) or ENGM 880 (http://bulletin.unl.edu/courses/ENGM/880) recommended

Practical and theoretical aspects of chemical process analysis, simulation, and synthesis. Case studies used to illustrate principles. Use of the digital computer as a tool of the process engineer is stressed.

**Automatic Process Control**

Prereqs:
- CHME 833 (http://bulletin.unl.edu/courses/CHME/833), MATH 821 (http://bulletin.unl.edu/courses/MATH/821)

This course is a prerequisite for CHME 965 (http://bulletin.unl.edu/courses/CHME/965).

Analysis and design of automatic control systems. Dynamic responses of measuring instruments, control elements, and process equipment included in control loops.

**Biochemical Engineering**

Prereqs:
- CHEM 262 (http://bulletin.unl.edu/courses/CHEM/262), CHME 323 (http://bulletin.unl.edu/courses/CHME/323) and CHME 333 (http://bulletin.unl.edu/courses/CHME/333)

This course is a prerequisite for CHME 874 (http://bulletin.unl.edu/courses/CHME/874).
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.

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<th>Course Code</th>
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<th>Prereqs</th>
<th>Course Format</th>
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<th>Course Delivery</th>
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<tbody>
<tr>
<td>CHME 874</td>
<td>Advanced Biochemical Engineering</td>
<td>2-6</td>
<td>CHME 873 or permission</td>
<td>Lecture</td>
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<td></td>
<td>Recent theoretical and technical developments in biochemical engineering.</td>
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<tr>
<td>CHME 882</td>
<td>Polymers</td>
<td>3</td>
<td>CHEM 262 and CHEM 264</td>
<td>Lecture</td>
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<td>Classroom</td>
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<td>Introduction to polymer technology stressing polymerization kinetics, methods of resin manufacture, and applications.</td>
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<tr>
<td>CHME 886</td>
<td>Electrochemical Engineering</td>
<td>3</td>
<td>CHME 312, CHME 833, and CHME 842, or permission</td>
<td>Lecture</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>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.</td>
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<tr>
<td>CHME 896</td>
<td>Advanced Topics in Chemical Engineering Computation</td>
<td>1-6</td>
<td>CHME 312 or CSCE 455, or CSCE 855, or ENGM 480, or ENGM 880, and permission</td>
<td>Lecture</td>
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<td>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.</td>
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<tr>
<td>CHME 899</td>
<td>Masters Thesis</td>
<td>6-10</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>Lecture</td>
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<td>Classroom</td>
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</tbody>
</table>
**Seminar in Chemical Engineering**

Discussion of research projects and review of current literature in chemical engineering.

**Systems Analysis in Chemical Engineering**

Prereqs: CHME 496/896


**Transport Properties**

Prereqs: CHME *835, CHEM 882

Application of the kinetic theories of gases, liquids, and solids to the prediction and correlation of transport properties.

**Membrane Principles and Processes**

Prereqs: CHME 823 and CHME 833

Fundamental principles relating to membrane effects, the structure and properties of membranes, and applications in electrodialysis, ultrafiltration, diffusion control, artificial organs, and other processes.

**Advanced Process Dynamics and Control**

Prereqs: 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.

**Special Problems in Chemical Engineering**

Prereqs: CHME 823, CHME 833 or equivalent


**Courses for CIVE (CIVE)**

**Water Quality Strategy**

Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875

**Prereqs:**
Senior standing or permission.

*Capstone course.*

Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.

**Nonpoint Source Pollution Control Engineering**

Crosslisted as CIVE 455/855

**Prereqs:**
BSEN 326 or CIVE 326; BSEN 350 or AGEN 350 or CIVE 352.

Identification, characterization, and assessment of nonpoint source pollutants; transport mechanisms and remediation technologies; design methodologies and case studies.

**Hydrology**

Crosslisted as NRES 853

**Prereqs:**
MATH 106, not available for credit for engineering students.

Introduction to the principles of hydrology, with emphasis on the components of the hydrologic cycle: precipitation, evaporation, groundwater flow, surface runoff, infiltration, precipitation runoff relationships.

**Flow Systems Design**

**Prereqs:**
CIVE 326 or CIVE 327; parallel CIVE 352.

Application of hydraulic principles to the design of water distribution.
systems, wastewater and stormwater collection systems, channelized flow systems, and treatment facilities.

Pollution Prevention: Principles and Practices

Crosslisted as BSEN 422/822

**Prereqs:** Permission.

Introduction to pollution prevention (P2) and waste minimization methods. Practical applications to small businesses and industries. Legislative and historical development of P2 systems analysis, waste estimation, P2 methods, P2 economics, and sources of P2 information.

**Credit Hours:** 3
**Course Delivery:** Classroom

Small Treatment Systems

**Prereqs:** Parallel CIVE/BSEN 425

Design of small and decentralized waste water management systems.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

Bioremediation of Hazardous Wastes

**Prereqs:** CIVE/BSEN 326 and CIVE/MECH 310

Principles, applications, and limitations of bioremediation of hazardous wastes and design of some bioremediation systems.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

Introduction to Bridge Engineering

**Prereqs:** CIVE 440 or 441

Structural types, bridge loads, design of bridge slabs, steel girder bridges, and prestressed concrete girder bridges. Evaluation of existing bridges. Problems related to fatigue and corrosion. Field testing of bridges.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

Reinforced Concrete Design I

**Prereqs:** CIVE 341

Introduction to the design concepts of reinforced concrete building.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
components. The design of flexural and compression members, simple walls, foundations, and floor systems using the latest American Concrete Institute (ACI) design requirements.

### Steel Design II

**CIVE 446/846**

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>CIVE 441 (<a href="http://bulletin.unl.edu/courses/CIVE/441">link</a>).</th>
</tr>
</thead>
</table>

This course is a prerequisite for CIVE 940 ([link](http://bulletin.unl.edu/courses/CIVE/940)) CIVE 949 ([link](http://bulletin.unl.edu/courses/CIVE/949)).

CIVE 446 ([link](http://bulletin.unl.edu/courses/CIVE/446)/846) ([link](http://bulletin.unl.edu/courses/CIVE/846)) is a continuation of the topics covered in CIVE 441 ([link](http://bulletin.unl.edu/courses/CIVE/441)).

The principles and procedures used in design of steel buildings, design of plate girders, design and analysis of building systems, design and analysis of composite steel–concrete building systems, innovative building systems, introduction to seismic design of steel buildings. Plate buckling, beam, column and beam-column design, and frame stability. Introduction to connection design.

### Reinforced Concrete Design II

**CIVE 447/847**

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>CIVE 440 (<a href="http://bulletin.unl.edu/courses/CIVE/440">link</a>) 840 (<a href="http://bulletin.unl.edu/courses/CIVE/840">link</a>)</th>
</tr>
</thead>
</table>

This course is a prerequisite for CIVE 950 ([link](http://bulletin.unl.edu/courses/CIVE/950)).

CIVE 447 ([link](http://bulletin.unl.edu/courses/CIVE/447)/847) ([link](http://bulletin.unl.edu/courses/CIVE/847)) is a continuation of topics covered in CIVE 440 ([link](http://bulletin.unl.edu/courses/CIVE/440)) 840 ([link](http://bulletin.unl.edu/courses/CIVE/840)).

Shear friction theory, strut-and-tie modeling, anchorage, deflection, slender and bi-axially loaded members, torsion, two-way action and punching shear, and footing design. Excel spreadsheets are developed and used for various design tasks.

### Groundwater Engineering

**CIVE 458/858**

Crosslisted as BSEN 458/858

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>CIVE 352 (<a href="http://bulletin.unl.edu/courses/CIVE/352">link</a>) or AGEN 350 (<a href="http://bulletin.unl.edu/courses/AGEN/350">link</a>) or BSEN 350 (<a href="http://bulletin.unl.edu/courses/BSEN/350">link</a>) or equivalent.</th>
</tr>
</thead>
</table>

Application of engineering principles to the movement of groundwater. Analysis and design of wells, well fields, and artificial recharge. Analysis of pollutant movement.

### Reliability of Structures

**CIVE 459/859**

<table>
<thead>
<tr>
<th>Prereqs:</th>
<th>CIVE 341 (<a href="http://bulletin.unl.edu/courses/CIVE/341">link</a>).</th>
</tr>
</thead>
</table>

Fundamental concepts related to structural reliability, safety measures, load models, resistance models, system reliability, optimum safety levels, and optimization of design codes.
### Highway Design

**Prereqs:**  
[CIVE 361](http://bulletin.unl.edu/courses/CIVE/361)

This course is a prerequisite for [CIVE 865](http://bulletin.unl.edu/courses/CIVE/865), [CIVE 469](http://bulletin.unl.edu/courses/CIVE/469)

Design of roadways, intersections, interchanges, parking facilities, and land development site access and circulation. Emphasis on design projects.

### Traffic Engineering

**Prereqs:**  
[CIVE 361](http://bulletin.unl.edu/courses/CIVE/361)

This course is a prerequisite for [CIVE 866](http://bulletin.unl.edu/courses/CIVE/866)

[CIVE 463](http://bulletin.unl.edu/courses/CIVE/463)/[863](http://bulletin.unl.edu/courses/CIVE/863) emphasizes design projects.

Design of signalized intersections, arterial street and network signal systems, and freeway control systems.

### Airport Planning and Design

**Prereqs:**  
[CIVE 361](http://bulletin.unl.edu/courses/CIVE/361)

Planning and design of general aviation and air carrier airports. Land-side components include vehicle ground-access systems, vehicle circulation parking, and terminal buildings. Air-side components include aircraft apron–gate area, taxi-way system, runway system, and air traffic control facilities and airspace. Emphasis on design projects.

### Computer-Aided Interchange Design

**Prereqs:**  
[CIVE 462](http://bulletin.unl.edu/courses/CIVE/462)/[862](http://bulletin.unl.edu/courses/CIVE/862)  
[CIVE 469](http://bulletin.unl.edu/courses/CIVE/469) requires the development of an interchange design project using graphical and civil engineering software.

Principles of high-speed traffic operations, safety, and decision making related to critical design parameters used for optimal interchange geometric designs.

### Bituminous Materials and Mixtures Laboratory

**Prereqs:**  
[CIVE 378](http://bulletin.unl.edu/courses/CIVE/378) or equivalent.

Portland Cement and Asphalt Concrete Laboratory. Laboratory and field
procedures used to obtain portland cement and asphalt concretes for engineered construction.

### Pavement Design and Evaluation

**CIVE 472/872**

**Prereqs:**
- [CIVE 334](http://bulletin.unl.edu/courses/CIVE/334).

Thickness design of flexible and rigid pavement systems for highways and airports; design of paving materials; evaluation and strengthening of existing pavements.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

### Special Topics in Civil Engineering

**CIVE 498/898**

**Prereqs:**
- Permission.

Special problems, topics, or research in civil engineering.

**Credit Hours:** 1–6  
**Max credits per degree:** 6  
**Course Format:** Lecture  
**Course Delivery:** Classroom

### Civil Engineering Systems

**CIVE 801**

**Prereqs:**
- [MATH 821](http://bulletin.unl.edu/courses/MATH/821)

Systems analysis approach to civil engineering problems. Systems model elements and principles of systems theory with applications to civil engineering.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

### Hazardous Waste Management and Treatment

**CIVE 821**

**Prereqs:**
- [CIVE/BSEN 326](http://bulletin.unl.edu/courses/BSEN/326) or permission

The US hazardous waste management system and state and federal hazardous waste regulations. Chemical characteristics or hazardous waste and unit operations and processes used for treatment of soil, water and air.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Physical and Chemical Treatment Processes in Environmental Engineering

**CIVE 823**

**Prereqs:**
- [CIVE 326](http://bulletin.unl.edu/courses/CIVE/326), [CIVE 425](http://bulletin.unl.edu/courses/CIVE/425) or permission

Evaluation and analysis of physical and chemical unit operations and processes applied to the treatment of water, wastewater, and hazardous wastes.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Solid Waste Management Engineering

**CIVE 824**

**Prereqs:**
- [CIVE 326](http://bulletin.unl.edu/courses/CIVE/326), [CIVE 425](http://bulletin.unl.edu/courses/CIVE/425) or permission

Evaluation and analysis of physical and chemical unit operations and processes applied to the treatment of water, wastewater, and hazardous wastes.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**LINK**
- [CIVE 472](http://bulletin.unl.edu/courses/CIVE/472)
- [CIVE 334](http://bulletin.unl.edu/courses/CIVE/334)
- [CIVE 326](http://bulletin.unl.edu/courses/CIVE/326)
- [CIVE 425](http://bulletin.unl.edu/courses/CIVE/425)
- [MATH 821](http://bulletin.unl.edu/courses/MATH/821)
- [BSEN 326](http://bulletin.unl.edu/courses/BSEN/326)
Prereqs:  
CIVE 326 (http://bulletin.unl.edu/courses/CIVE/326), CIVE 334 (http://bulletin.unl.edu/courses/CIVE/334)

Planning, design, and operation of solid waste collection, processing, treatment, and disposal systems including materials, resources and energy recovery systems.

Design of Water Treatment Facilities

Prereqs:  
CIVE 425 (http://bulletin.unl.edu/courses/CIVE/425) or permission

Analysis of water supplies and design of water treatment and distribution systems.

Design of Wastewater Treatment and Disposal Facilities

Prereqs:  
CIVE 425 (http://bulletin.unl.edu/courses/CIVE/425) or permission

Analysis of systems for wastewater treatment and disposal.

Quantitative Methods in Environmental Engineering

Prereqs:  
CIVE 326 (http://bulletin.unl.edu/courses/CIVE/326) or equivalent

Applications of chemistry, chemical processes, and biological processes in water and wastewater treatment. Laboratory methods used in environmental engineering. Basic water quality parameters, pathogen detection methods, and treatment of water/wastewater samples. QA/QC methods.

Biological Waste Treatment

Prereqs:  
CIVE 326 (http://bulletin.unl.edu/courses/CIVE/326) or equivalent

This course is a prerequisite for:  
CIVE 927 (http://bulletin.unl.edu/courses/CIVE/927), CIVE 928 (http://bulletin.unl.edu/courses/CIVE/928)

Principles of biological processes and their application in the design of waste treatment systems.

Fundamentals of Water Quality Modeling

Prereqs:  
CIVE 326 (http://bulletin.unl.edu/courses/CIVE/326)

This course is a prerequisite for:  
CIVE 926 (http://bulletin.unl.edu/courses/CIVE/926)

Water quality and the effects of various water pollutants on the aquatic environment; modeling of water quality variables.
### Soil Mechanics II

**Prereqs:**
CIVE 334  
This course is a prerequisite for CIVE 835, CIVE 934, and CIVE 937.

Application of the effective stress principle to shear strength of cohesive soil; analysis of stability of slopes. Development of continuum relationships for soil; solutions for stresses and displacements for elastic continuum. Solution of the consolidation equation for various initial and boundary conditions.

### Soil Mechanics II Lab

**Prereqs:**
CIVE 334

Determination of shear strength, deformation characteristics, permeability, and custom soil testing protocols to characterize soil behavior as part of slope stability analysis and design, solid waste containment, and finite element modeling.

### Experimental Soil Mechanics

**Prereqs:**
CIVE 834 or permission

Advanced soil testing procedures including consolidated undrained triaxial tests with pore pressure measurements; determination of pore pressure parameters A and B; back pressure confined compression; triaxial loading along various stress paths to failure.

### Foundation Engineering

This course is a prerequisite for CIVE 936 and CIVE 937.

(Optional lab CIVE 836L 1 cr)

Subsoil exploration and interpretation; selection of foundation systems; determination of allowable bearing capacity and settlement; design of deep foundations; pile driving analysis; control of groundwater.

### Foundation Engineering Lab

**Prereqs:**
CIVE 334

Determination of shear strength, consolidation characteristics, and custom soil testing protocols to characterize soil behavior as part of foundation analysis and design.
Structural Dynamics

Prereqs:
CIVE 341


Structural Design and Planning

Prereqs:
CIVE 440 and CIVE 441

CIVE 844 will not count toward a graduate degree in CIVE.

Principles of design of steel and reinforced concrete structural building systems, planning of building vertical and horizontal load resisting systems, and bridge systems. Several design projects involve indeterminate analysis and design concepts for both steel and reinforced concrete.

Advanced Structural Analysis

Prereqs:
CIVE 443

Computation of stress resultants in statically indeterminate structures including beams, planar and three–dimensional frames and trusses, using matrix formulations (finite element method). Shearing and axial deformations in addition to the usual flexural deformations. Effects of temperature and pre-strain, support displacements, elastic supports, and axial-flexural interaction.

Reinforced Masonry Design

Prereqs:
CIVE 440 or permission


Prestressed Concrete

Prereqs:
CIVE 341 and CIVE 440

Analysis and design of prestressed concrete members. Axial force, bending,
shear, torsion, prestress losses, initial and long-term deflection, partial prestressing, statically indeterminate structures.

### Water Resources Development

**CIVE 852**  
**Prereqs:**  
[CIVE 352](http://bulletin.unl.edu/courses/CIVE/352)  
This course is a prerequisite for CIVE 915 and CIVE 952.  

Theory and application of systems engineering with emphasis on optimization and simulation techniques for evaluating alternatives in water resources developments related to water supply, flood control, hydroelectric power, drainage, water quality, water distribution, irrigation, and water measurement.

### Hydraulic Engineering

**CIVE 854**  
**Prereqs:**  
[CIVE 352](http://bulletin.unl.edu/courses/CIVE/352)  
This course is a prerequisite for CIVE 854.  

Fundamentals of hydraulics with applications of mechanics of solids, mechanics of fluids, and engineering economics to the design of hydraulic structures. Continuity, momentum, and energy principles are applied to special problems from various branches of hydraulic engineering.

### Surface Water Hydrology

**CIVE 856**  
**Prereqs:**  
[CIVE 352](http://bulletin.unl.edu/courses/CIVE/352) or [CIVE 853](http://bulletin.unl.edu/courses/CIVE/853) or permission  

Stochastic analysis of hydrological data and processes including rainfall, runoff, infiltration, temperature, solar radiation, wind and non-point pollution. Space-time hydrologic modeling with emphasis on the application of techniques in the design of engineering projects.

### Applied Structural Analysis

**CIVE 857**  
**Prereqs:**  
[CIVE 851](http://bulletin.unl.edu/courses/CIVE/851)  


### Urban Transportation Planning

**CIVE 861**  
**Prereqs:**  
[CIVE 361](http://bulletin.unl.edu/courses/CIVE/361)  

Credit Hours: 3  
Campus: 

Conducting research and developing new knowledge on urban transportation systems and solutions for those systems.
### Analysis and Estimation of Transportation Demand

**Prereqs:**
- CIVE 461 or equivalent

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.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/CIVE/864)

### Highway Geometrics

**Prereqs:**
- CIVE 462 or equivalent

Principles of highway geometrics. Sight distance, design vehicles, vehicle characteristics, horizontal and vertical alignment, cross section elements, and at-grade intersections and interchanges.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/CIVE/865)

### Transportation Characteristics

**Prereqs:**
- CIVE 463 or equivalent; MATH/STAT 380 or equivalent.

This course is a prerequisite for CIVE 964.

Use of the concepts of volume, speed, density, and capacity to describe the characteristics and performance of surface, air, and water transportation systems.

**Credit Hours:** 3

**Course Format:** Lab 3, Lecture 2

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/CIVE/866)

### Transportation Safety Engineering

**Prereqs:**
- Permission

Safety criteria in the planning, design, and operation phases of highway, rail, airport, mass transit, pipeline, and waterway transportation systems. Background of safety legislation and funding requirements. Identification of high accident locations and methods to determine cost/effectiveness of improvements.

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/CIVE/867)

### Engineering Economy

**Prereqs:**
- Permission

Economic comparison of engineering alternatives. Equipment selection and

**Credit Hours:** 2

**Campus:**

**Course Delivery:** Classroom

[Link](http://bulletin.unl.edu/courses/CIVE/880)
replacement, depreciation, break-even points, and minimum-cost points.

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CIVE 899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
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<tr>
<td>CIVE 915</td>
<td>Water Resources Engineering</td>
<td>MATH 821, CIVE 852 and permission</td>
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<tr>
<td>CIVE 916</td>
<td>Environmental Law and Water Resource Management Seminar</td>
<td>Permission</td>
<td>1-4</td>
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<tr>
<td>CIVE 921</td>
<td>Advanced Topics in Hazardous Waste Treatment</td>
<td>CIVE 822 or permission</td>
<td>3</td>
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<tr>
<td>CIVE 926</td>
<td>Advanced Topics in Water Treatment</td>
<td>CIVE 826 or CIVE 830</td>
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<td>CIVE 927</td>
<td>Advanced Topics in Wastewater Treatment</td>
<td>CIVE 825 or CIVE 829</td>
<td>3</td>
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This course is a prerequisite for CIVE 929.
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<tr>
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<th>Course Title</th>
<th>URL</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Format</th>
<th>Prereqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVE 928</td>
<td>Industrial Waste Management Engineering</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/928">LINK</a></td>
<td>3</td>
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<td>Lab 3, Lecture 2</td>
<td>CIVE *828, *CIVE 829 (<a href="http://bulletin.unl.edu/courses/CIVE/829">http://bulletin.unl.edu/courses/CIVE/829</a>)</td>
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<td>CIVE 929</td>
<td>Industrial Waste Laboratory</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/929">LINK</a></td>
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<td>Classroom</td>
<td>CIVE 927 (<a href="http://bulletin.unl.edu/courses/CIVE/927">http://bulletin.unl.edu/courses/CIVE/927</a>) or parallel: CIVE 927 (<a href="http://bulletin.unl.edu/courses/CIVE/927">http://bulletin.unl.edu/courses/CIVE/927</a>)</td>
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<tr>
<td>CIVE 930</td>
<td>Advanced and Industrial Wastewater Treatment</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/930">LINK</a></td>
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<td>Classroom</td>
<td>CIVE *826. Parallel: CIVE *829.</td>
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<tr>
<td>CIVE 934</td>
<td>Theoretical Soil Mechanics II</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/934">LINK</a></td>
<td>3</td>
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<td>CIVE 834 (<a href="http://bulletin.unl.edu/courses/CIVE/834">http://bulletin.unl.edu/courses/CIVE/834</a>) or permission; MATH 821 (<a href="http://bulletin.unl.edu/courses/MATH/821">http://bulletin.unl.edu/courses/MATH/821</a>)</td>
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<tr>
<td>CIVE 936</td>
<td>Advanced Foundation Engineering</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/936">LINK</a></td>
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<td>CIVE 836 (<a href="http://bulletin.unl.edu/courses/CIVE/836">http://bulletin.unl.edu/courses/CIVE/836</a>) or permission</td>
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<tr>
<td>CIVE 937</td>
<td>Applied Soil Mechanics</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/937">LINK</a></td>
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</tbody>
</table>
CIVE 940  
**Behavior of Steel Members**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs: CIVE 446 or CIVE 846

Behavior and/or design of structural steel members and their connections. Torsion effects on open and closed thin walled members. Frame buckling and stability considerations in structural steel frames. Dynamic analysis and seismic design considerations.

CIVE 941  
**Behavior of Reinforced Concrete Members**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs: CIVE 847

Rigorous treatment of the behavior of structural components of reinforced concrete, both conventionally reinforced and prestressed, as interpreted by experimental evidence and related theory, when subjected to loads producing elastic or plastic strains or a combination of both. Selected laboratory demonstrations on the behavior of reinforced concrete members.

CIVE 944  
**Behavior of Miscellaneous Structural Materials**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs: CIVE 845, MATH 820 or MATH 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, compressed fibrous materials, and composite arrangements of structural materials. Use is made of currently approved national specifications or codes. Selected laboratory demonstrations of the behavior of members constructed from miscellaneous structural materials.

CIVE 945  
**Structural Design for Dynamic Loads**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs: ENGM 880, CIVE 845

Behavior of structural materials and systems under dynamic loads. Analysis and design for dynamic loads. Computational techniques. Selected laboratory demonstrations of the dynamic behavior of structural systems.

CIVE 946  
**Advanced Structural Engineering**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs: CIVE 834, CIVE 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, emphasizing geological, analytical, experimental, and judgmental factors.
Blast-resistant Structural Design

**Prereqs:**
CIVE 842


Steel Bridge Design

**Prereqs:**
CIVE 436 or CIVE 836


Concrete Bridge Design

**Prereqs:**
CIVE 436 or CIVE 836


Water Resources Planning

**Prereqs:**
CIVE 852 or permission

Techniques of solving topical water problems including groundwater contamination control, conflict resolution and risk analysis for contamination and river sediment management. Research and teamwork, including presentation.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>CIVE 954</td>
<td>Advanced Hydraulics</td>
<td>Prereqs: CIVE 854 or equivalent and permission</td>
<td>3</td>
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<tr>
<td></td>
<td>Advanced studies involving pipe and culvert hydraulics, rapidly-varied flow in open channels, sediment transport, river mechanics, control, and design.</td>
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<tr>
<td>CIVE 958</td>
<td>Groundwater Mechanics</td>
<td>Prereqs: CIVE 858 or equivalent</td>
<td>3</td>
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<tr>
<td></td>
<td>Theory of fluid and contaminant movement in groundwater systems. Analytic modeling of aquifers, wells and well fields, and transport.</td>
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<td>CIVE 959</td>
<td>Groundwater Modeling</td>
<td>Prereqs: CIVE 858 or equivalent</td>
<td>3</td>
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<td></td>
<td>Modeling techniques for groundwater systems, finite difference, finite element methods and other numerical techniques applied to both flow and transport problems. Applications to both groundwater hydrology and geotechnical engineering.</td>
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<tr>
<td>CIVE 961</td>
<td>Mass Transit Systems</td>
<td>Prereqs: Permission</td>
<td>3</td>
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<td></td>
<td>The place of mass transit in solving urban transportation problems: transit system and 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.</td>
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<tr>
<td>CIVE 962</td>
<td>Application of Geographic Information Systems GIS to Transportation</td>
<td>Prereqs: Permission</td>
<td>3</td>
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<td>Lecture 3</td>
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<tr>
<td></td>
<td>Geographic Information Systems (GIS) structure, functions, and concepts such as spatial data models, relational databases, and spatial analyses. GIS project planning, management, and applications to transportation-related issues.</td>
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<tr>
<td>CIVE 963</td>
<td>Highway Safety Data Analysis</td>
<td>Prereqs: STAT 801 or equivalent and permission</td>
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<td>Lecture 3</td>
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<td>and permission</td>
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</tbody>
</table>
Highway safety issues and appropriate accident data analyses. Quantify changes in safety when modifications are made to highways in an effort to enhance safety. Judge reported safety improvements and carry out appropriate analyses for assessing the effectiveness of safety improvements.

**CIVE 964 Theory of Traffic Flow**

**Prereqs:**
- STAT 801 (http://bulletin.unl.edu/courses/STAT/801) or equivalent; and CIVE 866 (http://bulletin.unl.edu/courses/CIVE/866)

Analysis of traffic characteristics as applied to traffic engineering facility design and flow optimization. Capacity of expressways, ramps, weaving sections, and intersections. Analytical approaches to flow analysis, queueing theory, flow density relationships, and traffic simulation.

**CIVE 965 Traffic Control Systems**

**Prereqs:**
- CIVE 966 (http://bulletin.unl.edu/courses/CIVE/966) and permission

Principles of traffic control. Design and analysis of intersection, arterial street, network, and freeway control systems. Traffic surveillance and driver information systems.

**CIVE 966 Transportation Planning and Economics**

**Prereqs:**
- Permission

This course is a prerequisite for: CIVE 965 (http://bulletin.unl.edu/courses/CIVE/965)

Community growth and development based on planning decisions regarding land use whereby transportation facilities are fitted to land use. Economic studies that consider the consequences to transportation agencies, users, and nonusers. Agency expenditures, capital outlay and annual expenses for maintenance and operations. User consequences such as vehicle operating costs; commercial time costs; accident costs; discomfort and inconvenience costs; and assignment of money valuations to pleasure, recreation, and culture. Nonusers consequences such as cost reductions or increases in public services; increases in value of crops and natural resources where areas become more readily accessible; changes in business and industrial activities; and increase or decrease of residential property values.

**CIVE 967 Analysis and Design of Transportation Supply Systems**

**Prereqs:**
- Permission

Operations research techniques for modeling system performance and design of transportation services. Routing and scheduling problems. Network equilibration and partially distributed queueing systems.

**CIVE 989 Seminar in Civil Engineering**

**Prereqs:**
- Permission


Current topics, research projects, and review of current literature in the various areas of civil engineering.

**Course Delivery:** Classroom

**Prereqs:** Permission

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.

**Course Delivery:** Classroom

**Prereqs:** Permission

This course is a prerequisite for: ENGM 951 (http://bulletin.unl.edu/courses/ENGM/951)


**Course Delivery:** Classroom

**Course Format:** Lecture 3

Knowledge of a programming language, MATH 821 (http://bulletin.unl.edu/courses/MATH/821) recommended. Offered even-numbered calendar years.

Examination of the theory and experimental evidence available to characterize the movement of chemicals in soil. Both saturated and unsaturated flow conditions examined. Initial presentation of basic theoretical concepts. Remainder of class a discussion of the literature.

**Course Delivery:** Classroom

| Courses for CNST (CNST) |
### Project Administration

**CNST 411/811**  
**Prereqs:**  
Junior standing; **CIVE 361**.  
**CNST 411** is 'Letter Grade only'.  
An introduction to construction project administration. Ownership and organization of construction companies, drawings and specifications, type of contracts, take-offs, estimating, bidding, bonds, insurance, project management and administration, scheduling, time and cost management, labor law and labor relations, and project safety.

### Professional Practice and Ethics

**CNST 420/820/4200/8206**  
**Prereqs:**  
Senior standing; **CNST 379** (or **CNST 3790**); and (UNL) **BLAW 371** (or 372) (or (UNO) **LAWS 2920**), with a grade of 'C' or better.  
Orientation to professional practice through the designers' and the contractors' relationships to society, specific clients, their professions, and other collaborators in environmental design and construction fields. Ethics, professional communication and responsibility, professional organization, office management, construction management, professional registration, and owner-designer-contractor relationships.

### Intent and Application of International Building Code

**CNST 436/836**  
**Prereqs:**  
**CNST 112**, 131, and 251.  
This course is designed to provide a fundamental understanding of how to research, interpret and apply building code requirements to the design and construction of both new and renovated structures.

### Productivity and Human Factors in Construction

**CNST 480/880/4800/8806**  
**Prereqs:**  
Senior standing; **CNST 242** (or **CNST 2420**); grade of 'C' or better in **MNGT 360** (or **MNGT 360H** or (UNO) **MGMT 3940**).  
Motivation and productivity improvement methods in the management of construction workers in their typical job environments. Methods to improve working environments in the field and in the office. Procedures and mechanisms to implement human behavior concepts for enhanced productivity and safety.
**Course Information:**

- **Heavy and/or Civil Construction**
  - Crosslisted as **CONE 482/882**
  - **Credit Hours:** 3
  - **Course Format:** Lecture 3
  - **Course Delivery:** Classroom
  - **Prereqs:** Senior or Graduate standing in ARCH, AREN, CIVE, CNST, or CONE.
  - Application of management principles to the construction of heavy and/or civil projects. History, theory, and methods of planning and constructing heavy and/or civil projects. Emerging equipment and new equipment capabilities. Economical use of equipment and managing costs associated with production.

- **Construction Management Systems**
  - **Credit Hours:** 3
  - **Course Format:** Lecture 3, Recitation 1
  - **Campus:** UNO
  - **Course Delivery:** Classroom
  - **Prereqs:** Grade of 'C' or better in [STAT 218](http://bulletin.unl.edu/courses/STAT/218) or (UNO) [MATH 1530](http://bulletin.unl.edu/courses/MATH/1530), or equivalent.
  - 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. Computer applications.

- **Mechanical/Electrical Project Management**
  - **Credit Hours:** 3
  - **Campus:**
  - **Course Delivery:** Classroom
  - Fundamentals of project management within the mechanical and electrical contracting industry. Codes, contract documents, productivity, coordination, project control and administration, scheduling safety, and project closeout, all from a specialty contracting perspective.

- **Occupational Health and Safety for Construction**
  - **Credit Hours:** 3
  - **Campus:**
  - **Course Delivery:** Classroom
  - **Prereqs:** Permission
  - Open only to students in engineering, construction management, architecture, or other closely related fields.
  - Investigation of occupational health and safety hazards in the construction environment. Accident causation and illness exposure models, construction safety and health programs and contract requirements, project safety and health management, special problems in construction safety, OSHA/EPD/ADA regulation and compliance issues, health assessment and monitoring, safe building methods design, toxic substance exposures, abatement methods, and worker training and protection.

- **Professional Trends in Design/Build**
  - **Credit Hours:** 3
  - **Campus:**
  - **Course Delivery:** Classroom
  - **Prereqs:** Permission; master in engineering in construction or a related discipline
  - Organizational, managerial, ethical, and legal principles in the delivery of Design/Build as a construction project delivery system.

- **Design/Build: Methods and Application**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>835</td>
<td>Investigation, documentation, and application of current Design/Build processes and methodology used in commercial construction. Principles and practices of Design/Build as a project delivery system.</td>
<td>Permission</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>850</td>
<td>Sustainable Construction</td>
<td>Graduate standing in ARCH, CET, CIVE, or CNST</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>858</td>
<td>Construction Information Management Systems</td>
<td>Graduate standing in construction management or related discipline with instructor approval.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>860</td>
<td>Construction Visualization and Simulation</td>
<td>Graduate standing in construction management or related discipline with instructor approval.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>879</td>
<td>Construction Management and Construction Systems</td>
<td>Permission</td>
<td>3</td>
<td>Lab 1, Lecture 2</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Management of Limited Scope Permitting

Prereqs:
Graduate standing in ARCH, CET, CIVE, or CNST

Building code permitting process associated with all projects. Phased projects that require one or more limited scope permits prior to receiving the final full construction permit. How to improve coordination and reduce the confusion and risk associated with managing the permitting process. The permitting process that is applicable to both large and small projects and that can be easily adapted and used in all jurisdictions throughout the United States.

Construction Leadership and Strategic Planning

Prereqs:
Permission

Open only to students in engineering, construction management, architecture, or other closely related fields.

New models of construction leadership for the 21st Century. Application of transformational leadership to strategic planning and marketing in construction contracting. Leadership and strategic problem solving constructs and methods.

Masters Project I

Prereqs:
Admission to the master of engineering degree program with an emphasis in construction, and permission

First course in a two-course sequence required for the masters degree.

Technical report, technical paper, or portfolio project, culminating in a final document and oral presentation.

Special Topics in Construction Management

Prereqs:
Master of engineering in construction or related discipline and permission

A signed student-instructor learning contract is required.

Individual or small group investigation of special topics in construction management. Topic varies.

Advanced Topics in Intent and Application of the International Building Code

Prereqs:
Graduate standing in Construction Management or by instructor permission.

In-depth analysis of research methodology, interpretation and application of building code requirements associated with design and construction of both new and renovated structures.
Thesis and Dissertation Methods for Construction Research

**Prereqs:**
Graduate standing in AREN, CET, CIVE, CNST, or CONE.

A structured approach to thesis and dissertation methods, conducting a literature review, choosing appropriate analytical methods, and writing and presenting a construction research project. Seminar course.

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Doctoral Dissertation

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair.

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Construction Planning, Scheduling, and Controls

**Crosslisted as CNST 485/885**

**Prereqs:**
CONE/CNST 378; AE 2250 (UNO).

This course is a prerequisite for: CONE 866.

Planning and scheduling a construction project using the critical path methods (CPM) with computer applications. Project pre-planning, logic networks, network construction, time estimates, critical path, float time, crash programs, scheduling, and monitoring project activities.

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Courses for CONE (CONE)

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Heavy and/or Civil Construction

**Crosslisted as CONE 482/882**

**Prereqs:**
Senior or Graduate standing in ARCH, AREN, CIVE, CNST, or CONE.

Application of management principles to the construction of heavy and/or civil projects. History, theory, and methods of planning and constructing heavy and/or civil projects. Emerging equipment and new equipment capabilities. Economical use of equipment and managing costs associated with production.

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Wood and/or Contemporary Materials Design

**Prereqs:**
CIVE 341

This course is a prerequisite for: CONE 417.

Design of structural timber, beams, columns, and connections. Introduction to applicable design philosophies and codes. Overview of materials design.
Masonry, aluminum, and contemporary materials such as plastics and fiber reinforced systems and composite material groups. Design considerations, cost and contractibility analysis.

### Formwork Systems
#### CONE 417/817
- **Prereqs:**
  - CONE 416: parallel CIVE 441.
- **Design of structural timber, beams, columns, and connections. Introduction to applicable design philosophies and codes. Overview of materials design, masonry, aluminum, and contemporary materials such as plastics and fiber reinforced systems and composite material groups. Design considerations, cost and constructability analysis.**
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

### Sustainable Construction
#### CONE 450/850
- **Prereqs:**
  - Senior standing.
- **Sustainable construction and its application to the green building industry. LEED certification process, sustainable building site management, efficient waste water applications, optimizing energy performance, indoor environmental issues, performance measurement and/or verification, recycled content and certified renewable materials.**
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

### BIM I: Introduction to Building Information Modeling (BIM)
#### CONE 459/859
- **Prereqs:**
  - CNST 112 Construction, or Graduate standing in AREN, CIVE, CNST, or CONE.
- **This course instructs CAD users on the effective use of Building Information Model (BIM) for Integration of design, document and Construction Estimate. Topics include: model-based 3D design, file formats, interoperability, and MEP modeling.**
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:** UNO
- **Course Delivery:** Classroom

### Highway and Bridge Construction
#### CONE 481/881
- **Prereqs:**
  - Senior standing; CONE/CNST 241.
- **The methods and equipment required in the construction of roads and bridges. Methods and equipment necessary for roads and bridges. Substructure and superstructures, precast and cast-in-place segments, and standard and specialized equipment.**
- **Credit Hours:** 3
- **Course Format:** Lecture
- **Course Delivery:** Classroom

### Support of Excavation
#### CONE 483/883
- **Prereqs:**
  - Senior standing.
- **Credit Hours:** 3
- **Course Format:** Lecture 3
The design and placement of excavation supports according to OSHA requirements and industry standards. A variety of routine to moderately complex support systems. Open excavations, heet piling and cofferdams, soil mechanics, lateral loads, hydrology, and pumping methods.

**CONE 485 Construction Planning, Scheduling, and Controls**
Crosslisted as CNST 485/885

**Prereqs:**
CONE/CNST 378; AE 2250 (UNO).

This course is a prerequisite for: CONE 866

Planning and scheduling a construction project using the critical path methods (CPM) with computer applications. Project pre-planning, logic networks, network construction, time estimates, critical path, float time, crash programs, scheduling, and monitoring project activities.

**CONE 821 Construction Risk Assessment and Management**

**Prereqs:**
STAT 380.

The overall process of hazards risk management (risk identification, risk analysis, risk assessment, risk communication), risk based decision making and risk mitigation. Classification of building stock, defining vulnerability, risk assessment methods, assessing economic losses and cost benefit analysis. Case studies will be used to demonstrate the application of risk management principles/techniques in practice.

**CONE 866 Heavy and/or Civil Estimating**

**Prereqs:**
CONE/CNST 241 and 378; CONE 485/885

Estimating techniques and strategies for heavy and/or civil construction. Unit pricing, heavy and civil constructions takeoffs and estimating, equipment analysis, overhead cost and allocations, estimating software and government contracts.

**CONE 891 Special Topics in Construction Engineering**

**Prereqs:**
Master of engineering in construction or related discipline and permission.

A signed student–instructor learning contract is required.

Individual or small group investigation of special topics in construction engineering. Topic varies.

**CONE 898 Special Topics in Construction Engineering**
### Professional Practice

**Prereqs:**
Master of engineering in construction or related discipline and permission

A signed student-instructor learning contract is required. Individual or small group investigation of special topics in construction engineering. Topic varies.

**Credit Hours:** 1–6
**Max credits per degree:** 6
**Course Format:** Lecture 1
**Campus:** UNO
**Course Delivery:** Classroom

### Precast Concrete Construction

**Prereqs:**
Senior standing.

*CONE* 96 is required of *CONE* majors prior to graduation. The work experience must be pre-approved by the faculty adviser in the *CONE* department.

**Prereqs:**
*CIVE* 440 and *CIVE* 441.

Introduces building and bridge construction using precast concrete components including design, production, and erection challenges with emphasis on precast connection details.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:** UNO
**Course Delivery:** Classroom

### Doctoral Dissertation

**Prereqs:**
Admission to the Doctor of Philosophy in Engineering degree program and permission of the major advisor.

**Credit Hours:** 1–21
**Max credits per degree:** 21
**Course Format:** Lecture
**Campus:** UNO
**Course Delivery:** Classroom

### Courses for ELEC (ELEC)

#### Semiconductor Fundamentals II

**Prereqs:**
*ELEC* 421/821.

Analysis of BJT’s and MOSFET’s from a first principle materials viewpoint. Static and dynamic analysis and characterization. Device fabrication processes.

**Credit Hours:** 3
**Course Format:** Lecture 2, Lab 1
**Course Delivery:** Classroom

#### Principles of Semiconductor Materials and Devices I

**Prereqs:**
*ELEC* 421/821.

**Credit Hours:**
**Course Format:**
**Course Delivery:**

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Introduction to semiconductor fundamentals, charge carrier concentration and carrier transport, energy bands, and recombination. PN junctions, static and dynamic, and special PN junction diode devices.

**Power Electronics**

**ELEC 428/828**

Prereqs: [PHYS 213](http://bulletin.unl.edu/courses/PHYS/213).

This course is a prerequisite for: [ELEC 417](http://bulletin.unl.edu/courses/ELEC/417).

Basic analysis and design of solid-state power electronic devices and converter circuitry.

**Wind Energy**

**ELEC 430/830**

Prereqs: [ELEC 304](http://bulletin.unl.edu/courses/ELEC/304) and [316](http://bulletin.unl.edu/courses/ELEC/316).

This broad multidisciplinary course will combine engineering principles of both the mechanical/aerdynamical and electrical components and systems, along with economic and environmental considerations for siting and public policy, to appropriately cover the relevant topics associated with all scales of wind energy implementations.

**Bioinformatics**

**ELEC 452/852**

Prereqs: Computer programming language and [ELEC 305](http://bulletin.unl.edu/courses/ELEC/305) or [IMSE 321](http://bulletin.unl.edu/courses/IMSE/321) or [STAT 380](http://bulletin.unl.edu/courses/STAT/380) or equivalent.

This course examines how information is organized in biological sequences such as DNA and proteins and will look at computational techniques which make use of this structure. During this class various biochemical processes that involve these sequences are studied to understand how these processes effect the structure of these sequences. In the process bioinformatics algorithms, tools, and techniques which are used to explore genomic and amino acid sequences are also introduced.

**Labview Programming**

**ELEC 460/860**

Prereqs: Prior programming experience.

Labview as a programming language and for applications to acquire and analyze data, to access the network, control lab instruments, and for video and sound applications.

**Digital Systems**

**ELEC 475**

Prereqs: [ELEC 417](http://bulletin.unl.edu/courses/ELEC/417).

This course is a prerequisite for: [ELEC 452](http://bulletin.unl.edu/courses/ELEC/452) or [ELEC 460](http://bulletin.unl.edu/courses/ELEC/460).
### 475/875

**Prereqs:**
- ELEC 370

This course is a prerequisite for ELEC 479.

Synthesis using state machines; design of digital systems; microprogramming in small controller design; hardware description language for design and timing analysis.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

### 479/879

**Prereqs:**
- ELEC 475

Hardware development languages, hardware organization and realization, microprogramming, interrupt, intersystem communication, and peripheral interfacing.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

### 480/880

**Prereqs:**
- PHYS 213


**Credit Hours:** 3
**Course Delivery:** Classroom

### 498/898

- **Prereqs:** Permission.
- ELEC 498 is offered as the need arises for electrical engineering topics for fourth-year and graduate students not covered in other courses.

**Credit Hours:** 1-6
**Max credits per degree:** 18
**Course Format:** Lecture
**Course Delivery:** Classroom

### 800

Applications of analog and digital devices to electronic instrumentation are studied. Transducer, instrumentation amplifiers, mechanical and solid-state switches, data acquisition systems, phase-lock loops and modulation techniques. Demonstrations with working circuits and systems.

**Credit Hours:** 3
**Campus:** Classroom

### 806

**Prereqs:**
- ELEC 838

This course is a prerequisite for ELEC 957.

**Credit Hours:** 3
**Campus:** Classroom
Symmetrical components and fault calculations, power system stability, generator modeling (circuit viewpoint), voltage control system, high-voltage DC transmission, and system protection.

**Power Systems Planning**

**ELEC 807**  
Prereqs:  
[ELEC 305](http://bulletin.unl.edu/courses/ELEC/305)  
Economic evaluation, load forecasting, generation planning, transmission planning, production simulation, power plant reliability characteristics and generation system reliability.

**Engineering Electromagnetics**

**ELEC 808**  
Prereqs:  
[ELEC 306](http://bulletin.unl.edu/courses/ELEC/306)  
Laboratory experiments. Applied electromagnetics in digital electronics and communication. Quasistatic electric and magnetic fields (magnetic circuits and electromechanical conversion); guided waves (metallic waveguides and optical fibers); radiation and antennas (line and aperture antennas and arrays).

**Multivariate Random Processes**

**ELEC 810**  
Prereqs:  
[ELEC 305](http://bulletin.unl.edu/courses/ELEC/305)  
This course is a prerequisite for:  
[ELEC 946](http://bulletin.unl.edu/courses/ELEC/946)  
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.

**Materials and Devices for Computer Memory, Logic, and Display**

**ELEC 816**  
Prereqs:  
[PHYS 212](http://bulletin.unl.edu/courses/PHYS/212)  
Survey of fundamentals and applications of devices used for logic, memory, and display. Magnetic, superconductive, semiconductive, and dielectric materials.

**Plasma Processing of Semiconductors**

**ELEC 820**  
Physics of plasmas and gas discharges developed. Basic collisional theory, the Boltzman equation and the concept of electron energy distributions. Results related to specific gas discharge systems used in semiconductor processing, such as sputtering, etching, and deposition systems.
Introduction to Electric Power Engineering

Prereqs:
ELEC 216

This course is a prerequisite for: ELEC 806
ELEC 854

Power systems principles, three phase circuits, transmission line parameters, transmission line modeling, transformers, per unit analysis, generator modeling, and power flow analysis.

Basic Analytical Techniques in Electrical Engineering

Prereqs:
MATH 821

Applications of partial differential equations, matrices, vector analysis, complex variables, and infinite series to problems in electrical engineering.

Linear Control Systems

Prereqs:
ELEC 304

Classical (transfer function) and modern (state variable) control techniques. Both time domain and frequency domain techniques. Traditional proportional, lead, lag, and PID compensators examined, as well as state variable feedback.

Power Systems Operation and Control

Prereqs:
ELEC 838

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.

Communication Systems

Prereqs:
or parallel: ELEC 305

This course is a prerequisite for: ELEC 864
ELEC 911

Principles of modulation and demodulation, communication in the presence of noise. Introduction to signal sets and computer communication networks.

Digital Signal Processing
### Digital Communication Systems

Prereqs: ELEC 862


### Introduction to Data Compression

Prereqs: ELEC 305

Introduction to the concepts of Information Theory and Redundancy removal. Simulation of various data compression schemes such as Delta Modulation, Differential Pulse Code Modulation, Transform Coding and Runlength Coding.

### Electromagnetic Theory and Applications

Prereqs: ELEC 306


### Microwave Engineering

Prereqs: ELEC 306

Applications of active and passive devices to microwave systems. Impedance matching, resonators, and microwave antennas.

### Analog Integrated Circuits

Prereqs: ELEC 361

Analysis and design of analog integrated circuits both bipolar and MOS. Basic circuit elements such as differential pairs, current sources, active loads, output drivers studied and used in the design of more complex
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEC 870</td>
<td>Digital and Analog VLSI Design</td>
<td>ELEC 316 [^1]</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>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 the standard cell approach of digital and analog circuits. Lab experiments, computer simulation and layout exercises.</td>
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<tr>
<td>ELEC 879</td>
<td>Digital Systems Organization and Design</td>
<td>ELEC 876 [^2]</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Hardware development languages, hardware organization and realization, microprogramming, interrupt, intersystem communication, and peripheral interfacing.</td>
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<tr>
<td>ELEC 886</td>
<td>Applied Photonics</td>
<td>ELEC 306 or permission [^3]</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
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<tr>
<td>ELEC 899</td>
<td>Masters Thesis</td>
<td>admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
<td></td>
<td>Classroom</td>
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<td></td>
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<td>P/N only.</td>
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</tr>
<tr>
<td>ELEC 911</td>
<td>Communication Theory</td>
<td>ELEC 862 or 864 [^4], and 864 [^5] or 810 [^6]</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Applications of probability and statistics to signals and noise; correlation; sampling; shot noise; spectral analysis; Gaussian processes; filtering.</td>
<td></td>
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</tr>
</tbody>
</table>

[^1]: [Link](http://bulletin.unl.edu/courses/ELEC/870)
[^2]: [Link](http://bulletin.unl.edu/courses/ELEC/879)
[^3]: [Link](http://bulletin.unl.edu/courses/ELEC/886)
[^4]: [Link](http://bulletin.unl.edu/courses/ELEC/899)
[^5]: [Link](http://bulletin.unl.edu/courses/ELEC/911)
[^6]: [Link](http://bulletin.unl.edu/courses/ELEC/912)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>912</td>
<td>Fundamentals of error correction and detection in digital communication and storage systems. Linear and algebraic block codes; Hamming, BCH and Reed–Solomon codes; algebraic decoding techniques; structure and performance of convolutional codes, turbo codes, and trellis coded modulation; MAP, Viterbi, and sequential decoding techniques.</td>
<td>ELEC 410, 464, 810, 864</td>
<td>3</td>
<td></td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>912</td>
<td>Fundamentals of error correction and detection in digital communication and storage systems. Linear and algebraic block codes; Hamming, BCH and Reed–Solomon codes; algebraic decoding techniques; structure and performance of convolutional codes, turbo codes, and trellis coded modulation; MAP, Viterbi, and sequential decoding techniques.</td>
<td>ELEC 410, 464, 810, 864</td>
<td>3</td>
<td></td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>913</td>
<td>Advanced Analog and Mixed-Signal Integrated Circuits</td>
<td>ELEC 869 and permission</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>915</td>
<td>Adaptive Signal Processing</td>
<td>ELEC 410, 463, 810, 863</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>946</td>
<td>Optimal Filtering, Estimation and Prediction</td>
<td>ELEC 810, 851</td>
<td>3</td>
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<td>957</td>
<td>Advanced Computer Methods in Power System Analysis</td>
<td>ELEC 806</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
<td>Credit Hours</td>
<td>Campus</td>
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<tr>
<td>ELEC 959</td>
<td>Wireless Communications</td>
<td>ELEC 864 (<a href="http://bulletin.unl.edu/courses/ELEC/864">http://bulletin.unl.edu/courses/ELEC/864</a>) and permission</td>
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<td>Lecture 3</td>
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<td>ELEC 960</td>
<td>Solid-State Devices</td>
<td>ELEC 315 (<a href="http://bulletin.unl.edu/courses/ELEC/315">http://bulletin.unl.edu/courses/ELEC/315</a>) or equivalent</td>
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<tr>
<td>ELEC 965</td>
<td>Passive Microwave Components,</td>
<td>ELEC 867 (<a href="http://bulletin.unl.edu/courses/ELEC/867">http://bulletin.unl.edu/courses/ELEC/867</a>) or 868 (<a href="http://bulletin.unl.edu/courses/ELEC/868">http://bulletin.unl.edu/courses/ELEC/868</a>)</td>
<td>3</td>
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<tr>
<td>ELEC 967</td>
<td>Introduction to Quantum Electronics</td>
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<td>Classroom</td>
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<tr>
<td>ELEC 968</td>
<td>Electron Theory of Solids I</td>
<td>ELEC 967 (<a href="http://bulletin.unl.edu/courses/ELEC/967">http://bulletin.unl.edu/courses/ELEC/967</a>) or permission</td>
<td>3</td>
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<tr>
<td>ELEC 971</td>
<td>Seminar</td>
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<td>1-12</td>
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<tr>
<td>ELEC 975</td>
<td>Optical Properties of Materials</td>
<td>3</td>
<td><strong>Prereqs:</strong> <a href="http://bulletin.unl.edu/courses/ELEC/967">ELEC 967</a>, equivalent, or permission</td>
<td>Quantum mechanical description of the optical properties of solids (complex refractive index and its dispersion, effects of electric and magnetic fields, temperature, stress; additional special topics as desired).</td>
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<tr>
<td>ELEC 986</td>
<td>Optoelectronics</td>
<td>3</td>
<td><strong>Prereqs:</strong> <a href="http://bulletin.unl.edu/courses/ELEC/886">ELEC 886</a></td>
<td>Modern phenomena associated with optoelectronics. Electro–optical effect such as Pockel effect, Kerr effect, and nonlinear optical phenomena. Material and devices used in modern communications, femtosecond lasers, and optical computer systems.</td>
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<tr>
<td>ELEC 991</td>
<td>Independent Study</td>
<td>1–24</td>
<td><strong>Prereqs:</strong> Permission</td>
<td>Selected topic under the direction and guidance of a faculty member.</td>
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<tr>
<td>ELEC 996</td>
<td>Topics in Electrical Engineering</td>
<td>3</td>
<td><strong>Prereqs:</strong> Permission</td>
<td>Selected topics in electrical engineering.</td>
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<tr>
<td>ELEC 999</td>
<td>Doctoral Dissertation</td>
<td>1-24</td>
<td><strong>Prereqs:</strong> Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>P/N only.</td>
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<tr>
<td>PHYS 422/822</td>
<td>Introduction to Physics and Chemistry of Solids</td>
<td>3</td>
<td><strong>Prereqs:</strong> <a href="http://bulletin.unl.edu/courses/PHYS/213">PHYS 213</a> or <a href="http://bulletin.unl.edu/courses/CHEM/481/881">CHEM 481</a> or <a href="http://bulletin.unl.edu/courses/MATH/220/820">MATH 220</a></td>
<td>Crosslisted as ELEC 422/822</td>
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</table>
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.

Courses for ENGR (ENGR)

**ENGR 856**

**History of Modern Technology**

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.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**ENGR 8690**

**Technology, Science and Civilization**

Offered on Omaha Campus. 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 development of the sciences and technologies that will dominate the new millennium.

**Credit Hours:** 3  
**Course Format:** Lecture 2  
**Campus:**  
**Course Delivery:** Classroom

**MECH 401/801**

**Elements of Nuclear Engineering**

Crosslisted as ENGR 401

Survey of nuclear engineering concepts and applications. Nuclear reactions, radioactivity, radiation interaction with matter, reactor physics, risk and dose assessment, applications in medicine, industry, agriculture, and research.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

Courses for ENGM (ENGM)

**ENGM 480/880**

**Numerical Methods in Engineering**

Survey of nuclear engineering concepts and applications. Nuclear reactions, radioactivity, radiation interaction with matter, reactor physics, risk and dose assessment, applications in medicine, industry, agriculture, and research.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom
This course is a prerequisite for: [IMSE 888](http://bulletin.unl.edu/courses/IMSE/888), [CHME 896](http://bulletin.unl.edu/courses/CHME/896), [CSCE/MATH 340](http://bulletin.unl.edu/courses/MATH/340/840) and [ENGM 480](http://bulletin.unl.edu/courses/ENGM/480/880).Credit towards the degree cannot be earned in both CSCE/MATH 340/840 and ENGM 480/880.

Numerical algorithms and their convergence properties in: solving nonlinear equations; direct and iterative schemes for linear systems of equations; eigenvalue problems; polynomial and spline interpolation; curve fitting; numerical integration and differentiation; initial and boundary values problems for Ordinary Differential Equations (ODEs) and systems of ODEs with applications to engineering; finite difference methods for partial differential equations (potential problems, heat-equation, wave-equation).

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<th>Course Code</th>
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<tr>
<td>ENGM 801</td>
<td>Analytical Methods in Engineering I</td>
<td><a href="http://bulletin.unl.edu/courses/ENGM/801">LINK</a></td>
<td>3</td>
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<td></td>
<td>Basic topics in real analysis and linear algebra with examples of applications from diverse branches of engineering and applied physics.</td>
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<tr>
<td>ENGM 802</td>
<td>Analytical Methods in Engineering II</td>
<td><a href="http://bulletin.unl.edu/courses/ENGM/802">LINK</a></td>
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<td>Prereqs: ENGM *801 or permission</td>
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<td></td>
<td>Continuation of ENGM *801 topics in complex analysis, linear algebra, ordinary and partial differential equations, and other areas of applied mathematics. Examples of applications from diverse branches of engineering and applied physics.</td>
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<tr>
<td>ENGM 843</td>
<td>Introduction to Piezoelectricity with Applications</td>
<td><a href="http://bulletin.unl.edu/courses/ENGM/843">LINK</a></td>
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<td>Prereqs: ENGM 325, 373, or equivalent, or permission</td>
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<td></td>
<td>Electrostatics, equations of piezoelectricity, static solutions, propagation of plane waves, waves in plates, surface waves, equations for piezoelectric rods and plates in extension and flexure, finite element formulation, finite element analysis of static, time–harmonic, and transient problems with applications in smart structures and piezoelectric devices.</td>
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<tr>
<td>ENGM 847</td>
<td>Advanced Dynamics</td>
<td><a href="http://bulletin.unl.edu/courses/ENGM/847">LINK</a></td>
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<td>Prereqs: ENGM 373 and MATH 821</td>
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<td>This course is a prerequisite for: ENGM 915, ENGM 919</td>
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<td>Particle dynamics using Newton’s laws, energy principles, momentum principles. Rigid body dynamics using Euler’s equations and Lagrange’s equations. Variable mass systems. Gyroscopic motion.</td>
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</table>
### Advanced Mechanics of Materials

**Prereqs:**
- ENGM 325 or 373

This course is a prerequisite for:
- ENGM 910
- ENGM 916
- ENGM 922
- ENGM 925
- ENGM 926
- ENGM 940
- ENGM 941
- ENGM 952


### Introduction to Continuum Modeling

**Prereqs:**
- MATH 821
- ENGM 325
- 373

Basic concepts of continuum modeling. Development of models and solutions to various mechanical thermal and electrical systems. Thermo-mechanical and electro-mechanical coupling effects. Differential equations, dimensional methods and similarity.

### Introduction to Finite Element Analysis

**Crosslisted as CIVE 851**

**Prereqs:**
- ENGM 325
- ENGM 880

This course is a prerequisite for:
- ENGM 951


### Experimental Stress Analysis I

**Prereqs:**
- ENGM 325

Investigations of the basic theories and techniques associated with the analysis of stress using mechanical strain gages, electric strain gages, brittle lacquer, photoelasticity and membrane analogy.

### Vibration Theory and Applications

**Prereqs:**

Credit Hours: 3
ENGM 373 and MATH 821


Special Topics in Engineering Mechanics

Prereqs:
Permission

See current Schedule of Classes for offerings. Treatment of special topics in engineering mechanics by experimental computational and/or theoretical methods. Topic varies from term to term.

Masters Thesis

Prereqs:
Admission to masters degree program and permission of major adviser

Continuum Mechanics

Prereqs:
ENGM 848 and permission


Stress Waves in Solids

Prereqs:
ENGM 847, 848, or permission


Theory of Plates and Shells I

Prereqs:
ENGM 848 and MATH 821

This course is a prerequisite for ENGM 917.
Basic equations for the bending and stretching of thin plates with small deformations. General theory of deformation of thin shells with small deflections. Large deformations theories of plates and shells. Effect of edge conditions.

### Theory of Plates and Shells II

**ENGM 917**  
Prereqs:  
[ENGM 916](http://bulletin.unl.edu/courses/ENGM/916)  
[ENGM 916](http://bulletin.unl.edu/courses/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.

### Fundamentals of Finite Elements

**ENGM 918**  
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.

### Nonlinear Mechanics

**ENGM 919**  
Prereqs:  
[ENGM 847](http://bulletin.unl.edu/courses/ENGM/847), 848  
[ENGM 847](http://bulletin.unl.edu/courses/ENGM/847), 848, or permission  
Physical systems in solid mechanics which lead to nonlinear differential equations. Graphical, numerical, and exact solutions of the governing differential equations. Physical interpretation of the solution.

### Theory of Elastic Stability

**ENGM 920**  
Prereqs:  
[ENGM 325](http://bulletin.unl.edu/courses/ENGM/325) or 373  
[ENGM 325](http://bulletin.unl.edu/courses/ENGM/325) and [MATH 821](http://bulletin.unl.edu/courses/MATH/821)  
Lateral buckling of beams; failure of columns; bending and buckling of thin plates and shells. Consideration of classical and modern theories.

### Theory of Elasticity I

**ENGM 922**  
Prereqs:  
[ENGM 848](http://bulletin.unl.edu/courses/ENGM/848) and [MATH 821](http://bulletin.unl.edu/courses/MATH/821)  
This course is a prerequisite for: [ENGM 923](http://bulletin.unl.edu/courses/ENGM/923), [ENGM 942](http://bulletin.unl.edu/courses/ENGM/942)

**Theory of Elasticity II**

**Prereqs:**
- ENGM 922


**Viscoelasticity**

**Prereqs:**
- ENGM 848 or 910, and MATH 821 or 822; or permission


**Mechanics of Composite Materials**

**Prereqs:**
- ENGM 848 or permission


**Fracture Mechanics**

**Prereqs:**
- ENGM 848 or permission


**Mechanics of Dislocations and Cracks**

**Prereqs:**
- ENGM 848 or permission


**ENG M 942**  
**Theory of Plasticity**  
**LINK** (http://bulletin.unl.edu/courses/ENGM/942)  
Prereqs:  
ENGM 922 (http://bulletin.unl.edu/courses/ENGM/922)  

**ENG M 951**  
**Advanced Topics in Finite Element Methods**  
**LINK** (http://bulletin.unl.edu/courses/ENGM/951)  
Prereqs:  
ENGM 851 (http://bulletin.unl.edu/courses/ENGM/851) or 918 (http://bulletin.unl.edu/courses/ENGM/918), or permission  
Theory and application of finite element methods. Topic varies with interest of instructor and may include: finite elements for the analysis of fracture; mixed variational formulations; hybrid stress elements; plasticity; non–linear elasticity; large deformations of structures; plate and shell elements; transverse shear effects in beams, plates and shells; "locking" phenomena; treatment of singularities; dynamics of large systems; "enhanced" strain methods; methods for solving non–linear algebraic systems; architecture of computer codes for non–linear finite element analysis; and treatment of constraints arising in nearly incompressible material models.

**ENG M 952**  
**Experimental Stress Analysis II**  
**LINK** (http://bulletin.unl.edu/courses/ENGM/952)  
Prereqs:  
ENGM 848 (http://bulletin.unl.edu/courses/ENGM/848) and 852 (http://bulletin.unl.edu/courses/ENGM/852)  
Surface strains and their measurement, principally by bonded wire resistance strain gages. Static and dynamic measurements using both oscilloscope and direct writing oscillograph, associated electrical circuits. Use of brittle coating in conjunction with strain gages. Evaluation of stresses from strain data.

**ENG M 975**  
**Advanced Vibrations**  
**LINK** (http://bulletin.unl.edu/courses/ENGM/975)  
Prereqs:  
ENGM *875  

**ENG M 991**  
**Advanced Investigations in Engineering Mechanics**  
**LINK** (http://bulletin.unl.edu/courses/ENGM/991)
### Seminar in Engineering Mechanics

**Course Code:** ENGM 996  
**Credit Hours:** 1-12  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Permission  

See current Schedule of Classes for offering. Treatment of advanced topics in engineering mechanics by experimental, computational, and/or theoretical methods. Topic varies from term to term.

### Doctoral Dissertation

**Course Code:** ENGM 999  
**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair

### Nonlinear Optimization in Engineering

**Course Code:** IMSE 888  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:**  
- MATH 208  
- MATH 208H  
- MATH 314  
- ENGM 480  
- ENGM 480H  
- and permission  


### Practicum in Environmental Engineering

**Course Code:** ENVE 890  
**Credit Hours:** 1-6  
**Max credits per degree:** 6  
**Course Format:** Field  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Permission  

ENVE 890 requires, in advance, the approval of the practicum and the written documentation of how demonstrated creativity will occur in the practicum. At the completion of the practicum, a written report of the creative accomplishments is required.  

Problems in engineering or management in a non-academic experience within the private sector or a government agency. Research, design, analysis, and testing.
### Special Problems in Environmental Engineering

**Course Code:** ENVE 898  
**Prereqs:** Permission  
**Credit Hours:** 1–6  
**Campus:**  
**Course Delivery:** Classroom  
**Description:** Special research-oriented problems in current topics in environmental engineering.

### Masters Thesis

**Course Code:** ENVE 899  
**Prereqs:** Admission to masters degree program and permission of major adviser  
**Credit Hours:** 6–10  
**Campus:**  
**Course Delivery:** Classroom  
**Description:** Special research-oriented problems in current topics in environmental engineering.

### Seminar in Environmental and Water Resources Engineering

**Course Code:** ENVE 990  
**Prereqs:** Permission  
**Credit Hours:** 1  
**Campus:**  
**Course Delivery:** Classroom  
**Description:** Current research topics and projects in environmental and water resources engineering and closely allied areas.

### Special Topics in Environmental Engineering

**Course Code:** ENVE 998  
**Prereqs:** Permission  
**Credit Hours:** 1–6  
**Campus:**  
**Course Delivery:** Classroom  
**Description:** Independent library and/or experimental research, analysis, evaluation and presentation of current and advanced topics in environmental engineering and closely related areas.

### Soil Environmental Chemistry

**Course Code:** NRES 451  
**Crosslisted as:** ENVE 851  
**Prereqs:** CHEM 252  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**Offered in spring semester of even-numbered calendar years**  
**Description:** Theory, mechanisms and processes related to chemical behavior in soil-water environments. Application of computer simulation models for predicting contaminant fate in soil. Basic chemical and biological principles of remediating contaminated soil and water.

### Courses for IMSE (IMSE)

### Project Management

**Course Code:** IMSE 407/807  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Description:** Project development, role of the project manager, project selection, project planning, budgeting and cost estimation, project scheduling, and project
RFID Systems in the Supply Chain

Foundations of Radio Frequency Identification Systems (RFID). The fundamentals of how RFID components of tag, transponder, and antennae are utilized to create RFID systems. Best practices for implementation RFID systems in common supply chain operations.

Supply Chain Optimization

Foundations of supply chain network modeling. The concepts that support the economic and service trade-offs in supply chain and logistics management. Using decision support system (DSS) to design optimal logistics network models given data requirements and operational parameters. Using leading software packages to model problems arising in strategic management of logistics networks.

Products Liability

Liability issues arising out of manufacturing defects, design defects and warning defects in various product categories. Specific issues related to product liability, such as identifying proper defendants, establishing causation and the issue of post-sale warnings. Broader policy questions about the role of litigation versus regulation in a democracy and a market economy.

Analysis of Engineering Management I

General concepts and principles of engineering management applied to cases.

Decision and Risk Analysis

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<th>Course Name</th>
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<tr>
<td>810</td>
<td>Not open to students with credit in IMSE 315</td>
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<td>Introduction to the principles of ergonomics.</td>
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<td>Information processing, human output and control,</td>
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<td>workplace design and environmental conditions.</td>
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<td>812</td>
<td>Occupational Safety–A Systems Analysis</td>
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<td>Analysis of safety performance, attribution of</td>
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<td>cost, identification and analysis of accident</td>
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<td>potential. Fault Tree analysis. Systems safety</td>
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<td>815</td>
<td>Cognitive Ergonomics</td>
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<td>and reliability.</td>
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<td>816</td>
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<td>Prereqs: IMSE 821</td>
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<td>Human performance in work. Focus on human's</td>
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<td>response to various environmental and task-related variables with emphasis on physical and physiological effects.</td>
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<td>817</td>
<td>Occupational Safety Hygiene Engineering</td>
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<td>Prereqs: Permission</td>
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<td></td>
<td>Introduction to occupational hygiene engineering</td>
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<td>with emphasis on work place environmental quality.</td>
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<td>Heat, illumination, noise, and ventilation.</td>
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<td>821</td>
<td>Applied Statistics and Quality Control</td>
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<td>Prereqs: IMSE 321</td>
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<td>Applied Statistics and Quality Control</td>
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<td>Prereqs: IMSE 321</td>
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Systematic analysis of processes through the use of statistical analysis, methods, and procedures: statistical process control, sampling, regression, ANOVA, quality control, and design of experiments.

**IMSE 822 Industrial Quality Control**

- **Prereqs:** IMSE 321
- **Credit Hours:** 3
- **Course Format:** Lab 3, Lecture 2
- **Campus:**
- **Course Delivery:** Classroom

Statistical process control and quality assurance techniques in manufacturing. Control charts, acceptance sampling, and analyses and design of quality control systems.

**IMSE 823 Reliability Engineering**

- **Prereqs:** IMSE 828
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom


**IMSE 828 Stochastic Operations Research Models**

- **Prereqs:** IMSE 321
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Techniques for understanding and predicting stochastic system behavior. Probability, Markov chains, queueing analysis, dynamic programming and reliability.

**IMSE 831 Stochastic Processes**

- **Prereqs:** IMSE 428/828
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom


**IMSE 832 Scheduling**

- **Prereqs:** IMSE 334
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

The problem of scheduling several tasks over time, including measure of
performance, single-machine sequencing, flow shop scheduling, the job shop problem and priority dispatching.

**Discrete Event Simulation Modeling**

**IMSE 840**

**Prereqs:**
- IMSE 206 (http://bulletin.unl.edu/courses/IMSE/206) and 321 (http://bulletin.unl.edu/courses/IMSE/321)
- CSCE 155 (http://bulletin.unl.edu/courses/CSCE/155)

This course is a prerequisite for IMSE 984 (http://bulletin.unl.edu/courses/IMSE/984).

Development of simulation models of discrete systems. Model development, Monte Carlo techniques, random number generators and output analysis.

**Packaging Engineering**

**IMSE 860**

**Prereqs:**
- IMSE 206 (http://bulletin.unl.edu/courses/IMSE/206), 321 (http://bulletin.unl.edu/courses/IMSE/321), ENGM 373 (http://bulletin.unl.edu/courses/ENGM/373)

Investigation of packaging processes, materials, equipment, and design. Container design, material handling, storage, packaging, and environmental regulations, and material selection.

**Theory and Practice of Materials Processing**

**IMSE 870**

**Prereqs:**
- IMSE 370 (http://bulletin.unl.edu/courses/IMSE/370)

This course is a prerequisite for IMSE 970 (http://bulletin.unl.edu/courses/IMSE/970).

Theory, practice and application of conventional machining, forming and nontraditional machining processes with emphasis on tool life, dynamics of machine tools and adaptive control.

**Tool and Die Design**

**IMSE 871**

**Prereqs:**
- IMSE 370 (http://bulletin.unl.edu/courses/IMSE/370)

General consideration in tool designing, 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.

**Manufacturing Systems I**

**IMSE 875**

**Prereqs:**
- IMSE 375 (http://bulletin.unl.edu/courses/IMSE/375), 428 (http://bulletin.unl.edu/courses/IMSE/428)

This course is a prerequisite for IMSE 975 (http://bulletin.unl.edu/courses/IMSE/975).

Principles of automated production lines; analysis of transfer lines; group
### Manufacturing Information Systems

**Course Code:** IMSE 876  
**Link:** [IMSE 876](http://bulletin.unl.edu/courses/IMSE/876)

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
- CSCE 155 or equivalent

Information systems and their impact on a manufacturing environment. Software, hardware, database systems, enterprise resource planning, networking and the Internet.

### Robotics

**Course Code:** IMSE 877  
**Link:** [IMSE 877](http://bulletin.unl.edu/courses/IMSE/877)

**Credit Hours:** 3  
**Course Format:** Lab 3, Lecture 2  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
- IMSE 375

Basic robotics technology; application in manufacturing, manipulators and mechanical design; programming languages; intelligence and control.

### Material Planning in Logistic Systems

**Course Code:** IMSE 882  
**Link:** [IMSE 882](http://bulletin.unl.edu/courses/IMSE/882)

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
- IMSE 321 and 328

Theory, practice and application of inventory, demand and supply planning techniques in multistage environments. Managing economies of scale, uncertainties, capacity constraints, and product availability in a supply chain. Integrated planning, supply chain coordination and technology enablers.

### Logistics in the Supply Chain

**Course Code:** IMSE 883  
**Link:** [IMSE 883](http://bulletin.unl.edu/courses/IMSE/883)

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
- IMSE 334

Process of planning, implementing and controlling the efficient, effective flow and storage of goods, services and related information from the point of origin to the point of consumption. Domestic transportation systems, distribution centers and warehousing, international logistics, logistics system controls and re-engineering logistics systems.

### Nonlinear Optimization in Engineering

**Course Code:** IMSE 888  
**Link:** [IMSE 888](http://bulletin.unl.edu/courses/IMSE/888)

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
- MATH 208 or 208H  
- ENGM 480

Nonlinear optimization using gradient–based and evolutionary methods. Constrained and unconstrained nonlinear optimization, Karush–Kuhn–
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<tr>
<td>IMSE 898</td>
<td>Laboratory Investigation</td>
<td>1-6</td>
<td>Investigation and written report of research into a specific problem in any area of industrial or management systems engineering.</td>
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<td>IMSE 899</td>
<td>Masters Thesis</td>
<td>6-10</td>
<td>Admission to masters degree program and permission of major adviser</td>
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<td>IMSE 901</td>
<td>Total Quality Management Using Six Sigma Techniques</td>
<td>3</td>
<td>Introduction to advanced topics in Engineering Management and the foundations of Total Quality Management (TQM). Costs of quality, statistical tools, initiating change, advanced topics, and TQM in practice. Using DMAIC, DFSS, and COPQ along with the other industry-accepted Six Sigma Quality Techniques.</td>
<td>Lecture 3</td>
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<td>IMSE 905</td>
<td>Analysis of Engineering Management II</td>
<td>3</td>
<td>Continuation of concepts and principles of engineering management applied to production cases.</td>
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<td>IMSE 906</td>
<td>Financial Engineering</td>
<td>3</td>
<td>Applications of principle and financial economics in industrial and systems engineering. Term structure of interest, capital asset pricing and other capital allocation models. Evaluation of real-options using binomial lattice, Black–Scholes and other pricing models.</td>
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<td>IMSE 816</td>
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<td>IMSE 914</td>
<td>Physiological Aspects of Ergonomics</td>
<td>3</td>
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Prerequisites:
- IMSE 816 (http://bulletin.unl.edu/courses/IMSE/816) or permission
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<td><strong>Biomechanics</strong></td>
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<td><strong>Prereqs:</strong></td>
<td>IMSE 816 (<a href="http://bulletin.unl.edu/courses/IMSE/816">http://bulletin.unl.edu/courses/IMSE/816</a>)</td>
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<td><strong>Introduction and historical developments, theoretical fundamentals of the mechanics of the body. The link system of the body and kinematic aspects of extremity joints of human motion.</strong></td>
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<td><strong>Biotechnology</strong></td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/IMSE/916">http://bulletin.unl.edu/courses/IMSE/916</a>)</td>
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<td>IMSE 815 (<a href="http://bulletin.unl.edu/courses/IMSE/815">http://bulletin.unl.edu/courses/IMSE/815</a>), 816 (<a href="http://bulletin.unl.edu/courses/IMSE/816">http://bulletin.unl.edu/courses/IMSE/816</a>)</td>
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<tr>
<td><strong>Focus on man in system: man–man and man–machine communication. Design and arrangement of controls and displays. Experimental evaluation concepts.</strong></td>
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<td><strong>Determinants of Occupational Performance</strong></td>
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<td><strong>Prereqs:</strong></td>
<td>IMSE 815 (<a href="http://bulletin.unl.edu/courses/IMSE/815">http://bulletin.unl.edu/courses/IMSE/815</a>), 816 (<a href="http://bulletin.unl.edu/courses/IMSE/816">http://bulletin.unl.edu/courses/IMSE/816</a>) or permission</td>
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<td><strong>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.</strong></td>
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<td><strong>Quality Engineering: Use of Experimental Design and Other Techniques</strong></td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/IMSE/922">http://bulletin.unl.edu/courses/IMSE/922</a>)</td>
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<tr>
<td><strong>Extension of industrial quality control methods and techniques. Off-line and online quality control methods. Development of quality at the design stage through planned experiments and analyses. Experimental design methods include factorial, 2k, 3k, and factional factorials designs. Includes applied project in design of quality.</strong></td>
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<tr>
<td><strong>Manufacturing and Dynamic Systems Modeling</strong></td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/IMSE/923">http://bulletin.unl.edu/courses/IMSE/923</a>)</td>
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<td><strong>Prereqs:</strong></td>
<td>MATH 821 (<a href="http://bulletin.unl.edu/courses/MATH/821">http://bulletin.unl.edu/courses/MATH/821</a>) and IMSE 822 (<a href="http://bulletin.unl.edu/courses/IMSE/822">http://bulletin.unl.edu/courses/IMSE/822</a>) or equivalent</td>
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<tr>
<td><strong>Difference and differential equation models directly from series of observed data. Underlying system analysis including impulse response, stability and feedback interpretation. Forecasting and accuracy of forecasts. Periodic and exponential trends in seasonal series. Modeling two series simultaneously. Minimum mean squared error control and forecasting by leading indicators. Illustrative applications to real life data in science and engineering.</strong></td>
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<td>IMSE 970</td>
<td>Advanced Manufacturing Processes</td>
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<td>IMSE 975</td>
<td>Manufacturing Systems II</td>
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<td>IMSE 984</td>
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<td>Advanced Topics in Industrial Engineering</td>
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<tr>
<td>IMSE 998</td>
<td>Advanced Laboratory Investigation</td>
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management systems engineering.

### Doctoral Dissertation

**Course Code:** 999  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair  
**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom

### Courses for MECH (MECH)

#### Elements of Nuclear Engineering

**Course Code:** 401/801  
**Crosslisted as:** ENGR 401  
**Prereqs:**  
- ENGR 300 (http://bulletin.unl.edu/courses/ENGR/300) or 301 (http://bulletin.unl.edu/courses/ENGR/301)  
- MATH 208 (http://bulletin.unl.edu/courses/MATH/208)  
- MATH 208H (http://bulletin.unl.edu/courses/MATH/208H)  
- PHYS 212 (http://bulletin.unl.edu/courses/PHYS/212)  
- PHYS 212H (http://bulletin.unl.edu/courses/PHYS/212H)  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**Survey of nuclear engineering concepts and applications. Nuclear reactions, radioactivity, radiation interaction with matter, reactor physics, risk and dose assessment, applications in medicine, industry, agriculture, and research.**

#### Laser Material Processing with Compressible Flow Perspective

**Course Code:** 424/824  
**Prereqs:** Permission.  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**Fundamentals of laser material processing. Laser material interactions from the compressible flow perspective. Analytical, semi-analytical, and numerical approaches.**

#### Heat Transfer at Nanoscales and in Ultrashort Time Domains

**Course Code:** 426/826  
**Prereqs:** MECH 420 (http://bulletin.unl.edu/courses/MECH/420).  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Heat transfer in nanoscale and nanostructured materials. Heat transfer in ultrafast laser materials processing.**

#### Computational Heat Transfer and Fluid Flow

**Course Code:** 431/831  
**Prereqs:**  
- MECH 310 (http://bulletin.unl.edu/courses/MECH/310)  
- MATH 314 (http://bulletin.unl.edu/courses/MATH/314)  
- MECH 420 (http://bulletin.unl.edu/courses/MECH/420) or parallel.  
**Course Delivery:** Classroom
### Finite Difference Methods for Steady and Transient Diffusion and Convection-Diffusion Problems

Finite volume technique for the solution of multi-dimensional fluid flow, and heat and mass transfer problems.

### Introduction to Continuum Biomechanics

**MECH 436/836**

| Prereqs:  
| ENGM 373 (http://bulletin.unl.edu/courses/ENGM/373) | MECH 310 (http://bulletin.unl.edu/courses/MECH/310) and 420 (http://bulletin.unl.edu/courses/MECH/420). |
| Credit Hours: | 3 |
| Course Format: | Lecture |
| Course Delivery: | Classroom |

Introduction to biomechanics. Basic anatomy, biomaterials, kinematics, dynamics, visco-elasticity, bio-fluid mechanics, and bio-heat transfer.

### Biomedical Device Design

**MECH 437/837**

| Prereqs:  
| ENGM 223 (http://bulletin.unl.edu/courses/ENGM/223), 325 (http://bulletin.unl.edu/courses/ENGM/325), and 373 (http://bulletin.unl.edu/courses/ENGM/373) or equivalent. |
| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |

Biomedical Device Design (3cr) Lec 3. Prereq: ENGM 223, 325, & 373 or equivalent. Design of devices intended for use in biomedical environments. Introduction to modeling of the bio-environment, biomaterials and material selection. Overview of design methodologies and strategies used in biomedical device design from a material properties perspective. Introduction to federal regulation and other pertinent issues.

### Vehicle Dynamics

**MECH 455/855**

| Prereqs:  
| MECH 343 (http://bulletin.unl.edu/courses/MECH/343) and 350 (http://bulletin.unl.edu/courses/MECH/350). |
| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |

Introduction to basic mechanics governing automotive vehicle dynamic acceleration, braking, ride, handling and stability. Analytical methods, including computer simulation, in vehicle dynamics. The different components and subsystems of a vehicle that influence vehicle dynamic performance.

### Dynamics of Internal Combustion Engines

**MECH 456/856**

| Prereqs:  
| MECH 342 (http://bulletin.unl.edu/courses/MECH/342) and 343 (http://bulletin.unl.edu/courses/MECH/343). |
| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |

Basics of design of the internal combustion engines. Design of various engine parts such as pistons, connecting rods, valve trains, crankshafts, and the vibration dampers. Dynamics of the engine. The vibration of the crankshaft assembly and the valve train. Balancing of the engines.

### Turbomachinery

**MECH 802**

| Credit Hours: | 3 |
| Course Format: | Lecture 3 |
| Course Delivery: | Classroom |
Thermodynamic analysis and design of axial and radial flow turbines, compressors and pumps. Fundamentals of the operating characteristics and performance parameters of turbomachines. Cavitation and blade element theory.

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. Thermodynamic evaluation of the performance and the basic operation of various engine types.


A comprehensive design project is an integral part of course. Application of thermodynamic and fluid dynamic principles to the design of air conditioning systems.

A comprehensive design project is an integral part of course. Application of thermodynamic and fluid dynamic principles to the design of power plants.
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<td>810</td>
<td>Viscous Flow I</td>
<td>MECH 310 (<a href="http://bulletin.unl.edu/courses/MECH/310">http://bulletin.unl.edu/courses/MECH/310</a>) and MATH 821 (<a href="http://bulletin.unl.edu/courses/MATH/821">http://bulletin.unl.edu/courses/MATH/821</a>)</td>
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<td>Viscous Flow II</td>
<td>MECH *810, MATH 822 (<a href="http://bulletin.unl.edu/courses/MATH/822">http://bulletin.unl.edu/courses/MATH/822</a>) or 824 (<a href="http://bulletin.unl.edu/courses/MATH/824">http://bulletin.unl.edu/courses/MATH/824</a>) or MECH *890</td>
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<tr>
<td>813</td>
<td>Aerodynamics</td>
<td>MECH 200 (<a href="http://bulletin.unl.edu/courses/MECH/200">http://bulletin.unl.edu/courses/MECH/200</a>) and 310 (<a href="http://bulletin.unl.edu/courses/MECH/310">http://bulletin.unl.edu/courses/MECH/310</a>)</td>
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<td>814</td>
<td>Compressible Flow</td>
<td>MECH 300 (<a href="http://bulletin.unl.edu/courses/MECH/300">http://bulletin.unl.edu/courses/MECH/300</a>) and 310 (<a href="http://bulletin.unl.edu/courses/MECH/310">http://bulletin.unl.edu/courses/MECH/310</a>)</td>
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<td>815</td>
<td>Two-Phase Flow</td>
<td>or parallel: MECH 310 (<a href="http://bulletin.unl.edu/courses/MECH/310">http://bulletin.unl.edu/courses/MECH/310</a>) and 380 (<a href="http://bulletin.unl.edu/courses/MECH/380">http://bulletin.unl.edu/courses/MECH/380</a>)</td>
<td>3</td>
<td>Lab 3, Lecture 2</td>
<td>Classroom</td>
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</table>

**Engineering Acoustics**

**MECH 816**

**Prereqs:**

[MECH 310](http://bulletin.unl.edu/courses/MECH/310) and [MATH 821](http://bulletin.unl.edu/courses/MATH/821)

Transverse and longitudinal traveling waves; acoustic wave equation of fluids; reflection, transmission, radiation, reception, absorption and attenuation of sound; acoustic cavities and waveguides; and sound propagation in pipes, resonators and filters.

**Heat Transfer**

**MECH 820**

**Prereqs:**

[MECH 310](http://bulletin.unl.edu/courses/MECH/310)

This course is a prerequisite for: [AREN 810](http://bulletin.unl.edu/courses/AREN/810), [MECH 825](http://bulletin.unl.edu/courses/MECH/825), [MECH 922](http://bulletin.unl.edu/courses/MECH/922), [MECH 923](http://bulletin.unl.edu/courses/MECH/923), [MECH 924](http://bulletin.unl.edu/courses/MECH/924)

Heat transfer by conduction, convection and radiation. Correlation of theory with experimental data and engineering design.

**Solar Energy Engineering**

**MECH 825**

**Prereqs:**

[MECH 820](http://bulletin.unl.edu/courses/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.

**Intermediate Kinematics**

**MECH 842**

**Prereqs:**

[MECH 342](http://bulletin.unl.edu/courses/MECH/342)

This course is a prerequisite for: [MECH 943](http://bulletin.unl.edu/courses/MECH/943)

Analytic cam design. The geometry of constrained plane motion and application to the design of mechanisms. Analysis and synthesis of pin-jointed linkage mechanisms.

**Intermediate Dynamics of Machinery**

**MECH 844**

**Prereqs:**

[MECH 342](http://bulletin.unl.edu/courses/MECH/342)

This course is a prerequisite for: [MECH 943](http://bulletin.unl.edu/courses/MECH/943)
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<tr>
<th>Course Format:</th>
<th>Lecture 3</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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**MECH 342** (http://bulletin.unl.edu/courses/MECH/342) and **350** (http://bulletin.unl.edu/courses/MECH/350)

Fundamentals of vibration, vibration and impact in machines, balance of rotors, flexible rotor dynamics and instabilities, parametric vibration, advanced dynamics and design of cam mechanisms, dynamics of flywheel.

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<th>Course Format:</th>
<th>Lab 3, Lecture 2</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

**Mechanical Engineering Design Concepts**

**Prereqs:**
- MECH 200 (http://bulletin.unl.edu/courses/MECH/200), 310 (http://bulletin.unl.edu/courses/MECH/310), 342 (http://bulletin.unl.edu/courses/MECH/342), and 350 (http://bulletin.unl.edu/courses/MECH/350)

This course is a prerequisite for **MECH 845** (http://bulletin.unl.edu/courses/MECH/845)

Development of design concepts. Introduction to synthesis techniques and mathematical analysis methods. Applications of these techniques to mechanical engineering design projects.

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<th>Course Format:</th>
<th>Lab 2, Lecture 2</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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**Mechanical Engineering Control Systems Design**

**Prereqs:**
- MECH 350 (http://bulletin.unl.edu/courses/MECH/350)

Applications of control systems analysis and synthesis for mechanical engineering equipment. Control systems for pneumatic, hydraulic, kinematic, electromechanical and thermal systems.

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<th>Course Format:</th>
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<td>Course Delivery:</td>
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**Digital Control of Mechanical Systems**

**Prereqs:**
- MECH 450 (http://bulletin.unl.edu/courses/MECH/450)

Introduction to digital measurement and control of mechanical systems. Applications of analysis and synthesis of discrete time systems.

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<th>Course Format:</th>
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**Robotics: Kinematics and Design**

**Prereqs:**
- MECH 350 (http://bulletin.unl.edu/courses/MECH/350)

Robotics synthesize some aspects of human function by the use of mechanisms, sensors, actuators and computers.

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<td>Course Delivery:</td>
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**Mechatronic Systems Design**

**Prereqs:**
- ELEC 231 (http://bulletin.unl.edu/courses/ELEC/231); MECH 350 (http://bulletin.unl.edu/courses/MECH/350) or parallel

Lab sessions allow for constructing mechatronic systems. Lab time arranged. A comprehensive design project included. Theory, application, simulation, and design of systems that integrate mechanical, computer, and electronic
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>881</td>
<td>Introduction to Nuclear Engineering</td>
<td>MATH 820 or 821</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Introduction to nuclear physics, radiation interaction with</td>
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<td>matter, reactor fundamentals, and the application of</td>
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<td>equipment and principles associated with reactor safety</td>
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<td>and operations.</td>
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<td>890</td>
<td>Advanced Analysis of Mechanical Engineering Systems</td>
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<td>3</td>
<td>Lecture 3</td>
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<td></td>
<td>Engineering mathematics review. Formulation and solution of</td>
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<td></td>
<td>engineering problems including basic laws, lumped parameter</td>
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<td>models, and continuous systems. Examples drawn from all</td>
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<td>areas of mechanical engineering.</td>
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<td>898</td>
<td>Laboratory and Analytical Investigations</td>
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<td>1-6</td>
<td>Lab</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Investigation and written report of research into a specific</td>
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<td>problem in any major area of mechanical engineering.</td>
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<td>899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree</td>
<td>6-10</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>program and permission of major adviser</td>
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<td>900</td>
<td>Advanced Thermodynamics</td>
<td>Permission</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Classical thermodynamics providing precise and true</td>
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<td>understanding; advanced methodologies and applications</td>
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<td>to mechanical engineering tasks; axiomatic foundations of</td>
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<td>classical thermodynamics, engineering applications to</td>
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<td>working substances in motion; systematic generalizations</td>
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<td>to exotic substances; and selected topics as illustrations.</td>
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<td>904</td>
<td>Advanced Combustion Theory</td>
<td>MECH 804 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Prereqs:</td>
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<td>MECH 804 or equivalent</td>
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### Advanced Topics in Fluid Dynamics

**Course Code:** MECH 912  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  

**Prereqs:** MECH *812 or permission

Selected topics from one or two of the following fields: magneto-fluid-mechanics, three-dimensional boundary layers, fluid-mechanical stability, hypersonic flow, theory of turbulence, rarefied gas dynamics or other current research interest area.

### Turbulent Flows

**Course Code:** MECH 916  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  

**Prereqs:** MECH *812


### Conduction Heat Transfer

**Course Code:** MECH 922  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  

**Prereqs:** MECH 820 or permission

Theory of heat conduction: analytical, numerical, graphical and analog methods of solution.

### Convection Heat Transfer

**Course Code:** MECH 923  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  

**Prereqs:** MECH 820 or permission


### Radiation Heat Transfer

**Course Code:** MECH 924  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom  

**Prereqs:** MECH 820 or permission

Theory of heat transfer by thermal radiation. Formulation and analytical and numerical solutions. Selected applications.
Advanced Finite Element Methods

Prereqs:
MECH 831, 890


Credit Hours: 3
Course Format: Lecture 3
Campus: Classroom

Machine Design

Prereqs:
MECH 842 or permission

The student's competence in designing machine members to withstand various static and dynamic loads, to analyze failure, and to design members for optimum balance of weight, cost, and reliability is advanced to a level beyond that of MECH 843. Impact loading, fatigue, optimum design of mechanical components, lubrication, and environmental considerations (mechanical properties at high and low temperature, creep, stress corrosion, fretting corrosion, etc.) are tested. Laboratory includes completion of one or more realistic individual design projects and the use of engineering case studies to illustrate more complex interactive design than would be feasible to actually carry out in one semester.

Credit Hours: 3
Course Format: Lab 3, Lecture 2
Campus: Classroom

Probabilistic Design of Machine Elements

Prereqs:
MECH 845, STAT 880 or permission


Credit Hours: 3
Campus: Classroom

Impact Engineering

Prereqs:
ENGM/CIVE 851

Design and analysis of structures that undergo impact. Nonlinear, large-deformation finite element analysis of structures. Vehicle crashworthiness, roadside safety design, sheet metal forming, and projectile impacts.

Credit Hours: 3
Course Format: Lecture 3
Campus: Classroom

Advanced Mechatronics

Prereqs:
MECH 457 or permission

Theory, application, simulation, and design of systems that integrate mechanical, computer, and electronics components. Analyze, design,
1 Description (#Description)

- 1.1 Unified Doctoral Engineering Program (#Unified_Doctoral_Engineering_Program)
- 1.2 Master of Engineering Program (#Master_of_Engineering_Program)
- 1.3 Architectural Engineering (#Architectural_Engineering)
- 1.4 Biological Systems Engineering (#Biological_Systems_Engineering)
- 1.5 Biomedical Engineering (#Biomedical_Engineering)
- 1.6 Chemical and Biomolecular Engineering (#Chemical_and_Biomolecular_Engineering)
- 1.7 Civil Engineering (#Civil_Engineering)
- 1.8 Construction (#Construction)
- 1.9 Electrical Engineering (#Electrical_Engineering)
- 1.10 Engineering Mechanics (#Engineering_Mechanics)
- 1.11 Environmental Engineering (#Environmental_Engineering)
- 1.12 Industrial and Management Systems Engineering (#Industrial_and_Management_Systems_Engineering)
- 1.13 Manufacturing Systems Engineering (#Manufacturing_Systems_Engineering)
- 1.14 Materials Engineering (#Materials_Engineering)
- 1.15 Mechanical Engineering (#Mechanical_Engineering)
- 1.16 Telecommunications Engineering (#Telecommunications_Engineering)

2 Faculty (#Faculty)

Description

Unified Doctoral Engineering Program

For a brief description of the program, application requirements and contact information, view the graduate program summary, [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Engineering_PhD).

**Graduate Engineering Board:** Professor and Associate Dean Chandra (Interim Director of Graduate Studies); Professors Bishu, Eisenhauer, Foster, Liu, Robertson, Rothermel, Sharif, Tadros, To; Associate Professors Balkir, Berryman, Dvorak, Farritor, Negahban

Courses of study in engineering leading to the doctoral degree are offered through a Unified PhD Engineering Program which is governed by a graduate board of faculty members elected from each participating field in the college. In addition to addressing the traditional engineering fields, this program encourages multidisciplinary approaches to engineering research. Faculties of the various engineering departments and programs (agricultural and biological systems, architectural, chemical, civil, computer science and engineering, electrical, engineering mechanics, industrial and management systems and mechanical engineering) staff eleven PhD fields of study: agricultural engineering; architectural engineering; biological systems engineering; biomedical engineering; civil
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)
- 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 Graduates 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 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. If you have questions about this degree program, contact udurhams@unlnotes.unl.edu.

#### Engineering Management

This area of concentration is offered as an on-line distance education only program. It 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 Dr. Jeff Woldstad.

#### Telecommunications Engineering

This area of concentration requires two years of practical engineering experience and a BS degree 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 core of computer and electronics engineering course, 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 Dr. Hamid Sharif-Kashani.

#### Architectural Engineering

This area of concentration requires at least six months of architectural engineering or related engineering area work experience, a bachelors 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. This degree 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 Dr. Lily Wang.
Architectural Engineering

For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/ArchitecturalEngineering]

School Director: Eddy Rojas, Ph.D.
Graduate Chair: Lily Wang, Ph.D.

Programs leading to the master of architectural engineering (MAE), master of science (MS), and the doctor of philosophy (PhD) degrees are offered by the Architectural Engineering Program within the Durham School of Architectural Engineering and Construction. There are five primary areas of emphasis: building structural systems; building lighting systems; building electrical systems; building heating, ventilation and air-conditioning systems; and building acoustical systems.

Students entering the graduate program are expected to have undergraduate training that covers the fundamental courses within a bachelors degree in engineering. Students with undergraduate backgrounds in fields other than engineering may be required to take additional prerequisite course work. Foreign students without degrees from United States institutions are required to take the TOEFL and GRE general examinations. Further details concerning Program application requirements and procedures can be obtained by contacting the Program Graduate Chair.

Masters Degrees
(1) The master of architectural engineering (MAE) degree is intended primarily for students who have graduated with a bachelor of science degree in architectural engineering (BSAE) from the University of Nebraska. This is a professional (Option III) degree requiring 36 hours of graduate credit course work, without a thesis. (2) The master of science (MS) degree is a research-oriented (Option I) program, preparing graduates for professional positions in building design and manufacturing firms where research skills are beneficial or for graduate study in a specialized field of architectural engineering at the doctoral level. 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. (3) Studies leading to a master of engineering (MEng) degree with concentration in architectural engineering are conducted under the College of Engineering’s master of engineering (MEng) degree program. [http://engineering.unl.edu/graduate-programs/MEng.shtml] This program is intended primarily for graduates of engineering programs in fields other than architectural engineering who are now working in architectural engineering related positions.

Doctor of Philosophy Degree
Studies leading to a PhD degree in engineering [http://www.unl.edu/gradstudies/prospective/programs/ArchitecturalEngineering] are conducted under the College of Engineering’s unified doctoral engineering program.

Biological Systems Engineering

For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/AgAndBioSystemsEngr]

Interim Department Head: Milford Hanna, Ph.D.
Graduate Committee: Professors Eisenhauer (chair), Hanna, Associate Professors Bashford, Irmak, Woldt; Assistant Professor Keshwani

The Department of Biological Systems Engineering offers graduate programs leading to the master of science with a major in agricultural and biological systems engineering and the PhD in engineering with a specialization in agricultural and biological systems engineering or biomedical engineering. Also, the department offers a master of science with a major in mechanized systems management and is a cooperating department offering a master of science with a major in environmental engineering.

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 soil and water conservation, irrigation system design, ground and surface water management, water quality, plant environment, bioprocessing, animal well being, risk assessment, environmental 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, agricultural power and machinery systems, control 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 College. With approval of the departmental Graduate Committee and the Graduate Council, course work at the graduate level from other areas of engineering may be used as part of the course work constituting a major in agricultural and biological systems engineering. Minors in Environmental Studies and Water Resources Planning and Management are available.

Doctor of Philosophy Degree
Studies leading to a PhD degree in engineering are conducted under the engineering doctoral program.

Biomedical Engineering

For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/BiomedicalEng]

Field Chair: Shane Farritor, Ph.D.

This program in the College of Engineering is designed to promote interdisciplinary research at the graduate level within the College and within the University system as a whole. Students come from undergraduate degrees in various branches of engineering, physics, chemistry, biology, and mathematics. They take 24 graduate-level engineering classes, and at least 12 graduate-level credit hours in biomedical sciences.

At this time, there is no formal degree program in biomedical engineering at the masters degree level, however, students can obtain masters degrees in traditional degree programs of their strength, with an emphasis in biomedical research programs.

Chemical and Biomolecular Engineering

For a brief description of the program, application requirements and contact information, view the graduate program summary. [http://www.unl.edu/gradstudies/prospective/programs/ChemicalAndBiomolecularEng]

Department Chair: William H. Velander, Ph.D.
Graduate Committee: Associate Professor Larsen (chair); Professor Viljoen; Assistant Professor Noureddini

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 Studies Office at the University of Nebraska–Lincoln at the earliest possible date since admission of the applicant will not be taken before these scores are received. 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 Engineering Test is recommended for applicants for financial aid. The Department of Chemical Engineering reserves the right to consider admission without the GRE in exceptional cases. All international applicants must complete the TOEFL with at least a score of 550.

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 supervisor 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 supervisor.

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.

Civil Engineering
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Interim Department Chair: Andrzej Nowak, Ph.D.
Graduate Committee: Associate Professors Jones (Chair), Tuan; Assistant Professors Bartelt–Hunt, Guo, Kim
Graduate work in civil engineering is governed by the general requirements of the Graduate College. Selection of the option and program are subject to approval by the student’s advisor and the departmental Graduate Committee.

A student applying for admission should designate the major 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. A 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. Refer to the main "Engineering" section.

Construction
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Program Director: Eddy Rojas, Ph.D.
Graduate Committee Chair, Terry Stentz, Ph.D.
Degree programs leading to the master of engineering with a concentration in construction, master of science in construction, and doctor of philosophy in engineering (with a specialization in construction) are offered in a unique blend of courses and graduate research in business, construction management, construction engineering, engineering, architecture, law, and related disciplines. The emphasis is on advanced studies in construction with application to a broad range of construction activities and applied research. For more information on the MEng program, refer to the "Master of Engineering Program" section.

A doctoral specialization is available in construction in the unified engineering major.

Electrical Engineering
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Jerry Hudgins, Ph.D.
Graduate Committee Chair: Sina Balkir, Ph.D.
Website: www.ee.unl.edu
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. A student who wishes 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.

Engineering Mechanics
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Joseph A. Turner, Ph.D.
Graduate Committee Chair: Mehrdad Negahban, Ph.D.
Website: www.unl.edu/emhome/grad/default.html
Candidates for an advanced degree in engineering mechanics must be graduates of an accredited program in engineering or a closely related area.
Graduate study in this department places strong emphasis on the fundamentals of engineering science. This is combined with advanced study in specialty areas in mechanics, materials, mathematics and physical sciences. The program of study is closely related to the research program. Current areas of research are: analytical mechanics, including dynamics, vibrations, nonlinear mechanics and stress waves; computational mechanics, including finite and boundary element methods, meshless methods, and optimization of materials and structures; mechanics of materials, including the study of static, dynamic, thermal, and other effects in metals, polymers, nanomaterials, nanofibers, and composites; mechanics of solids, including linear and nonlinear elasticity, plasticity, viscoelasticity, piezoelectricity, damage, fatigue and fracture mechanics.

The Department provides a simultaneous double master in Mechanics and Materials with the University of Rouen (UR) in France. Students in this program spend one year at UNL and one year at UR. Upon satisfactory completion of the program, students are simultaneously awarded a master of science in engineering mechanics from UNL and a master of science in materials (InCoMatex CEPMI) from UR.

Admission and financial assistance is offered on a competitive basis. Graduates of foreign universities or of non–accredited engineering programs are strongly urged to submit GRE scores. Foreign applicants whose native language is not English must submit a TOEFL score of 213 or better for the computer–based TOEFL.
Further information about the MS and PhD degree programs is available upon request from the Chairperson of the Graduate Committee.

**Master of Science Degree.**

It is expected that all students in this program will have the necessary prerequisites for, or credits in, ENGM 847 (Advanced Dynamics) or 875 (Vibration Theory and Applications), and ENGM 848 (Advanced Mechanics of Materials).

**Doctor of Philosophy Degree.**

Studies leading to a PhD degree in engineering are conducted under the engineering doctoral program. Candidates for this degree are required to take a qualifying examination conducted by the Engineering Mechanics Graduate Committee.

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**Environmental Engineering**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EnvironmentalEngineering).

**Program Director:** Bruce I. Dvorak, Ph.D., P.E.

**Program Committee:** Professor Dvorak (Chair); Professors Comfort, Hendrix, Schulte; Assistant Professor Bartelt–Hunt

**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 (MS) degree. Environmental engineering faculty members in the three departments offer a balance 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 concentrate include: water supply engineering, wastewater engineering, hazardous waste management engineering, and solid waste management engineering. In addition, a fifth area in diffuse (non-point) and agricultural waste management engineering is offered.

The area committee evaluates the qualifications of students for admission into the program. Students can 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 828 (Quantitative Methods in Environmental Engineering, 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 advisers, 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.

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 953. Advanced Irrigation & Drainage Systems Engineering
- AGEN 954. Hydrologic Modeling of Small Watersheds
- AGEN 955. Solute Movement in Soils (AGRO 955, CIVE 955)
- BSEN 846. Unit Operations of Biological Processes
- BSEN 855. Nonpoint Source Pollution Control Engineering (CIVE 855)
- BSEN 941. Agricultural Waste Management
- BSEN 943. Bioenvironmental Engineering

**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 Kinetics
- CHME 873. Biochemical Engineering
- CHME 892. Air Pollution Assessment & Control

**Offered in the Department of Civil Engineering**

- CIVE 819. Flow Systems Design
- CIVE 821. Hazardous Waste Management
- CIVE 822. Pollution Prevention
- 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. Quantitative Methods in Environmental Engineering
- CIVE *829. Biological Waste Treatment
- CIVE 830. Fundamentals of Water Quality Modeling
- CIVE 831. Small Treatment Systems
- CIVE 852. Water Resources Development
- CIVE 854. Hydraulic Engineering
- CIVE 855. Nonpoint Source Pollution Control Engineering (BSEN 855)
- CIVE 856. Surface Water Hydrology
- CIVE 858. Groundwater Engineering
- CIVE 875. Water Quality Strategy (AGRO 875, etc.)
- CIVE 915. Water Resources Engineering
- CIVE 916. Interdisciplinary Seminar in Engineering Economics & Legal Aspects of Water Resources Systems
- CIVE 921. Advanced Topics in Hazardous Waste Treatment
- CIVE 926. Advanced Topics in Water Treatment
- CIVE 927. Advanced Topics in Wastewater Treatment
- CIVE 929. Industrial Waste Lab
- CIVE 952. Water Resources Planning
- CIVE 954. Advanced Hydraulics
- CIVE 955. Solute Movement in Soils (AGEN 955, AGRO 955)
- CIVE 958. Groundwater Mechanics
- CIVE 959. Groundwater Modeling
Industrial and Management Systems Engineering

The department is no longer accepting applications. Current students will be able to complete their programs.

Department Chair and Graduate Committee Chair: Jeffrey Woldstad, Ph.D.

Manufacturing Systems Engineering

(Interdepartmental Area)

Area Committee Chair: Professor Ballard

Departments Cooperating: Electrical Engineering, Industrial and Management Systems Engineering, Mechanical Engineering, and Management

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 as 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.

Courses listed below are offered by the participating departments.

Offered in the Department of Electrical Engineering

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

805. Analysis of Engineering Management
806. Decision and Risk Analysis
807. Project Management
810. Ergonomics
812. Occupational Safety – A Systems Analysis
815. Cognitive Ergonomics
816. Physical Ergonomics
817. Occupational Safety Hygiene Engineering
821. Applied Statistics and Quality Control
822. Industrial Quality Control
823. Reliability Engineering
828. Stochastic Operations Research Models
831. Stochastic Processes
832. Scheduling
840. Discrete Event Simulation Modeling
860. Packaging Engineering
861. Radio Frequency Identification
870. Theory and Practice of Materials Processing
871. Tool and Die Design
875. Manufacturing Systems I
876. Manufacturing Information Systems
877. Robotics
881. Supply Chain Optimization
882. Material Planning in Logistic Systems
883. Logistics in the Supply Chain
898. Laboratory Investigation
899. Masters Thesis
901. Total Quality Management Using Six Sigma Techniques
905. Analysis of Engineering Management II
906. Financial Engineering
914. Physiological Aspects of Ergonomics
915. Biomechanics
916. Biotechnology
919. Determinants of Occupational Performance
922. Quality Engineering. Use of Experimental Design and Other Techniques
923. Manufacturing and Dynamic Systems Modeling
970. Advanced Manufacturing Processes
975. Manufacturing Systems II
984. Advanced Simulation Modeling
991. Seminar
996. Advanced Topics in Industrial Engineering
998. Advanced Laboratory Investigation

Offered in the Department of Mechanical Engineering

850. Mechanical Engineering Control Systems
952. Digital Control of Mechanical Systems

Offered in the Department of Management

931. Operations Planning & Control Systems
994. Seminar in Selected Topics I
995. Seminar in Selected Topics II
Materials Engineering

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/MaterialsEngineering).

For a brief description of the program, application requirements and contact information, view the graduate program summary. (Interdepartmental Area)

**Area Committee Chair:** Professor Brian W. Robertson

**Departments Cooperating:** Chemical and Biomolecular Engineering, Electrical Engineering, and Mechanical and Materials Engineering

Description of Program:

Materials engineering involves the investigation and application of the fundamental physics, chemistry, and engineering of materials in order to create, develop, and use materials with superior and new properties for manufacturing processes and engineering design. The discovery, research, development, and applications of materials are major reasons behind the adoption, widespread availability, cost reduction, innovations, and improvements in biomedical, energy, information, transportation, communications, security, home, and entertainment technologies.

The objectives in the Materials Engineering area are: (1) to involve students in research and creative activity in new aspects and applications of materials engineering; (2) to prepare students for careers in the research, development, and applications of new and advanced materials; and (3) to provide students with a foundation for work in industry, commerce, national and corporate laboratories, and academia.

Students have access to many experimental and computational research laboratories and facilities in the four departments and in the Nebraska Center for Materials and Nanoscience. To learn more about these core facilities visit [this link](http://www.unl.edu/nccm/index.shtml) and [this other link](http://www.unl.edu/nccm/index.shtml).

The Area Committee will evaluate the qualifications for the admission of students leading to the doctoral degree. Students are required to complete a minimum of 36 credit hours of courses. No single listing of required courses or course sequences is appropriate for an area as broad as Materials Engineering; the exact program of studies instead is determined jointly by the student and the student’s major adviser, subject to the approval of the student’s supervisory committee. It is expected that the great majority of courses (at least about two-thirds) that a student takes will be closely relevant to the specialization. Typically, the program of studies will include a relevant graduate level mathematics course and at least one course in each of the following four major subject areas: mechanical aspects of materials; physical aspects of materials; chemical aspects of materials or thermodynamics of materials; and materials simulation or characterization of materials. In addition, at least three elective courses in materials topics are expected. Other courses (the remaining minimum of 12 credit hours) could be taken in materials topics or in other subjects approved by the major adviser and supervisory committee. The approval of the final Program of Studies follows the requirements of the Graduate College.

To satisfy comprehensive and advanced qualifying exam requirements, all students are required to pass an advanced qualifying exam in which the student writes a research proposal and then presents and defends the research proposal orally. This exam serves to guide the student, major adviser and supervisory committee in determining whether any additional course(s) should be taken as part of the degree program.

Courses that students may take in consultation with their advisers and supervisory committees include, but are not limited to, the following:

- CHEM 881 Physical Chemistry
- CHEM 943 Solid State Chemistry
- CHME 823 Chemical Engineering Thermodynamics and Kinetics
- CHME 882 Polymers
- ELEC 816 Materials and Devices for Computer Memory, Logic, and Display
- ELEC 817 Semiconductor Fundamentals II
- ELEC 820 Plasma Processing of Semiconductors
- ELEC 821 Solid State Physical Electronics
- ELEC 822 Introduction to the Physics and Chemistry of Solids (PHYS 822)
- ELEC 968 Electron Theory of Solids I
- ELEC 970 Electron Theory of Solids II
- ELEC 975 Optical Properties of Materials
- ENGM 852 Experimental Stress Analysis
- ENGM 910 Continuum Mechanics
- ENGM 930 Mechanics of Composite Materials
- ENGM 940 Fracture Mechanics
- ENGM 941 Mechanics of Dislocations and Cracks
- MECH 824 Laser Material Processing with Compressible Flow Perspective
- MECH 826 Heat Transfer at Nanoscales and in Ultrashort Time Domains
- MECH 836 Introduction to Continuum Biomechanics
- MECH 922 Conduction Heat Transfer
- METL 860 Mechanical Aspects of Materials
- METL 861 Materials Laboratory II
- METL 862 X-Ray Diffraction
- METL 864* Thin Films and Surface Engineering
- METL 865 Applied Physical Metallurgy and Design
- METL 866 Materials Selection for Mechanical Design
- METL 867 Principles of Powder Metallurgy
- METL 868 Failure Analysis: Prevention and Control
- METL 869 Physical Materials Science
- METL 870 Thermodynamics of Alloys
- METL 871 Electron Microscopy of Materials
- METL 872 Kinetics of Alloys
- METL 873 Corrosion
- METL 874 Extractive Metallurgy
- METL 875* Glass and Ceramic Materials
- METL 898 Special Topics
- METL 960 Materials Aspects of Fracture
- METL 962 Imperfections in Crystals
- METL 970 Advanced Thermodynamics of Materials
- METL 972 Transformation in Materials
- METL 998 Advanced Materials Topics
- PHYS 822 Introduction to the Physics and Chemistry of Solids (ELEC 822)
- PHYS 927 Introduction to Solid State Physics

Mechanical Engineering
For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/EnvironmentalEngineering).

**Interim Department Chair:** Jeffrey E. Shield, Ph.D.
**Graduate Committee:** Professors Reid (chair), Robertson; Associate Professors Farritor, Zhang

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 United States institutions are required to take the TOEFL and GRE general examinations with a minimum TOEFL score of 550 paper based (213 computer based, 79 Internet based) and minimum GRE scores of 600 quantitative and 2.5 writing. 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 I, 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 Department 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 Dr. Brian Robertson.

**Doctor of Philosophy Degree.**

Studies leading to a PhD degree in engineering are conducted under the engineering doctoral program.

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### Telecommunications Engineering

For a brief description of the program, application requirements and contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/TelecommunicationsEngr).

**Department Chair:** Dr. Bing Chen
**Graduate Chair:** Dr. Hamid Sharif

The Department of Computer and Electronics Engineering offers courses of study leading to the master of science in telecommunications engineering. This program provides advanced education and research to develop breadth of knowledge and depth of expertise in the engineering of telecommunication networks and systems. Strong emphasis is placed on the areas of High Speed/Broadband Computer Communications Networks, Optical Communications, and Wireless/Satellite Communications. Specialized state-of-the-art laboratories and computer facilities are available in the above three areas.

This program is a UNL program offered in Omaha at the Peter Kiewit Institute. Students may take some of the courses through the Electrical Engineering and the Computer Science and Engineering Departments on the Lincoln Campus. Further information, please visit the department’s Website: [www.ceen.unomaha.edu](http://www.ceen.unomaha.edu)

For admission to this program, a student must have a bachelor of science degree in computer engineering, electrical engineering, electronics engineering or a closely related area.

The CEEN Department offers three areas of concentrations leading to the MS degree in Telecommunications Engineering. The choice of MS option depends on the interests and future plans of the student. The length of time necessary to complete the MS program varies, but is typically two years for full-time enrollment.

- **Option I:** The vast majority of MS students in the CEEN Department choose Option I. Students considering a PhD degree would also generally choose this option. For this degree option, a minimum of 30 credit hours which includes a written thesis are required. At least 6 credit hours must be taken as thesis research. Of the remaining hours, a minimum of 24 hours of formal course work must be taken with at least 9 credit hours in graduate-only courses. Of the total minimum of 30 credit hours, at least 15 credit hours must be CEEN credits.
- **Option II:** Option II does not require thesis research and provides the student with a broader range of courses in his/her program. Normally, this option is not appropriate for students interested in continuing with a PhD degree. A minimum of 36 credit hours of formal course work are required and a single minor must be designated. The program must consist of a minimum of 18 credit hours in CEEN and 9 hours in the minor field. A minimum of 12 credit hours of graduate-only courses are required.
- **Option III:** Option III does not require a master’s thesis but has a minimum course requirement of 36 credit hours. At least 18 credit hours must be earned in graduate-only courses. A minimum of 18 credit hours must be CEEN courses. No minor is required.

### Faculty

#### Architectural Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/ArchitecturalEngineering).

#### Biological Systems Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/AqAndBioSystemsEngr).

#### Chemical and Biomolecular Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/ChemicalAndBiomolecularEngr).

#### Civil Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/CivilEngineering).

#### Construction

For faculty research list, interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/Construction).

#### Electrical Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/ElectricalEngineering).

#### Engineering Mechanics

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/EngineeringMechanics).

#### Environmental Engineering

For faculty list, research interests and department contact information, view the [Graduate Program Summary](https://www.unl.edu/gradstudies/prospective/programs/EnvironmentalEngineering).
## English

### Courses for ENGL (ENGL)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted As</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHIS 988</td>
<td>Introduction to the Interdisciplinary Study of the Middle Ages</td>
<td>ENGL 988, HIST 988, MODL 988, MUSC 988</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>AHIS 989</td>
<td>Introduction to the Interdisciplinary Study of the Renaissance</td>
<td>ENGL 989, HIST 989, MODL 989, MUSC 989</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>CLAS 483/883</td>
<td>Classical Drama</td>
<td>ENGL 440/840</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ENGL 401/801</td>
<td>Drama</td>
<td></td>
<td>3</td>
<td></td>
<td>Lecture 3, Classroom, Literary and Cultural Studies</td>
</tr>
</tbody>
</table>

**AHIS 988**: 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.

**AHIS 989**: 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.

**CLAS 483/883**: Greek and Roman tragedy and comedy in translation.

**ENGL 401/801**: Particular historical periods or other groupings of dramas. 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, and Shakespeare's contemporaries in drama.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>401K/801K</td>
<td>Gay and Lesbian Drama</td>
<td>Junior standing</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
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<tr>
<td>402/802</td>
<td>Poetry</td>
<td>Junior standing; two courses in ENGL above 199</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
</tr>
<tr>
<td>402L/802L</td>
<td>Romantic Poetry</td>
<td>Junior standing; two courses in ENGL above 199</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
</tr>
<tr>
<td>403/803</td>
<td>American Short Story</td>
<td>Junior standing; two courses in ENGL above 199</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
</tr>
<tr>
<td>405/805</td>
<td>Fiction</td>
<td>Junior standing; two courses in ENGL above 199</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
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<tr>
<td>405A/805A</td>
<td>19th Century British Novel</td>
<td>Junior standing; two courses in ENGL above 199</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Literary and Cultural Studies</td>
</tr>
</tbody>
</table>
The most popular and influential literary genre in the nineteenth century, the novel, through representative Romantic, Victorian, and "fin de siecle" (end of century) works.

### 18th Century British Novel

**ENGL 405B/805B**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Survey of British fiction (primarily novels), 1780–1850. Major and minor authors whose works illustrate the tastes and trends of British fiction in the early modern period. The literary, social, and cultural context.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Literary and Cultural Studies

### Modern Fiction

**ENGL 405E/805E**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Key British and American novels and short stories from about 1910 to 1950. Modernism as a literary and cultural practice. Modernism's interpretation of the revolutionary changes in culture and society in the first half of the twentieth century. The relation between modernism and postmodernism.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Literary and Cultural Studies

### Canadian Fiction

**ENGL 405K/805K**

**Prereqs:**
Junior standing.

Survey of modern Canadian novels and short stories from 1920 to the present plus some other genres. The historical and cultural context.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Literary and Cultural Studies

### American Novel I

**ENGL 405M/805M**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Survey of novels written by a variety of men and women of diverse backgrounds in the United States from the late eighteenth century to 1900.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Literary and Cultural Studies

### American Novel II

**ENGL 405N/805N**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Survey of novels written by a variety of men and women of diverse backgrounds in the United States from 1900 to the present day.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Literary and Cultural Studies
**Studies in Literary Movements**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

A literary movement (national or transnational), the development of a genre, or the intellectual and historical origins of an idea, as reflected in literature. May include the literature of abolition, alternative Romanticsisms, literary modernism, the literature of Civil Rights, postmodernism, and/or the avant garde movement.

**Plains Literature**

**Prereqs:**
Junior standing.

Various forms of literature seen in the historical, cultural, and aesthetic context of the North American Great Plains.

**Film**

May be repeated once for credit with a different topic.

Study of specific critical and historical film theory and approaches to film history using more difficult texts (both as films and as readings) for the students, to create an intense immersion into more complex films and critical readings.

**Women's Literature**

Croslisted as WMNS 414

**Prereqs:**
Junior standing.

A particular historical or other groups of literature by and about women, seen in their aesthetic and intellectual context.

**Modern and Contemporary Women Writers**

Croslisted as WMNS 414B/814B

**Prereqs:**
Junior standing.

Selected women writers from the twentieth and twenty-first century.

**Introduction to Linguistics**

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...
<table>
<thead>
<tr>
<th>Course Delivery:</th>
<th>Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups:</td>
<td>ESL and Linguistics</td>
</tr>
<tr>
<td><strong>History of the English Language</strong>&lt;br&gt;426/826</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/426">LINK</a></td>
</tr>
<tr>
<td>Historical development of contemporary English with particular attention to its Old and Middle English background.</td>
<td></td>
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<table>
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<th>Credit Hours:</th>
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<tr>
<td>Groups:</td>
<td>ESL and Linguistics</td>
</tr>
<tr>
<td><strong>Applications of Linguistics</strong>&lt;br&gt;427/827</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/427">LINK</a></td>
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<tr>
<td>Prereqs:</td>
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<td>Groups:</td>
<td>ESL and Linguistics</td>
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<tr>
<td><strong>Old English</strong>&lt;br&gt;428/828</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/428">LINK</a></td>
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<tr>
<td>Prereqs:</td>
<td>Junior standing; two courses in ENGL above 199.</td>
</tr>
<tr>
<td>Old English. Read and understand literary texts of the period in their historical context.</td>
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<tr>
<td><strong>British Authors to 1800</strong>&lt;br&gt;430/830</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/430">LINK</a></td>
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<tr>
<td>Prereqs:</td>
<td>Junior standing; two courses in ENGL above 199.</td>
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<tr>
<td>The works of a particular major author, such as Chaucer, Shakespeare, or Milton situated within literary, historical, biographical, and critical context.</td>
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<th>Credit Hours:</th>
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<td>Literary and Cultural Studies</td>
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<tr>
<td><strong>Shakespeare I</strong>&lt;br&gt;430A/830A</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/430A">LINK</a></td>
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<tr>
<td>Prereqs:</td>
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<tr>
<td>How performance-based strategies can help in understanding and in teaching Shakespeare’s plays. The historical and contemporary stage practices, the performance history of these plays, and recent criticism that engages with the insights of both Performance Theory and Semiotics.</td>
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<td><strong>American Authors to 1900</strong>&lt;br&gt;432</td>
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<td>432/832</td>
<td>American Authors Since 1900</td>
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<td>433/833</td>
<td>American Authors Since 1900</td>
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<tr>
<td>439/839</td>
<td>Film Directors</td>
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<tr>
<td>445/845</td>
<td>Ethnic Literature</td>
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<tr>
<td>445B/845B</td>
<td>Topics in African American Literature</td>
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<tr>
<td>445K/845K</td>
<td>Topics in African Literature</td>
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<td>ENGL 445N/845N</td>
<td>Topics in Native American Literature</td>
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<tr>
<td>ENGL 457A/857A</td>
<td>Composition and Rhetorical Theory</td>
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<tr>
<td>ENGL 459/859</td>
<td>Writing for Film</td>
</tr>
<tr>
<td>ENGL 462/862</td>
<td>Survey of Medieval Literature</td>
</tr>
<tr>
<td>ENGL 462A/862A</td>
<td>Ideas of Ethnicity in Medieval and Renaissance Literature</td>
</tr>
<tr>
<td>ENGL 463/863</td>
<td>Survey of Renaissance Literature</td>
</tr>
</tbody>
</table>
Extensive study of major authors and works of the sixteenth and early seventeenth centuries with particular attention to the development of poetic and prose literary forms and their cultural context.

**British Literature, 1660–1800**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Major writers and critical issues of the period. Emphasis on poetry and nonfiction prose.

**Nineteenth-Century British Literature**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Poetry and prose of the Romantic and Victorian periods. Their intellectual and cultural context.

**Literary History**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Theory of literary periods and movements and the causes for change among them. Periods, movements, and readings are taken from British literature from about 1475 to about 1950.

**Rhetoric**

**Prereqs:**
Junior standing; two courses in ENGL above 199.

Rhetoric and rhetorical theory in relation to literature, composition, and language.

**Rhetorical Theory: Rhetoric of Women Writers**

Crosslisted as WMNS 475A/875A

**Prereqs:**
Junior standing.

Rhetoric and rhetorical theory of women writers and speakers and its implications for literature, composition, literacy, feminist theory, and women’s and gender studies.
Digital Archives and Editions

**Course Information**

- **Course Code:** ENGL 478/878
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

**Prereqs:**
- Junior standing.

**Course Description:**
The shift from printed to digital texts and its implications for the humanities. Practice in digitally representing texts, archival design, and analysis of representative electronic projects dedicated to a variety of authors and genres.

---

Writing Theory and Practice for Consultants

**Course Information**

- **Course Code:** ENGL 480/880
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

**Groups:** Writing, Rhetoric, and Culture

**Course Description:**
- **Prereqs:** Junior standing; two courses in ENGL above 199.
- Successful completion of ENGL 480 (http://bulletin.unl.edu/courses/ENGL/480) or ENGL 880 (http://bulletin.unl.edu/courses/ENGL/880) is required to intern or work as a consultant in UNL’s Writing Assistance Center.
- Introduction to issues and scholarship in teaching writing and working as a writing consultant.

---

Literacy Issues and Community

**Course Information**

- **Course Code:** ENGL 482/882
- **Credit Hours:** 3-6
- **Max credits per degree:** 6
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

**Groups:** Writing, Rhetoric, and Culture

**Course Description:**
- **Prereqs:** Junior standing.
- ENGL 482/882 may include a literacy and/or writing internship in a community or workplace setting.
- Literacy theory and its application in school, community, and workplace environments.

---

Medieval Literature and Theology

**Course Information**

- **Course Code:** ENGL 489/889
- **Crosslisted as:** RELG 489
- **Credit Hours:** 3
- **Course Delivery:** Classroom

**Groups:** Literary and Cultural Studies

**Course Description:**
The relationship between significant medieval theologies and primary medieval poets and prose masters.

---

Independent Directed Reading

**Course Information**

- **Course Code:** ENGL 497/897
- **Credit Hours:** 1-6
- **Course Delivery:** Classroom

**Groups:** Independent Study, Special Topics, Internships

**Prereqs:**
- Permission.
Special Topics

**Prereqs:** Senior standing.

**Credit Hours:** 1–6

**Max credits per semester:** 6

**Course Format:** Lecture

**Course Delivery:** Classroom

**Groups:** Independent Study, Special Topics, Internships

---

Genre

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

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Plains Literature

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

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Middle English

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

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Music and Text in the English Renaissance

Crosslisted as MUSC 830J

**Prereqs:**

MUSC 366

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

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Fiction Writing

**Prereqs:** ENGL 252; and permission

ENGL *852 is for advanced students with previous experience in fiction writing.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Campus:**

**Course Delivery:** Classroom
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>ENGL 852A</td>
<td>Writing of Literary Non-Fiction</td>
<td>ENGL 252 or 253</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Advanced (workshop) course for creative writers; emphasis on memoirs, personal essays, other forms of literary non-fiction.</td>
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<tr>
<td>ENGL 853</td>
<td>Writing of Poetry</td>
<td>ENGL 253 and permission</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>For advanced students with previous experience in poetry writing.</td>
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<tr>
<td>ENGL 854</td>
<td>Advanced Writing Projects</td>
<td>3 hrs English composition above the ENGL 200 level</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Advanced writing workshop in which experienced writers develop extended projects in writing, analyze their own and others' writing processes, and read widely in genres related to their projects.</td>
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<td>ENGL 857</td>
<td>Composition Theory and Practice</td>
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<td>Classroom</td>
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<td></td>
<td>Recent research on language development and the process of writing. Applications of theory to composition instruction, especially in K-12 grades.</td>
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<tr>
<td>ENGL 881</td>
<td>GESL/Academic Research</td>
<td></td>
<td>3</td>
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<tr>
<td>ENGL 884</td>
<td>GESL/Advanced Academic Writing</td>
<td>Permission</td>
<td>1-3</td>
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<td>Classroom</td>
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<td></td>
<td>Individualized tutorial instruction focused on the student's particular grammar and writing problems.</td>
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<td>Course Code</td>
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<td>Credit Hours:</td>
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<tr>
<td>ENGL 886</td>
<td>GESL and/or Academic Language Skills</td>
<td></td>
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<td>Permission</td>
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<tr>
<td></td>
<td>For international graduate students designed to develop academic language skills.</td>
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<tr>
<td>ENGL 887</td>
<td>GESL and/or Academic Research Skills</td>
<td></td>
<td></td>
<td>Permission</td>
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<td></td>
<td>Advanced tutorial in academic writing for international graduate students.</td>
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<tr>
<td>ENGL 888</td>
<td>Spoken English for International Students</td>
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<td>Permission</td>
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<td></td>
<td>Speech improvement course for international graduate students.</td>
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<td>ENGL 895</td>
<td>Internship in Teaching English</td>
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<td>Permission</td>
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<td>Lecture</td>
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<tr>
<td>ENGL 895A</td>
<td>Nebraska Writing Project Internship</td>
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<tr>
<td>ENGL 899</td>
<td>Masters Thesis</td>
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<td>Admission to masters degree program and permission of major adviser</td>
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<td>ENGL 901</td>
<td>Seminar in Drama</td>
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<td>1-24</td>
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<td>ENGL 902</td>
<td>Seminar in Poetry</td>
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<td>ENGL 905</td>
<td>Seminar in Prose Fiction</td>
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<td>ENGL 911</td>
<td>Seminar in Plains Literature</td>
<td>Classroom</td>
<td>1-24</td>
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<td>ENGL 913</td>
<td>Studies in Film</td>
<td>Classroom</td>
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<td>ENGL 914</td>
<td>Seminar in Women Writers</td>
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<td>Popular Literature</td>
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<td>ENGL 918</td>
<td>Interdisciplinary Seminar in Nineteenth-Century Studies</td>
<td>Classroom</td>
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<td>Max credits per degree: 6</td>
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Invention of the nineteenth century, gender, colonialism, class, realism science and technology.
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<td>Interdisciplinary Approaches to the Nineteenth Century</td>
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<td>Introduction to the nineteenth century in North America (focusing on the US), 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.</td>
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<td>ENGL 920</td>
<td>Seminar in Linguistics</td>
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<td>ENGL 927</td>
<td>Stylistics</td>
<td>1-24</td>
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<td>ENGL 930</td>
<td>Seminar in British Authors to 1800</td>
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<td>ENGL 931</td>
<td>Seminar in British Authors since 1800</td>
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<td>ENGL 932</td>
<td>Seminar in American Authors to 1900</td>
<td>1-24</td>
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<tr>
<td>ENGL 933</td>
<td>Seminar in American Authors since 1900</td>
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Seminar in African-American Literature

Seminar in Creative Writing

Composition Theory and Practice

Seminar in American Literature

Seminar in Medieval Literature

Seminar in Renaissance Literature

Seminar in Restoration and Eighteenth-Century Literature
<table>
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<tr>
<td>ENGL 965</td>
<td>Seminar in Nineteenth-Century Literature</td>
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<td>ENGL 967</td>
<td>Seminar in Modern Literature</td>
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<td>ENGL 970</td>
<td>Literary Theory</td>
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<td>ENGL 971</td>
<td>Seminar in Literary Theory</td>
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<tr>
<td>ENGL 973</td>
<td>Seminar in Literacy Studies</td>
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<tr>
<td>ENGL 976</td>
<td>Seminar in Rhetorical Theory</td>
<td>1-24</td>
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<tr>
<td>ENGL 986</td>
<td>Approaches to English Studies</td>
<td>1-24</td>
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</table>
Emerging models of English studies that cross traditional boundaries. Traces disciplinary concerns across three registers: scholarship, curriculum, and pedagogy.

**Seminar in Humanities and Public Policy**

- **ENGL 987**
- 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.
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Introduction to Research and Scholarship in English**

- **ENGL 990**
- Introduction to a variety of approaches to research and scholarship current in the discipline.
- **Credit Hours:** 1-3
- **Max credits per degree:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Nebraska Literature Project**

- **ENGL 991**
- **Credit Hours:** 1-24
- **Campus:**
- **Course Delivery:** Classroom

**Nebraska Humanities Project**

- **ENGL 992**
- Crosslisted as TEAC 992
- **Credit Hours:** 1-24
- **Course Format:** Lecture
- **Campus:**
- **Course Delivery:** Classroom

**Place Conscious Teaching**

- **ENGL 992B**
- Crosslisted as TEAC 992B
- Theory and practice of teaching writing, literature, and rhetoric in connection with local place, region, and community.
- **Credit Hours:** 1-6
- **Max credits per degree:** 6
- **Course Format:** Lecture
- **Campus:**
- **Course Delivery:** Classroom

**Application of Learning and Teaching English**

- **ENGL 994**
- **Credit Hours:** 3-4
- **Campus:**
**Teaching of Literature**

Course Delivery: Classroom

Credit Hours: 1-24

Max credits per degree: 24

Course Format: Lecture

Campus:

Course Delivery: Classroom

**Bibliography and Methods**

Course Delivery: Classroom

Credit Hours: 3-4

Campus:

Course Delivery: Classroom

**Independent Directed Reading**

Course Delivery: Classroom

Credit Hours: 1-24

Campus:

Course Delivery: Classroom

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

**Doctoral Dissertation**

Course Delivery: Classroom

Credit Hours: 1-24

Max credits per degree: 55

Campus:

Course Delivery: Classroom

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

**Internship in Digital Humanities**

Crosslisted as ENGL 895E, MODL 895

Course Delivery: Classroom

Credit Hours: 3

Course Format: Lecture 3

Campus:

Course Delivery: Classroom

Active participation in an ongoing digital humanities project in the Center for Digital Research in the Humanities, including weekly meetings designed to build technical and project management skills.

**Nebraska Writing Project**

Crosslisted as ENGL 857B

Course Delivery: Classroom

Credit Hours: 1-3

Course Format: Lecture

Campus:

Course Delivery: Classroom

Topics in writing instruction, explored via the National Writing Project Institute model, for K-12 and college teachers of writing in all curricular areas.
Description
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Susan Belasco, Ph.D.

Graduate Studies Committee: Associate Professor Abel (Chair), Professors Agee, Brooke, Assistant Professors Schleck, Vegso; Graduate Student Representative Wendy Oleson

The Department of English offers MA and PhD work in ten major fields of study: Medieval, Renaissance, Restoration and Eighteenth-Century, Nineteenth-Century British, American Literature to 1900, Modern British and American, Composition and Rhetoric, Creative Writing, Women’s Literature, Plains Literature, Ethnic Literature, and Critical Theory.

Master of Arts Degree.
The prerequisite for admission to work leading to the degree of master of arts with specialization in English is normally an undergraduate major in English. The application for admission must include transcripts, three letters of recommendation, vita, evidence of teaching potential, a statement of educational goals, and a sample of the student’s scholarly writing. The GRE general test score may be submitted but is not required. 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 score of 100 or higher on the Internet-based TOEFL or 600 or higher on the paper-based TOEFL. Masters students must satisfy course distribution requirements and take a comprehensive examination or write a thesis. Further information about the program is available upon request from the chairperson of the Graduate Committee.

Doctor of Philosophy Degree.
Students can apply for the PhD program directly from the BA, or with an MA or MFA. The application for admission must include transcripts (graduate and undergraduate), three letters of recommendation, a sample of the student’s scholarly writing, a personal statement of the applicant’s interests and goals in obtaining a PhD, a vita, and evidence of teaching experience or potential. The GRE general test score may be submitted but is not required. Creative writing applicants should submit a portfolio of their work. Foreign students whose native language is not English must submit a score of 100 or higher on the Internet-based TOEFL or 600 or higher on the paper-based TOEFL. Doctoral students shape their own program of study with the guidance of a Supervisory Committee and take a three-part comprehensive examination. Fluency in one foreign language, reading knowledge of two foreign languages, or reading knowledge of a foreign language plus a collateral field, are also required. Students will ordinarily be expected to complete at least 60 hours of course work beyond the bachelors 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:
Ethnic Studies; Great Plains Studies; Human Rights and Humanitarian Affairs; Nineteenth-Century Studies; Women’s and Gender Studies.

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 MA students must take ENGL 990 (Introduction to Literary Scholarship). Teaching assistants must take ENGL 957 (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.

NOTE: For specific topics of each course for any particular semester, consult the Schedule of Classes for that semester.

Faculty
For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/English"
### Courses for ENTO (ENTO)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 815A</td>
<td>Self-pollinated Crop Breeding</td>
<td>AGRO 315</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>AGRO 815B</td>
<td>Germplasm and Genes</td>
<td>AGRO 315</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>AGRO 815D</td>
<td>Cross-pollinated Crop Breeding</td>
<td>AGRO 315</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>BIOS 865</td>
<td>Insect Transmission of Plant Diseases</td>
<td>8 hrs biological sciences including BIOS 864</td>
<td>2</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>BIOS 960</td>
<td>Biosystematics and Nomenclature</td>
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</tbody>
</table>

#### AGRO 815A: Self-pollinated Crop Breeding
- Crosslisted as ENTO 815A
- **Prereqs:**
- AGRO 315
- This course is a prerequisite for AGRO 816
- Self-pollinated plant breeding theory and methods. Pedigree, bulk, single seed descent, back-crossing methods and inbreeding theory.

#### AGRO 815B: Germplasm and Genes
- Crosslisted as ENTO 815B
- **Prereqs:**
- AGRO 315
- Obtaining germplasm and genes from cultivated plants, wild relatives of cultivated plants, and the biosphere. Origination of crops, mutation genetics, biotechnology as a source of genes, chromosomal engineering and plant reproduction.

#### AGRO 815D: Cross-pollinated Crop Breeding
- Crosslisted as ENTO 815D
- **Prereqs:**
- AGRO 315
- Cross-pollinated breeding theory and methods. Genes in populations, recurrent selection methods, creating populations, hybrid production practices, and population improvement theory.

#### BIOS 865: Insect Transmission of Plant Diseases
- Crosslisted as ENTO 865
- **Prereqs:**
- 8 hrs biological sciences including BIOS 864
- ENT0 "865 is offered even-numbered calendar years.
- Relationships between plant diseases and their vectors with emphasis on virus diseases and transmission by aphids.

#### BIOS 960: Biosystematics and Nomenclature
- Crosslisted as ENTO 960
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTO 400/800</td>
<td>Biology and Classification of Insects</td>
<td>2-3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Methods and principles of systematics and nomenclature.</td>
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<tr>
<td></td>
<td>Biology and ecology of common families of insects. Sight recognition of 22 Orders and 105 Families, identification of other families with keys. Student project at species level.</td>
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</tr>
<tr>
<td>ENTO 401/801</td>
<td>Insect Physiology</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Functions and other phenomena associated with the major organ systems of insects; the cuticle, nervous, circulatory, digestive, metabolism, nutrition, locomotion, reproduction, respiration, and growth and development.</td>
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</tr>
<tr>
<td>ENTO 402/802</td>
<td>Aquatic Insects</td>
<td>2</td>
<td>Lecture 2</td>
<td>Classroom, Web</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as BIOS 485/885, NRES 402/802</td>
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<tr>
<td></td>
<td>Biology and ecology of aquatic insects.</td>
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<tr>
<td>ENTO 402L/802L</td>
<td>Identification of Aquatic Insects</td>
<td>1</td>
<td>Lab</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as BIOS 485L/885L, NRES 402L/802L</td>
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<tr>
<td></td>
<td>Identification of aquatic insects to the family level.</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
<td>Credit Hours</td>
<td>Course Format</td>
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</tr>
<tr>
<td>ENTO 403/803</td>
<td>Management of Horticultural Crop Insects</td>
<td>Introductory biology course. Offered spring semester of even-numbered calendar years on the Internet via the World Wide Web. Credit toward the degree cannot be earned in both ENTO 303 and ENTO 403.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The biology, ecology and management of insect pests of horticultural crops such as vegetables, fruit trees, trees and shrubs, greenhouse crops, turf and ornamentals. Employing Integrated Pest Management (IPM) strategies to maintain pests below damaging levels while minimizing the use of traditional insecticides.</td>
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<tr>
<td>ENTO 406/806</td>
<td>Insect Ecology</td>
<td>Crosslisted as BIOS 406/806</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Biotic and abiotic factors as they influence insect development, behavior, distribution, and abundance.</td>
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<tr>
<td>ENTO 409/809</td>
<td>Insect Control by Host-Plant Resistance</td>
<td>12 hrs agricultural sciences and/or biological sciences including one course in entomology and one course in genetics. AGRO/HORT 481 recommended. Offered spring semester of odd-numbered calendar years.</td>
<td>2</td>
<td>Lecture 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nature and mechanisms of plant resistance to insect attack and the utilization of resistance for insect control.</td>
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<tr>
<td>ENTO 410/810</td>
<td>Insects as Educational Tools for the Classroom</td>
<td>Introductory entomology course. Offered fall semester of even-numbered calendar years on the Internet via the World Wide Web (WWW).</td>
<td>3</td>
<td>Lab 2, Lecture 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overview of insects. Insect diversity, insect structure and function, insect ecology and behavior, and the beneficial and detrimental roles insects play. Integrating the study of insects into the classroom to enhance science education.</td>
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</tr>
</tbody>
</table>
### Field Entomology

**Course Code:** ENTO 411/811  
**Credit Hours:** 4  
**Course Delivery:** Classroom

**Prereqs:**  
12 hrs biological sciences.

**Offered only at Cedar Point Biological Station.**

Field course in insect taxonomy and biology emphasizing field collection, specimen preparation, classification, and insect natural history.

### Entomology and Pest Management

**Course Code:** ENTO 412/812  
**Credit Hours:** 3  
**Course Delivery:** Web

**Prereqs:**  
Introductory course in ENTO.

**Offered summer semester of odd-numbered calendar years on the Internet via the World Wide Web (WWW).**

Principles and practices of managing insect pests. Pest management theory, use of sampling, evaluation, and tactics, types of insect pests, and current issues.

### Forensic Entomology

**Course Code:** ENTO 414/814  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom, Web

**Prereqs:**  
Introductory course in entomology.

**Also offered on the Internet via the World Wide Web (WWW).**

Application of entomology to legal issues. Criminal investigations, insects of forensic importance, insect succession on carrion, and case studies.

### Medical Entomology

**Course Code:** ENTO 415/815  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom, Web

**Prereqs:**  
Introductory course in ENTO.

**Also offered on the Internet via the World Wide Web (WWW).**

Direct and indirect importance of insects in human medicine. Principles of arthropod-borne disease, medically important arthropod groups, and arthropod-transmitted diseases.

### Independent Study in Entomology

**Course Code:** ENTO 496/896  
**Credit Hours:** 1-6  
**Max credits per degree:** 12  
**Course Delivery:** Classroom

**Prereqs:**  
12 hrs biological sciences and/or agricultural sciences.

Independent study contracts for ENTO 496 must be filed with the department.

Individual or group projects in research, literature review, or extension of course work.
Pest Management Systems

ENTO 817

Prereqs: 10 hrs entomology and crop production courses or permission

ENTO *817 is offered fall semester of odd-numbered calendar years.

Different philosophies and theories of insect pest management, theory vs. reality of management, interactions of public and private sectors, development and implementation of pest management programs.

Insect Identification and Natural History

ENTO 818

Prereqs: Introductory course in entomology

ENTO *818 is offered in summer session on the Internet via the World Wide Web (WWW). Credit toward the degree may not be earned in both ENTO 800 (http://bulletin.unl.edu/courses/ENTO/800) and ENTO *818.

Application of entomology to legal issues. Criminal investigations, insects of forensic importance, insect succession on carrion, and case studies.

Insect Behavior

ENTO 819

Prereqs: Introductory course in entomology.

*ENTO 819 (http://bulletin.unl.edu/courses/ENTO/819) is offered fall semesters of odd-numbered calendar years on the Internet via the World Wide Web (WWW).

The process of behavioral study involves investigating the relationship between animals and their surroundings, and their response to their kin and to other organisms. Topics include characterizing how insects find and defend their resources, how they avoid predators, how they find mates, how they mate, and how some exist in highly ordered social settings.

Insecticide Toxicology

ENTO 820

Prereqs: 12 hrs biological sciences; 4 hrs organic chemistry

ENTO *820 is offered fall semester of odd-numbered calendar years and also on the Internet via the World Wide Web (WWW).

Principles of toxicology, insecticide classification, mode of action, metabolism and consequences of insecticide use.

Management of Agronomic Crop Insects

ENTO 825

Prereqs: An introductory entomology course.

ENTO *825 is offered on the Internet via the World Wide Web (WWW) and requires access to a computer, email, and the Internet.

Identification, biology, ecology and management of insect pests of agronomic crops such as corn, soybeans, sorghum, wheat, and alfalfa.
Integrated Pest Management (IPM) strategies employed to maintain pests below damaging levels while minimizing the use of traditional insecticides

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Link</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTO 826</td>
<td>Scientific Illustration</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/826">Link</a></td>
<td>3</td>
<td>Independent Study</td>
<td>Web</td>
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<td>Prereqs:</td>
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<tr>
<td></td>
<td>12 hrs agricultural and/or biological sciences.</td>
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<td></td>
<td><em>ENTO 826 is offered spring semester of even-numbered calendar years.</em></td>
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<td></td>
<td>Prepare scientifically accurate, high quality illustrations and graphics for the teaching, presentation, and publication of scientific information. Drawing techniques, drafting, copyright, and publication and presentation of scientific art work.</td>
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<tr>
<td>ENTO 827</td>
<td>POPULATION AND ECOLOGICAL GENETICS</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/827">Link</a></td>
<td>3</td>
<td>Lecture 2, Recitation 1</td>
<td>Web</td>
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<td>Prereqs:</td>
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<td></td>
<td>Introductory Genetics, Introductory Algebra</td>
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<td></td>
<td>Introduction to key theoretical concepts in population genetics and their application. Mutation, genetic drift, structured populations, natural selection, molecular evolution.</td>
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<tr>
<td>ENTO 888</td>
<td>MS Degree Project</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/888">Link</a></td>
<td>4</td>
<td>Web</td>
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<td></td>
<td>Prereqs:</td>
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<td></td>
<td>Completion of 24 hrs toward the MS degree</td>
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<td></td>
<td>Application of graduate course work for the non-thesis MS degree program.</td>
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<tr>
<td>ENTO 899</td>
<td>Masters Thesis</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/899">Link</a></td>
<td>6-10</td>
<td>Classroom</td>
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<td></td>
<td>Prereqs:</td>
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<td></td>
<td>Admission to masters degree program and permission of major adviser</td>
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<tr>
<td>ENTO 905</td>
<td>Seminar in Entomology</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/905">Link</a></td>
<td>1</td>
<td>Classroom</td>
<td></td>
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<td></td>
<td>Prereqs:</td>
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<tr>
<td></td>
<td>Permission.</td>
<td></td>
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<tr>
<td>ENTO 915</td>
<td>Presentation Methods</td>
<td><a href="http://bulletin.unl.edu/courses/ENTO/915">Link</a></td>
<td>3</td>
<td>Lab, Lecture</td>
<td></td>
</tr>
</tbody>
</table>
This course prepares entomology graduate students to give scientific and public presentations. It includes instruction in preparing posters and on-screen shows, image editing, finding entomological resources in libraries and on the internet, insect photography, and public speaking. Students develop a portfolio of their work, and they make two 12- and one 30-minute presentations to their classmates.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTO 991</td>
<td>Advanced Topics in Entomology</td>
<td>1-5</td>
<td>Permission as the need arises. The amount of credit is determined by the instructor at the time the course is offered. May be repeated for credit.</td>
<td>Classroom</td>
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<td></td>
<td>Advanced study of selected topics not presented in established courses.</td>
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<tr>
<td>ENTO 996</td>
<td>Research in Entomology</td>
<td>1-12</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>ENTO 999</td>
<td>Doctoral Dissertation</td>
<td>1-24</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>Classroom</td>
</tr>
<tr>
<td>NRES 920</td>
<td>Xenobiotics in the Environment</td>
<td>3</td>
<td>Recommend one course each in organic chemistry, soil science, biochemistry, plant physiology, microbiology and ecology</td>
<td>Classroom</td>
</tr>
<tr>
<td>PLPT 813</td>
<td>Biological Control of Pests</td>
<td>3</td>
<td>12 hrs biological sciences and/or agricultural sciences</td>
<td>Classroom, Web</td>
</tr>
</tbody>
</table>

Fate and ecotoxicological impacts of biologically foreign compounds in soil-water-plant environments; uptake, mechanisms of toxicity and metabolism in plants and other biota. Herbicides and other pesticides.
### Courses for FORS (FORS)

<table>
<thead>
<tr>
<th>ENTO 414/814</th>
<th>Forensic Entomology</th>
<th><a href="http://bulletin.unl.edu/courses/ENTO/414">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>Introductory course in entomology.</td>
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<tr>
<td>Also offered on the Internet via the World Wide Web (WWW).</td>
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</tr>
<tr>
<td><strong>Course Delivery:</strong></td>
<td>Classroom, Web</td>
<td></td>
</tr>
<tr>
<td><strong>Application:</strong></td>
<td>Application of entomology to legal issues. Criminal investigations, insects of forensic importance, insect succession on carrion, and case studies.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>FORS 402/802</th>
<th>Principles of Forensic Photography</th>
<th><a href="http://bulletin.unl.edu/courses/FORS/402">LINK</a></th>
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</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>FORS 120 and 200.</td>
<td></td>
</tr>
<tr>
<td><strong>Course Format:</strong></td>
<td>Lecture 1</td>
<td></td>
</tr>
<tr>
<td><strong>Course Delivery:</strong></td>
<td>Web</td>
<td></td>
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<tr>
<td><strong>Concepts:</strong></td>
<td>Concepts, techniques, analysis, and interpretation of photographic evidence.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>FORS 403/803</th>
<th>Advanced Forensic Photography</th>
<th><a href="http://bulletin.unl.edu/courses/FORS/403">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>FORS 120, 200, and 402.</td>
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<tr>
<td><strong>Course Format:</strong></td>
<td>Lecture 1</td>
<td></td>
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<tr>
<td><strong>Course Delivery:</strong></td>
<td>Web</td>
<td></td>
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<tr>
<td><strong>Advanced concepts:</strong></td>
<td>Advanced concepts, techniques, analysis, and interpretation of photographic evidence.</td>
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<table>
<thead>
<tr>
<th>FORS 404/804</th>
<th>Bloodstains as Evidence</th>
<th><a href="http://bulletin.unl.edu/courses/FORS/404">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>FORS 120 and 200.</td>
<td></td>
</tr>
<tr>
<td><strong>Course Format:</strong></td>
<td>Lecture 1</td>
<td></td>
</tr>
<tr>
<td><strong>Course Delivery:</strong></td>
<td>Web</td>
<td></td>
</tr>
<tr>
<td><strong>Documentation:</strong></td>
<td>Documentation and interpretation of geometric bloodstains, calculating probable origins, and collecting blood as a source of DNA evidence.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>FORS 406/806</th>
<th>Crime Scene Management</th>
<th><a href="http://bulletin.unl.edu/courses/FORS/406">LINK</a></th>
</tr>
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<tbody>
<tr>
<td><strong>Prereqs:</strong></td>
<td>FORS 120 and 200.</td>
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</tr>
<tr>
<td><strong>Course Format:</strong></td>
<td>Lecture 1</td>
<td></td>
</tr>
<tr>
<td><strong>Course Delivery:</strong></td>
<td>Web</td>
<td></td>
</tr>
<tr>
<td><strong>Critical thinking:</strong></td>
<td>Critical thinking, reasoning, investigative failure, resource management, and supervision in criminal investigation.</td>
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</tr>
</tbody>
</table>
### Forensic DNA Analysis

**Prereqs:**
- FORS 120 ([link](http://bulletin.unl.edu/courses/FORS/120)) and 200 ([link](http://bulletin.unl.edu/courses/FORS/200)).

Collection and analysis of DNA for use in forensic science.

### Special Topics in Forensic Science

**Prereqs:**
- 3 hrs FORS or equivalent.

Current issues in forensic science.

### Forensic Science and Criminal Investigation

Theory and practice in forensic science. The legal system, crime scene investigation, taphonomy, and criminalistics.

### Human Remains in Forensic Science

Crosslisted as FORS 445/845

**Prereqs:**
- FORS 120 ([link](http://bulletin.unl.edu/courses/FORS/120)).

Forensic anthropology within the broader context of forensic sciences and physical anthropology. Decomposition and bone modification through artificial means. Determination of individual identity, diet, chronic pathology and cause of death from human remains.

### Pollen Analysis for Behavioral, Biological, and Forensic Science

Crosslisted as FORS 446/846

**Prereqs:**
- BIOS 109 ([link](http://bulletin.unl.edu/courses/BIOS/109)) and FORS 120 ([link](http://bulletin.unl.edu/courses/FORS/120)).

Collection, processing, identification of common North American pollen types. Pollination ecology relating to scene reconstruction. Fundamental statistics and presentation requirements for a legal and scientific audience.

### Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Entomology).

**Department Head:** Gary Brewer, Ph.D.

**Graduate Committee Chair:** Marion Ellis, Ph.D.

**Areas of Study:**
Apiculture, Forensic Science, Insect Ecology, Insect Physiology and Toxicology, Management of Insects and other Arthropods, Plant–Arthropod Interactions, Stress Biology, Plant Resistance to Insects, Systematics, Medical and Veterinary Entomology.

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, 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 two credit hours of seminar (one must be ENTO 905). These seminars include formal presentations by the students.

Distance Master of Science Degree (Option III – non-thesis).

Students must hold a BS or BA degree from an accredited college or university. Baccalaureate course work must include chemistry, mathematics, biology and introductory entomology. A limited number of deficiencies in course work can be made up during the graduate program. An undergraduate GPA of 3.0 or better is required for Full Graduate Standing. A GPA of less than 3.0 will be considered on an individual basis for provisional admission (students accepted on provisional admission must establish acceptable academic performance in their first semester to continue in the graduate program). Students in the distance masters degree program must earn a minimum of 36 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 the major. Students must take or have taken insect identification and natural history, insect ecology, and insect physiology. Additionally, students must take ENTO 888, Masters Degree Project, for 4 credit hours, in which students will develop an independent project applying their graduate training to a practical question of interest. At the end of the graduate program, students must pass the Board Certified Entomology (BCE) general exam through the Entomological Society of America or the Department of Entomology’s general exam. A specialized written comprehensive exam, prepared by the distance education committee must also be passed at the end of the degree program.

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 two credit hours of seminar (one must be ENTO 905). These seminars include formal presentations by the students.

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

For faculty list, research interests and department contact information, view the graduate program summary. Retrieved from "http://bulletin.unl.edu/graduate/Entomology"

Entrepreneurship

Courses for ENTR (ENTR)

### Small Business Owner (ENTR 422A/822A)

- **Prereqs:**
  - Junior standing.

- **Credit toward the degree cannot be earned in both ENTR/MNGT422/822 and ENTR/MNGT422A/822A.**

- **The obligations and operating practices required by ownership of one's own business, whether new or acquired. Interactions with owners of small businesses (e.g., on-site visits and discussions). Cases and projects relevant to small businesses.**

### Initiating and Managing Entrepreneurial Growth (ENTR 821)

- **Prereqs:**
  - [MNGT 321](http://bulletin.unl.edu/courses/MNGT/321) and [360](http://bulletin.unl.edu/courses/MNGT/360); or permission.

- **Focuses on the management of new firms, including small businesses designed to be lifestyle ventures and firms destined to grow. Exposure to variety of growth opportunities including franchising, organic growth and**
Managing Rapid Growth and Change in Organizations  
Crosslisted as MNGT 822

**Prereqs:**
MNGT 321 or 360; or permission.

Addresses financial, human resource, operations and marketing issues that face entrepreneurs whose businesses are confronted with significant growth. In addition, will learn change management concepts that are targeted towards managing an organization in extremely turbulent times. Prepares students to work in fast-growth firms, whether they are interested in starting their own business or joining an already established fast-growth firm. Helpful for students interested in fast-growth industries such as life science and high technology.

Business Plan Development and Decision Making  
Crosslisted as MNGT 823

**Prereqs:**
MNGT 321 or 360; or permission.

ENTR 823 may be taken by non-management majors with departmental permission.

Takes an in-depth look at the business planning process. By the end of the class, students produce their own business plans. Learn through their own business plan writing, through in-depth cases studies, by engaging in role plays and by interacting with business executives. Business plans are a critical part of any organization, thus, preparing students to develop business plans for a variety of new concepts and ideas, whether inside an established firm or as part of the start-up new venture. Students will be asked to enter their business plans into the business planning competitions in which the University participates.

Business Management for Agricultural Enterprises  
Crosslisted as ENTR 488/888, EAEP 488/888, AGRO 488/888

HORT 488 requires the completion of a shadowing assignment and the analyses of case studies.

Research a specific agricultural enterprise. Develop and present a business plan using materials from the primary area of interest.

Environmental Studies
Description

Advisory Committee: Professor Gosselin (chair); Professors Amedeo, Borner, Carr, Dahab, Hage, Hayden, Louda, Riordan, Supalla, Williams; Associate Professors Blum, Harvey, Humes, Ledder, Skopp, Wandsnider, Yuen, Zellmer

Program Overview.
The Environmental Studies specialization provides an exciting opportunity to integrate multiple kinds of information, tools, and methods from a variety of disciplines to analyze and construct arguments about complex environmental challenges. Because of the interdisciplinary nature of environmental challenges, this specialization is designed to give students the opportunity to integrate the knowledge and understanding of the earth and ecological sciences (SD), the built and engineered environment (BE), or the human dimension (HD) disciplines into their graduate work.

Departments Participating (Masters): Agricultural Economics (HD); Agricultural Leadership, Education and Communication (HD); Agronomy and Horticulture (SD); Anthropology (HD), Architecture (BE); Chemistry (SD); Civil Engineering (BE); Community and Regional Planning (BE); Earth and Atmospheric Sciences (SD); Entomology (SD); Geography (SD, HD); Law (MLS Program) (HD); Mathematics (SD); Physics and Astronomy (SD); Plant Pathology (SD); Political Science (HD); School of Biological Sciences (SD); School of Natural Resources (SD, HD); and Sociology (SD, HD)

Departments Participating (Doctoral): Agricultural Economics (HD); Agronomy and Horticulture (SD); Chemistry (SD); Civil Engineering (BE); Entomology (SD); Earth and Atmospheric Sciences (SD); Geography (SD, HD); Mathematics (SD); Physics and Astronomy (SD); Plant Pathology (SD); Political Science (HD); School of Biological Sciences (SD); School of Natural Resources (SD, HD); and Sociology (SD)

(BE) = building and engineering discipline
(HD) = human dimension discipline
(SD) = scientific discipline

Policies and Procedure. The Director of Environmental Studies in collaboration with the Environmental Studies Coordinating Committee coordinates the specialization. One member of the student’s examining or supervisory committee must be from a discipline in the option area, defined below. This member will be approved by the Director of Environmental Studies who will consult with the Environmental Studies Coordinating Committee, where appropriate. Approval of the thesis or dissertation topic must have the concurrence of the student’s major department or program and the Environmental Studies Program.

Masters-level Specialization Requirements.
A masters-level specialization in environmental studies is available to any student who pursues a masters degree within any of the participating departments and programs. Successful completion of the requirements will be indicated on the student’s final transcript following the name of the student’s academic discipline, for example, Sociology, with a specialization in Environmental Studies.

Each student will be required to complete:

1. A masters degree in one of the participating departments or programs

2. Nine (9)–credit hours of environmentally-related courses from departments or programs outside the student’s major department. The purpose of this emphasis area is to provide the student the ability to improve their abilities to work across disciplinary boundaries and to integrate the knowledge and understanding of the earth and ecological systems, the built and engineered environment, or human dimension disciplines (socioeconomic, legal, and/or political) into their graduate work.

To facilitate this, the nine-credit hours must be taken using the following approach:

If your major is in a human dimension discipline, you can choose an option area that expands your understanding of earth systems; ecological systems; or the built and engineered environment; or

If your major is a scientific discipline, you can choose an option area that expands your understanding of the built and engineered environment or the human dimension aspects of environmental issues – socioeconomic, legal, and/or political

If your major involves the built and engineered environment, you can choose an option area that expands your understanding of earth systems or ecological systems; or the human dimension aspects of environmental issues – socioeconomic, legal, and/or political

3. When Option I (thesis) is available in the student’s program, a thesis that deals with an environmentally-relevant issue and integrates disciplinary-knowledge with the knowledge gained from their selected option area. 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. A doctoral-level specialization in environmental studies is available to any student who pursues 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. Fifteen (15)–credit hours of environmentally-related courses from departments or programs outside the student’s major department. The purpose of this emphasis area is to provide the student the ability to improve their abilities to work across disciplinary boundaries and to integrate the knowledge and understanding of the earth and ecological systems, the built and engineered environment, or human dimension disciplines (socioeconomic, legal, and/or political) into their graduate work.

To facilitate this, the fifteen-credit hours must be taken using the following approach:

If your major is in a human dimension discipline, you can choose an option area that expands your understanding of earth systems; ecological systems; or the built and engineered environment; or
If your major is a scientific discipline, you can choose an option area that expands your understanding of the built and engineered environment or the human dimension aspects of environmental issues – socioeconomic, legal, and/or political.

If your major involves the built and engineered environment, you can choose an option area that expands your understanding of earth systems or ecological systems; or the human dimension aspects of environmental issues – socioeconomic, legal, and/or political.

3. A dissertation that deals with an environmentally-relevant issue that integrates disciplinary-knowledge with the knowledge gained from their selected option area. Environmentally-related courses completed by a student for an Environmental Studies Specialization at the masters level may be counted toward meeting the requirements for an Environmental Studies Specialization at the PhD level.

The PhD degree will be granted in one of the basic disciplines and students must be formally registered in one of the participating departments.

Course Lists

Earth Systems Option

Offered in the Department of Earth and Atmospheric Sciences (GEOL)

816. Isotope Geochemistry
817. Organic Geochemistry
824. Biogeochemical Cycles
825. Geostatistics
834. Marine Ecology and Paleoecology
850. Surficial Processes & Landscape Evolution
872. Water in Geosciences
888. Groundwater Geology
898. Hydrogeology
898. Special Problems in Geology
953. Glacial Geology
986. Containment Hydrogeology
988. Introduction to Groundwater Modeling

Offered in the Department of Earth and Atmospheric Sciences (METR)

987. Seminar in Climatic Change

Offered in the School of Natural Resources (NRES)

808. Microclimate: The Biological Environment
819. Chemistry of Natural Waters
851. Soil Environmental Chemistry
853. Climate and Society
853. Hydrology
855. Soil Chemistry and Mineralogy
857. Soil Chemical Measurements
859. Limnology
865. Soil Geomorphology and Paleopedology
868. Wetlands
869. Bioatmospheric Instrumentation
870. Lake and Reservoir Restoration
873. Ecological Anthropology
877. Great Plains Field Pedology
878. Regional Climatology
879. Hydroclimatology
917. Environmental Isotope Hydrology
977. Soil Genesis and Classification

Offered in the Department of Agronomy and Horticulture (AGRO)

860. Soil Microbiology
861. Soil Physics
875. Water Quality Strategy
877. Great Plains Field Pedology
884. Water Resources Seminar
955. Solute Movement in Soils

Offered in the Department of Geography (GEOG)

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. Applications for Remote Sensing in Agriculture and Natural Resources
820. Remote Sensing III-Digital Image Analysis
821. Field Techniques in Remote Sensing
822. Advanced Techniques in Geographic Information Systems
898. Advanced Special Problems
915. Seminar in Cartography
922. Seminar in Geographic Information Systems
Ecological Systems Option

**Offered in the School of Natural Resources (NRES)**

803. Ecological Statistics
806. Plant Ecophysiology: Theory and Practice
807. Plant-Water Relations
808. Microclimate: The Biological Environment
810. Landscape Ecology
823. Integrated Resources Management
824. Forest Ecology
826. Invasive Plants
833. Wildlife Management Techniques
835. Agroecology
846. Pollen Analysis for Behavioral, Biological, and Forensic Science
848. Advanced Topics in Wildlife Damage Management
850. Biology of Wildlife Populations
859. Limnology
862. Conservation Biology
863. Fisheries Science
864. Fisheries Biology
866. Advanced Limnology
868. Wetlands
965. Management of Aquatic Systems

**Offered in the Department of Agronomy and Horticulture (AGRO)**

835. Agroecology
840. Great Plains Ecosystems
842. Wildland Plants
844. Vegetation Analysis

**Offered in the Department of Agronomy and Horticulture (HORT)**

818. Agroforestry Systems in Sustainable Agriculture
824. Plant Nutrition and Nutrient Management
825. Turf Grass Science and Culture
849. Woody Plant Growth and Development
907. Agricultural Climatology

**Offered in the School of Biological Sciences (BIOS)**

806. Insect Ecology
836. Quaternary Paleoclimatology and Paleoecology
838. Biogeochemical Cycles
847. Soil Microbiology
850. Biology of Wildlife Population
854. Ecological Interactions
855. Great Plains Flora
857. Ecosystem Ecology
859. Limnology
862. Animal Behavior
863. Experimental Methods in Animal Behavior
864A. Principles of Plant Pathology I
864B. Principles of Plant Pathology II
867. Plant Pathogenic Bacteria
869. Phytopathogenic Fungi
870. Prairie Ecology
871. Plant Taxonomy
873. Freshwater Algae
874. Ichthyology
875. Herpetology
876. Mammalogy
882. Field Entomology
887. Field Parasitology
889. Natural History of Invertebrates
894. Ornithology
953. Advanced Population Ecology
955. Behavioral Ecology
956. Biochemical Adaptations
957. Zoogeography
958. Genetic Ecology
959. Advanced Community Ecology
960. Biosystematics & Nomenclature

**Offered in the Department of Entomology (ENTO)**

800. Biology & Classification of Insects
802. Aquatic Insects
806. Insect Ecology
809. Insect Control by Host Plant Resistance
817. Pest Management Systems
BUILT AND ENGINEERED ENVIRONMENT OPTION

Offered in the Department of Architecture (ARCH)
830. Advanced Elements of Building Construction
836. Daylighting and Energy
856. Behavior & Social Factors in Environmental Design
860. Environmental Survey & Analysis
861. Studies in Environmental Design
866. Community Design Center
864. Urban Design I

Offered in the Department of Community and Regional Planning (CRPL)
800. Introduction to Planning
860. Planning & Design in the Built Environment
870. Environmental Planning & Policy
872. Environmental Survey & Analysis
877. Recreation & Park Planning

Offered in the Department of Agronomy and Horticulture (HORT)
898. Topics in Landscape Architecture

Offered in the Department of Civil Engineering (CIVE)
821. Hazardous Waste Management and Treatment
822. Pollution Prevention Principles and Practices
823. Physical/Chemical Treatment Processes
824. Solid Waste Management Engineering
826. Design of Water Treatment Facilities
827. Design of Wastewater Treatment & Disposal Facilities
828. Quantitative Methods in Environmental Engineering
829. Biological Waste Treatment
830. Fundamentals of Water Quality Modeling
852. Water Resources Development
853. Hydrology
854. Hydraulic Engineering
855. Nonpoint Source Pollution Control Engineering (BSEN 855)
856. Surface Water Hydrology
858. Groundwater Engineering
875. Water Quality Strategy (AGRO/CRPL/GEOL/MSYM/POLS 875)
915. Water Resources Engineering
921. Advanced Topics in Hazardous Waste Treatment & Remediation
926. Advanced Topics in Water Treatment
927. Advanced Topics in Wastewater Treatment
929. Industrial Waste Lab
930. Advanced & Industrial Wastewater Treatment
952. Water Resources Planning
954. Advanced Hydraulics
958. Groundwater Mechanics
959. Groundwater Modeling

SOCIOECONOMIC OPTION

Offered in the Department of Agricultural Economics (AECN)
865. Resource & Environmental Economics II

Offered in the Department of Economics (ECON)
872. Efficiency in Government

Offered in the Department of Geography (GEOG)
806. Spatial & Environmental Influences in Social Systems
850. Climate & Society
983. Seminar on Behavioral Processes in Person/Environment Relations

Offered in the Department of Sociology (SOCI)
807. Strategies of Social Research: Qualitative Methods
815. Social Change
841. Social Psychology
844. Social Demography
845. Sociology of Urban Areas
846. Environmental Sociology
853. Sociology of Health and Health Professions
862. Advanced Social Research Methods
863. Quantitative Methods of Social Research
868. Policy and Program Evaluation Research
875. Water Quality Strategy
880. Social Inequality: Stratification and Life Changes
881. Minority Groups
897. Fieldwork in Sociology
898 and 998. Special Topics (approved topics are Environmental Sociology, Social Demography, Social Movements, Social Inequality, & the Sociology of Health)
902. Seminar in Research Methods
905. Seminar in Stratification, Class, and Inequality

Offered in the Department of Anthropology (ANTH)
835. Introduction to Heritage Management Archaeology
851. Contemporary Issues of Indigenous Peoples in North America
873. Ecological Anthropology
874. Applied & Developmental Anthropology
877. Hunters-Gatherers 883. Advanced Field Methods
994. Seminar in Anthropology & Geography Courses

Legal Option
Offered in the Department of Agricultural Economics (AECN)
841. Environmental Law
857. Water Law

Offered in the Department of Community and Regional Planning (CRPL)
804. Legal Aspects of Planning

Offered in the Department of Legal Studies (LAW)
609G. Constitutional Law I
633G. Administrative Law
666G. International Environmental Law
677G. Toxic Substances and Hazardous Waste Law
693G. Law & Economics
698G. Public Lands & Natural Resources Law
699G. Land Use Planning
774G. Environmental Law and Water Resource Management Seminar
776G. Water Law, Planning & Policy
796G. Native American Law

Offered in the Department of Political Science (POLS)
869. International Law

Public Policy Option
Offered in the Department of Political Science (POLS)
826. Topics in American Public Policy
836. Introduction to Public Policy Analysis
866. Pro-seminar in International Relations I
984. Seminar in Methods

Offered in the Department of Economics (ECON)
872. Efficiency in Government

Offered in the School of Natural Resources (NRES)
828. Leadership in Public Organizations

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Food Science and Technology

Courses for FDST (FDST)

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<tr>
<th>ASCI 419/819</th>
<th>Meat Investigations</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/ASCI/419">http://bulletin.unl.edu/courses/ASCI/419</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prereqs: ASCI 210 (<a href="http://bulletin.unl.edu/courses/ASCI/210">http://bulletin.unl.edu/courses/ASCI/210</a>) or permission.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Hours: 1-3</td>
<td></td>
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<tr>
<td>Max credits per degree: 3</td>
<td></td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td>Conduct independent research and study meat industry problems in processing, production, storage, and preparation of meat and meat products.</td>
<td></td>
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<table>
<thead>
<tr>
<th>FDST 401/801</th>
<th>Teaching Applications of Food Science</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/FDST/401">http://bulletin.unl.edu/courses/FDST/401</a>)</th>
</tr>
</thead>
</table>
Overview of the science of food and how food can be used in the classroom to enhance science education.

### Food Quality Assurance

**FDST 403/803**

**Prereqs:**
- BIOS 101 [Link](http://bulletin.unl.edu/courses/BIOS/101) and CHEM 109 [Link](http://bulletin.unl.edu/courses/CHEM/109).
- FDST 401 [Link](http://bulletin.unl.edu/courses/BIOS/101)/801 [Link](http://bulletin.unl.edu/courses/BIOS/801) will not count toward a FDST major or minor.

**Overview:**
- Quality related issues as they pertain to manufacturing, processing, and/or testing of foods, with a major emphasis on food regulations, statistical process control and Hazard Analysis of Critical Control Points (HACCP).

### Food Microbiology

**FDST 405/405X/805**

**Prereqs:**
- BIOS 312 [Link](http://bulletin.unl.edu/courses/BIOS/312);
- CHEM 251 [Link](http://bulletin.unl.edu/courses/CHEM/251);
- BIOC 321 [Link](http://bulletin.unl.edu/courses/BIOC/321).

This course is a prerequisite for:
- FDST 406 [Link](http://bulletin.unl.edu/courses/BIOS/446/846)
- FDST 415 [Link](http://bulletin.unl.edu/courses/BIOS/446/846)

**Nature:**
- Nature, physiology, and interactions of microorganisms in foods.
- Introduction to food-borne diseases, the effect of food processing systems on the microflora of foods, principles of food preservation, food spoilage, and foods produced by microorganisms.
- Food plant sanitation and criteria for establishing microbial standards for food products.

### Food Microbiology Laboratory

**FDST 406/806**

**Prereqs:**
- Parallel in FDST 405 [Link](http://bulletin.unl.edu/courses/BIOS/446/846)

This course is a prerequisite for: FDST 415 [Link](http://bulletin.unl.edu/courses/BIOS/446/846)

**The microorganisms in foods and the methods used to study them as discussed in FDST 405 [Link](http://bulletin.unl.edu/courses/BIOS/446/846).**

### Cereal Technology

**FDST 412/812**

**Prereqs:**
- BIOS 101 [Link](http://bulletin.unl.edu/courses/BIOS/101) and CHEM 109 [Link](http://bulletin.unl.edu/courses/CHEM/109).
- FDST 401 [Link](http://bulletin.unl.edu/courses/BIOS/101)/801 [Link](http://bulletin.unl.edu/courses/BIOS/801) will not count toward a FDST major or minor.
Molds and Mycotoxins in Food, Feed, and the Human Environment

**FDST 415/815**

**Credit Hours:** 3  
**Course Format:** Lab 3, Lecture 2  
**Course Delivery:** Classroom

**Prereqs:**  
FDST 205 ([link](http://bulletin.unl.edu/courses/FDST/205))

*Offered fall semester of odd-numbered calendar years.*

Chemistry and technology of the cereal grains. Post–harvest processing and utilization for food and feed. Current industrial processes and practices, and the theoretical basis for these operations.

**Prereqs:**  
FDST 405 ([link](http://bulletin.unl.edu/courses/FDST/405)) / 805 ([link](http://bulletin.unl.edu/courses/FDST/805)) / BIOS 445 ([link](http://bulletin.unl.edu/courses/BIOS/445)) / 845 ([link](http://bulletin.unl.edu/courses/BIOS/845)) and FDST 406 ([link](http://bulletin.unl.edu/courses/FDST/406)) / 806 ([link](http://bulletin.unl.edu/courses/FDST/806)) / BIOS 446 ([link](http://bulletin.unl.edu/courses/BIOS/446)) / 846 ([link](http://bulletin.unl.edu/courses/BIOS/846)).  

*Offered fall semester of odd-numbered calendar years.*

Occurrence, growth, and mycotoxin production of molds in human foods, animal feeds, and the human environment. Spoilage, mycotoxin production conditions, toxicity, and pathological effects. Culture media, methods and techniques for enumerating and identifying molds, analytical methods for mycotoxins, and effects of food and feed processing on mycotoxin stability.

Fruit and Vegetable Technology

**FDST 420/820**

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3  
**Course Delivery:** Classroom

**Prereqs:**  
FDST 205 ([link](http://bulletin.unl.edu/courses/FDST/205))

*Offered fall semester of even-numbered calendar years.*

Harvesting and postharvest handling of fruit and vegetables, processing and safety issues, processes of ripening and/or maturation in fresh fruits and vegetables.

Food Toxicology

**FDST 425/825**

**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Course Delivery:** Classroom

**Prereqs:**  
FDST 405 ([link](http://bulletin.unl.edu/courses/FDST/405)) / 805 ([link](http://bulletin.unl.edu/courses/FDST/805)) / BIOS 321 ([link](http://bulletin.unl.edu/courses/BIOS/321)) or equivalent, or permission.

*Offered spring semester of odd-numbered calendar years.*

Toxic substances that may be found in foods with emphasis on bacterial toxins, mycotoxins, and naturally occurring toxicants of plants, animals, and seafood. Basic toxicological methodology and the effects of food processing and handling on food–borne toxicants.

Sensory Evaluation

**FDST 430/830**

**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3

**Prereqs:**  
Introductory course in statistics.

*Offered fall semester of odd-numbered calendar years.*

Crosslisted as STAT 430/830
Food evaluation using sensory techniques and statistical analysis.

**Food Chemistry**

**FDST 448/848**

**Prereqs:**
- [FDST 205](http://bulletin.unl.edu/courses/FDST/205) (http://bulletin.unl.edu/courses/FDST/205)
- [CHEM 251](http://bulletin.unl.edu/courses/CHEM/251) (http://bulletin.unl.edu/courses/CHEM/251)
- [BIOC 321](http://bulletin.unl.edu/courses/BIOC/321) (http://bulletin.unl.edu/courses/BIOC/321)

This course is a prerequisite for [NUTR 441](http://bulletin.unl.edu/courses/NUTR/441) (http://bulletin.unl.edu/courses/NUTR/441).

**Molecular components of various foods and the reactions of these components during the processing of foods.**

**Food Chemistry**

**FDST 449/849**

**Prereqs:**
- [FDST 205](http://bulletin.unl.edu/courses/FDST/205)
- [FDST 448](http://bulletin.unl.edu/courses/FDST/448)/[848](http://bulletin.unl.edu/courses/FDST/848) or parallel [BIOC 321](http://bulletin.unl.edu/courses/BIOC/321)

Experiments involving the isolation, purification, and characterization of the molecular components of foods.

**Microbiology of Fermented Foods**

**FDST 455/855**

**Prereqs:**
- [FDST 405](http://bulletin.unl.edu/courses/FDST/405)/[805](http://bulletin.unl.edu/courses/FDST/805)

This course is a prerequisite for [FDST 455L](http://bulletin.unl.edu/courses/FDST/455L) (http://bulletin.unl.edu/courses/FDST/455L)

*On-campus students must also register for [FDST 455L](http://bulletin.unl.edu/courses/FDST/455L) (http://bulletin.unl.edu/courses/FDST/455L) and parallel [FDST 455](http://bulletin.unl.edu/courses/FDST/455) (http://bulletin.unl.edu/courses/FDST/455)/[855](http://bulletin.unl.edu/courses/FDST/855).*

*Offered spring semester of even–numbered years.*

Physiology, biochemistry, and genetics of microorganisms important in food fermentation. How microorganisms are used in fermentation and the effects of processing and manufacturing conditions on production of fermented foods.

**Microbiology of Fermented Foods Laboratory**

**FDST 455L/855L**

**Prereqs:**
- [FDST 405](http://bulletin.unl.edu/courses/FDST/405)/[805](http://bulletin.unl.edu/courses/FDST/805) and parallel [FDST 455](http://bulletin.unl.edu/courses/FDST/455)/[855](http://bulletin.unl.edu/courses/FDST/855)

**Advanced Food Analysis**

**FDST 458/858**

**Prereqs:**
- [FDST](http://bulletin.unl.edu/courses/FDST/458)
Theory and application of molecular and atomic spectroscopy, immunochemistry and thermal methods to the analysis of foods. Chemical separation techniques for the isolation of food constituents.

**FDST 460/860 Food Product Development Concepts**

**Prereqs:**
- FDST 405 (http://bulletin.unl.edu/courses/FDST/405)/805
- 448 (http://bulletin.unl.edu/courses/FDST/448)/848
- 449 (http://bulletin.unl.edu/courses/FDST/449)/849

*Capstone course.*

Develop a commercially viable food product using chemical, microbiological and sensory analysis principles, and marketing and packaging sciences.

**FDST 465/865 Food Engineering Unit Operations**

**Prereqs:**
- FDST/MSYM 363 (http://bulletin.unl.edu/courses/MSYM/363).

Crosslisted as MSYM 465/865

Unit operations and their applications to food processing.

**FDST 470/870 Nutraceuticals and Functional Foods**

**Prereqs:**
- BIOC 321 (http://bulletin.unl.edu/courses/BIOC/321) or
- BIOC/BIOS/CHM 431 (http://bulletin.unl.edu/courses/CHM/431)/831 (http://bulletin.unl.edu/courses/CHM/831).

FDST 470 (http://bulletin.unl.edu/courses/FDST/470)/870 (http://bulletin.unl.edu/courses/FDST/870) is offered in even calendar years.


**FDST 829 Dairy Products Technology**

**Prereqs:**
- FDST 205 (http://bulletin.unl.edu/courses/FDST/205)

Offered spring semester of odd-numbered calendar years. Physical, chemical and microbiological properties of milk. Principles of milk processing and manufacture of cultured dairy products, cheeses, ice cream and concentrated dairy products.

**FDST 871 A Multidisciplinary Overview of Food Safety and Security**
Instruction in FDST 871 is provided by numerous subject matter experts. Multidisciplinary food safety and security perspectives. Food safety policy, ag bioterrorism, border security, animal ID, food defense, and site security, risk analysis, crisis communication, epidemiology, Hazard Analysis and Critical Control Point System, and more.

**FDST 872**  
**Principles of Hazard Analysis and Critical Control Point System**  
**Prereqs:**  
3 hrs BIOS or CHEM  

The Hazard Analysis and Critical Control Point (HACCP) System and its application in the food industry.

**FDST 873**  
**Food-borne Toxicants**  
**Prereqs:**  
3 hrs BIOS or CHEM  


**FDST 874**  
**Food Laws, Regulations, and the Regulatory Process**  
**Prereqs:**  
3 hrs FDST at 200 level or above  

FDST 874 has presentations by state and federal food regulators. History of the development of the current federal state food regulations. Guidelines that govern the practice of regulating the wholesomeness of red meats, poultry, and eggs.

**FDST 875**  
**Rapid Methods in Food Microbiology**  
**Prereqs:**  
FDST 405/805, BIOS 445/845  

The different types of rapid microbial detection approaches available for use in foods. Commercial reagents and detection platforms, and the "next generation" approaches currently under development in academia or industry. Challenges to detection posed by the complexity of most food matrices and the sample preparation methods for separating microorganisms from such matrices.

**FDST 876**  
**Risk Assessment for Food, Agriculture, and Veterinary Medicine**  
**Prereqs:**  
FDST 405/805, BIOS 445/845  

Risk analysis, crisis communication, epidemiology, Hazard Analysis and Critical Control Point System, and more.
**Advanced Food Microbiology and Biotechnology**

3 hrs STAT


**Advanced Food Science: Selected Topics**

- Basic principles in biotechnology and applied food microbiology. Current topics of interest in food biotechnology. Introduction to recombinant DNA techniques and how they are applied to genetically modify microorganisms. The use of nucleic acids as tools of rapid detection of microorganisms in foods, basic enzyme immobilization and down-stream processing techniques, and regulatory aspects of food biotechnology.

**Independent Study in Food Science and Technology**

- Offered on a rotating basis in alternate years.
  - A. Food Carbohydrates (2 cr I) Prereq: FDST 484
  - B. Food Flavors (2 cr I) Prereq: FDST 848 or equivalent. Offered fall semester of even-numbered calendar years. Food flavors and their sources and the instrumental, chemical, and sensory methods used to identify and evaluate them.
  - L. Food Lipids (2 cr I) Prereq: FDST 848 or equivalent. Offered fall semester of odd-numbered calendar years. In-depth discussion of: composition, quality, and chemical and physical properties and reactions of fats and oils in food systems; processing and refining of food fats and oils; manufacture of various fat and oil products; current research related to fats and oils.
  - P. Food Proteins (2 cr II) Prereq: FDST 848 or permission. Offered spring semester of even-numbered calendar years.

**Masters Thesis**

- Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member.
Prereqs:
Admission to masters degree program and permission of major adviser

Topics in Advanced Food Microbiology

Offered on a rotating basis in alternate years. Current topics in food microbiology.

A. Food Biotechnology (2 cr I) Prereq: FDST 805
(http://bulletin.unl.edu/courses/FDST/805) BIOS 845
(http://bulletin.unl.edu/courses/BIOS/845), BIOC 832
(http://bulletin.unl.edu/courses/BIOC/832), or permission. Offered fall semester of even-numbered calendar years.

Microbial genetics and recombinant DNA technology as applied to food science. Includes modification and improvement of microorganisms important in food fermentations; effects of bacteriophages in food fermentations; enzyme engineering; principles of plant and animal tissue culture; bioprocess engineering and down stream processing; DNA probe and monoclonal antibody technology; and regulatory and ethical aspects of biotechnology.

B. Food Borne Pathogens (2 cr II) Prereq: FDST 805
(http://bulletin.unl.edu/courses/FDST/805) BIOS 845
(http://bulletin.unl.edu/courses/BIOS/845). BIOS 820
(http://bulletin.unl.edu/courses/BIOS/820), or permission. BIOC 831
(http://bulletin.unl.edu/courses/BIOC/831) and 832
(http://bulletin.unl.edu/courses/BIOC/832) recommended. Offered spring semester of odd-numbered calendar years.

Survey of current research topics in the molecular biology of agents of food borne disease. Includes structure–function analyses of toxin molecules and other virulence determinants; genetic mechanisms of phenotypic variation, coordinate regulation of virulence gene expression; mobile genetic elements that contribute to pathogenesis; invasion of host tissues; and stress–response systems and survival.

E. Readings in Food Microbiology (2 cr II) Prereq: FDST 805
(http://bulletin.unl.edu/courses/FDST/805) BIOS 845
(http://bulletin.unl.edu/courses/BIOS/845) or permission. Offered spring semester of even-numbered calendar years.

Primarily a literature course that focuses on current topics in food microbiology. Articles from food microbiology, as well as other applied and basic microbiology journals reviewed and discussed. Recent advances in methodology and microbiological techniques emphasized.

J. Gastrointestinal Microbiology (2 cr I) Lec 2. Prereq: BIOS 312
(http://bulletin.unl.edu/courses/BIOS/312). Offered fall semester of even-numbered calendar years.

Introduction to the complex microbial populations that inhabit the gastrointestinal tracts of human and non-ruminant animals, and how they impact their hosts. Aspects of gut microbiota having medical or agricultural applications.

K. Food Mycology (2 cr I) Lec 1, lab 1. Prereq: FDST 405
(http://bulletin.unl.edu/courses/FDST/405) BIOS 445
(http://bulletin.unl.edu/courses/BIOS/445) or permission. Offered fall semester of odd-numbered calendar years.

Food borne filamentous micro–fungi or molds. Culture media and methods. Techniques for enumerating and identifying molds belonging to the genera Aspergillus, Penicillium, Fusarium, Alternaria, Cladosporium, Rhizopus, Mucor and others. Food spoilage by molds, mycotoxin production and pathological effects.
### Advanced Food Science Seminar

**Course Code:** FDST 951  
**Credit Hours:** 1  
**Max credits per degree:** 2  
**Course Delivery:** Classroom  

**Prereqs:**  
Permission  

**Description:** Advanced study and discussion of the scientific literature and research pertaining to food science.

### Research in Food Science and Technology

**Course Code:** FDST 996  
**Credit Hours:** 1-8  
**Max credits per degree:** 8  
**Course Delivery:** Classroom  

**Prereqs:**  
6 hrs microbiology, 12 hrs chemistry, or permission  

**Description:** Studies and investigational work relating to chemistry, microbiology, and processing of food products.

### Doctoral Dissertation

**Course Code:** FDST 999  
**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Course Delivery:** Classroom  

**Prereqs:**  
Admission to doctoral degree program and permission of supervisory committee chair  

### Functional Properties of Food

**Course Code:** NUTR 441/841  
**Credit Hours:** 3  
**Course Format:** Lecture 2, Lab 3  
**Course Delivery:** Classroom  

**Prereqs:**  
NUTR 224, 245, BIOC 321, or FDST 448  

**Description:** Relationship of structure and functionality of ingredients in food systems.

### Experimental Foods

**Course Code:** NUTR 445/845  
**Credit Hours:** 3  
**Course Format:** Lecture 1, Lab 6  
**Course Delivery:** Classroom  

**Prereqs:**  
NUTR 444 and 245; BIOC 321  

**Description:** Introduction to food research. Application of research techniques to selected problems.

### Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/FoodScienceAndTechnology).  

**Department Head:** Rolando A. Flores, Ph.D.  
**Graduate Committee Chair:** Robert W. Hutkins, Ph.D.
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.

The Department of Food Science and Technology is located in the modern, well equipped Food Industry Complex on East Campus. The faculty are world-recognized for their research on food microbiology, food chemistry, food engineering, microbial genomics, and gut ecology. The research environment is challenging, interactive, and exciting. Graduate students have access to a wide variety of state-of-the-art instruments for conducting cutting edge research on molecular biology and genomics of foodborne and intestinal bacteria, detection and analysis of allergens and toxins, nutraceuticals and their properties, metabolomics and proteomics, predictive microbiology and fuzzy logic modeling, and structure/function of novel food ingredients.

Applicants to the graduate program in Food Science and Technology must have a degree in food science, microbiology, biochemistry, engineering, nutrition, biology, chemistry, or other related field. Undergraduate work should include organic chemistry, calculus, and physics. Deficiencies in these requirements can be made up during the first year of graduate study. In addition to the general requirements of the Graduate College, the verbal and quantitative parts of the Graduate Record Examination are also required. The minimum GRE score is 302 (verbal 143; quantitative 159; analytical writing 3.5). An overall GPA of 3.2 is required. For students whose native language is not English, a TOEFL score of at least 577 paper (90 iBT; 233 computer-based; 6.5 IELT) is required. Applicants should also provide three letters of recommendation, a 1-2 page Statement of Academic and Professional Goals, and a current resume.

Faculty
For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/FoodScienceAndTechnology).

Retrieved from "[http://bulletin.unl.edu/graduate/Food_Science_and_Technology](http://bulletin.unl.edu/graduate/Food_Science_and_Technology)"

### Geography

#### Courses for GEOG (GEOG)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted As</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
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</thead>
<tbody>
<tr>
<td>AGRO 977</td>
<td>Soil Genesis and Classification</td>
<td>GEOG 967, NRES 977</td>
<td><a href="http://bulletin.unl.edu/courses/AGRO/153">AGRO 153</a>, AGRO 877 <a href="http://bulletin.unl.edu/courses/GEOG/867">GEOG 867</a>, and permission</td>
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<td>6</td>
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<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>ANTH 478/878</td>
<td>Pro-seminar in Latin American Studies</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/478">HIST 478/878</a>, <a href="http://bulletin.unl.edu/courses/POLIS/478">POLIS 478/878</a>, <a href="http://bulletin.unl.edu/courses/SOCI/478">SOCI 478/878</a>, <a href="http://bulletin.unl.edu/courses/MODL/478">MODL 478/878</a>, <a href="http://bulletin.unl.edu/courses/LAMS/478">LAMS 478</a>, GEOG 478/878, EDPS 478/878</td>
<td>Junior standing and permission.</td>
<td>3</td>
<td>6</td>
<td>Classroom</td>
<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>ANTH 994</td>
<td>Seminar in Anthropology and Geography</td>
<td>GEOG 994</td>
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<td>1-3</td>
<td>6</td>
<td>Classroom</td>
<td></td>
</tr>
</tbody>
</table>
### Introduction to Geographic Information Systems (GEOG 412/812)

Crosslisted as NRES 412/812

- **Credit Hours:** 4
- **Course Format:** Lecture 3, Lab 2
- **Course Delivery:** Classroom
- **Groups:** Techniques

Introduction to conceptual foundations and applications of computer-based geographic information systems (GIS). GIS database development, spatial data analysis, spatial modeling, GIS implementation and administration.

[Lab exercises provide experience with GIS](http://bulletin.unl.edu/courses/GEOG/412)

This course is a prerequisite for GEOG 422.

### Quantitative Methods in Geography (GEOG 414/814)

- **Credit Hours:** 3
- **Course Delivery:** Classroom
- **Groups:** Techniques

Introduction to quantitative techniques utilized in geographic research. Fundamental statistical and mathematical techniques used in analyzing spatial relationships examined.

Prereqs: STAT 218 or 380 and 6 hrs of geography.

### Introduction to Computer Mapping (GEOG 415/815)

- **Credit Hours:** 3
- **Course Format:** Lecture 2, Lab 2
- **Course Delivery:** Classroom
- **Groups:** Techniques

Introduction to the tools, techniques, and analytical uses of computer mapping. Programming necessary for producing own computer mapping programs.

Prereqs: GEOG 317 or permission.

### Cartography II: Electronic Atlas Design and Production (GEOG 417/817)

- **Credit Hours:** 3
- **Course Format:** Lab 2, Lecture 2
- **Course Delivery:** Classroom
- **Groups:** Techniques

Computer-map design and production for the purpose of assembling an environmental electronic atlas, using advanced computer hardware and software. Extensive discussions and demonstrations on content, design, and methods used in computer mapping.

Prereqs: GEOG 317 or permission.

### Introduction to Remote Sensing (GEOG 418/818)

Crosslisted as NRES 418/818

- **Credit Hours:** 4
- **Course Format:** Lecture 3, Lab 2
- **Course Delivery:** Classroom
- **Groups:** Techniques

Introduction to remote sensing of the earth from aerial 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. Applications in geographic, agricultural, environmental and natural
### Applications of Remote Sensing in Agriculture and Natural Resources

**Course Code:** GEOG 419/819  
**Crosslisted as:** GEOL 419/819, AGRO 419/819, NRES 420/820

**Prereqs:**  
GEOG/NRES 418 (http://bulletin.unl.edu/courses/NRES/418).

Introduction to the practical uses of remote electromagnetic sensing in dealing with agricultural and water-resources issues.

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### Digital Image Analysis of Remote Sensing Data

**Course Code:** GEOG 420/820

**Prereqs:**  
GEOG 418 (http://bulletin.unl.edu/courses/GEOG/418) and GEOG 419 (http://bulletin.unl.edu/courses/GEOG/419); or equivalent.

Principles and methods of digital image processing of remotely sensed data. The biophysical basis of remote sensing and the various sensor systems typically used for monitoring terrestrial and aquatic environments. Algorithms for the preprocessing, enhancement, classification and mapping of digital data for agricultural, urban, geological, environmental, and natural resource management problems.

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### Advanced Techniques in Geographic Information Systems

**Course Code:** GEOG 422/822

**Prereqs:**  
GEOG 412 (http://bulletin.unl.edu/courses/GEOG/412) and GEOG 418 (http://bulletin.unl.edu/courses/GEOG/418); or equivalent, or permission.

Vector and quadtree data structures, use of relational database management systems, topologically structured databases, query languages, digital terrain modeling, advanced data analysis methods and research issues in GIS. Extensive practical experience with the current GIS software.

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### Scientific Visualization in Cartography

**Course Code:** GEOG 425/825

**Prereqs:**  
GEOG 317 (http://bulletin.unl.edu/courses/GEOG/317) and either 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.

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### Introduction to the Global Positioning System (GPS)

**Course Code:** GEOG 427/827  
**Crosslisted as:** NRES 427/827

**Prereqs:**  
Junior standing and a basic familiarity with mapping and GIS, or permission.

Integrated lectures, lab exercises and field experience provide an
### Cultural Geography

**431/831**

The history of cultural geography from von Humboldt through Carl Sauer to the 'new' cultural geographies of Don Mitchell, Gillian Rose and Noel Castree. The current theoretical debates of feminism, post-structuralism, post-colonialism and environmentalism, and the influences of literary and cultural studies in the development of cultural geography and the various methodologies involved.

### GIS Programming for Advanced Spatial Analysis and Modeling

**432/832**

**Prereqs:**
- GEOG/NRES 412 [LINK](http://bulletin.unl.edu/courses/NRES/412)
- 812 [LINK](http://bulletin.unl.edu/courses/NRES/812)
- or 18 [LINK](http://bulletin.unl.edu/courses/NRES/18) hours of GIS practice.

Techniques for Geoprocessing script programming to customize geographic information systems (GIS), utilize GIS tools, and implement application-specific spatial analysis, modeling algorithms and procedures.

### Cultural Survival: Indigenous People's Rights

**435/835**

Threats against indigenous peoples' lands, resources and cultural patrimony, languages and knowledge systems more than 500 years after Columbus instigated European colonialism, creating the first global world order. The responses of Indigenous peoples to the imposition of Western dominated economic and political systems. Land rights, economic development, and women's rights from the perspective of different Indigenous communities around the world.

### Geo-demographics and GIS

**444/844**

Geo-demographic and GIS analysis, interpretation, and mapping of geographical patterns of population size, population composition and population change. Theoretical and applied investigation of geo-demographic issues involving marketing research, environmental impact analysis, public facilities planning, public health provision, and small-area population change forecasting. Particular attention to GIS use of TIGER and small-area Census data.

### Political Geography

**447/847**

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;
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<tr>
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<th>Prereqs</th>
<th>Credit Hours</th>
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<th>Groups</th>
<th>Campus</th>
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<tbody>
<tr>
<td>GEOG 483/883</td>
<td>Cognitive Processes in Map Comprehension and Use</td>
<td>GEOG 317 <a href="http://bulletin.unl.edu/courses/GEOG/317">link</a> and 417 <a href="http://bulletin.unl.edu/courses/GEOG/417/817">link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>Techniques</td>
<td></td>
<td><a href="http://bulletin.unl.edu/courses/GEOG/483">link</a></td>
</tr>
<tr>
<td>GEOG 491/891</td>
<td>Geography Field Tour</td>
<td>Crosslisted as NRES 491</td>
<td>2–3</td>
<td>Field 40</td>
<td>Classroom</td>
<td>Physical</td>
<td></td>
<td><a href="http://bulletin.unl.edu/courses/GEOG/491">link</a></td>
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<tr>
<td>GEOG 497/897</td>
<td>Internship in Geography</td>
<td>Permission.</td>
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<td>Classroom</td>
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<td>Independent</td>
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<td><a href="http://bulletin.unl.edu/courses/GEOG/497">link</a></td>
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<tr>
<td>GEOG 498/898</td>
<td>Advanced Special Problems</td>
<td>Topic varies, see course description or registration guide.</td>
<td>1–24</td>
<td>Classroom</td>
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<td>Special Topics</td>
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<td><a href="http://bulletin.unl.edu/courses/GEOG/498">link</a></td>
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<td>GEOG 806</td>
<td>Spatial and Environmental Influences in Social Systems</td>
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<td>3</td>
<td>Classroom</td>
<td></td>
<td>Economic</td>
<td></td>
<td><a href="http://bulletin.unl.edu/courses/GEOG/806">link</a></td>
</tr>
</tbody>
</table>

Cognitive Processes in Map Comprehension and Use:

How cognitive processes help individuals to comprehend the spatial circumstances or arenas they confront when carrying out their daily activities. Awareness of space, spatial knowing, formation of cognitive maps, importance of spatial images in negotiation of surroundings, and the relationship of cognitive maps to orientation and wayfinding.

Geography Field Tour:

Crosslisted as NRES 491

Off-campus travel required.

Group educational tours to specific sites that illustrate aspects of physical and cultural geography.

Internship in Geography:

Applying geographic training with on-the-job learning.

Advanced Special Problems:

Topic varies, see course description or registration guide.

Spatial and Environmental Influences in Social Systems:

How space, spatial structure, and spatially oriented behavior operate in social systems, emphasizing their influence on interpersonal communication and/or social exchange.
### Pro-seminar in Research Methods and Professional Development

**Credit Hours:** 6-10  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Admission to masters degree program and permission of major adviser  
**Notes:** Development of skills required for success in completing a graduate degree and forging a career as a geographer. Setting career goals, designing a graduate program, preparing research proposals, presenting research at professional conferences, reviewing professional literature and writing articles for publication.

### General Seminar

**Credit Hours:** 2  
**Course Format:** Lecture 2  
**Campus:**  
**Course Delivery:** Classroom  
**Notes:** Development of skills required for success in completing a graduate degree and forging a career as a geographer. Setting career goals, designing a graduate program, preparing research proposals, presenting research at professional conferences, reviewing professional literature and writing articles for publication.

### History and Philosophy of Geography

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  
**Notes:** 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.

### Explanation in Geography

**Credit Hours:** 2-3  
**Campus:**  
**Course Delivery:** Classroom  
**Notes:** Course directly complements GEOG 903. Methodology or methods of explanation employed in geographic research and their relationship to the goals of the discipline. Problems, hypotheses, laws, theories, and models of a spatial nature.

### Seminar in Cartography

**Credit Hours:** 3-6  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** GEOG 815, 817, or permission  
**Notes:** Review and examination of cartographic research on map design. Primary emphasis on efficiency and accuracy of maps as devices for spatial understanding and analytical cartography.

### Comparative Studies of the Dispossession of Indigenous Peoples

**Credit Hours:**  
**Campus:**  
**Course Delivery:** Classroom  
**Links:** [GEOG 815](http://bulletin.unl.edu/courses/GEOG/815), [817](http://bulletin.unl.edu/courses/GEOG/817), or permission  
**Notes:** Review and examination of cartographic research on map design. Primary emphasis on efficiency and accuracy of maps as devices for spatial understanding and analytical cartography.
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<tr>
<th>Code</th>
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<th>Max credits per degree</th>
<th>Prerequisites</th>
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</thead>
<tbody>
<tr>
<td>931</td>
<td>Dispossession of the indigenous peoples of Australia, Canada, New Zealand, and the United States from a historical, spatial and interdisciplinary approach. Emphasis on human rights, including topics such as the legal assumptions of colonization, reduction of land holdings, population loss, resistance, and land claims.</td>
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<td></td>
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<tr>
<td>GEOG</td>
<td>Seminar in Historical Geography</td>
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<tr>
<td>GEOG</td>
<td>Seminar in Human Geography</td>
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<tr>
<td>GEOG</td>
<td>Seminar on Behavioral Processes in Person/Environment Relations</td>
<td>3</td>
<td></td>
<td>Senior-level masters degree candidate or PhD-level in human geography or design or planning or any of the social and behavioral disciplines or permission</td>
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<tr>
<td>GEOG</td>
<td>Non-thesis Research</td>
<td>1-4</td>
<td>24</td>
<td>24 hrs geography and permission</td>
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<tr>
<td>GEOG</td>
<td>Doctoral Dissertation</td>
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<tr>
<td>999</td>
<td>Seminar in Great Plains Studies</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair (1-24, max 55)</td>
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</tr>
<tr>
<td>GPSP 400/800</td>
<td>Crosslisted as HIST 400/800, GEOG 400/800</td>
<td>A course in the study of the Great Plains. GPSP/GEOG/HIST 400 is required for a GPSP major or minor. Topic varies.</td>
<td>3</td>
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<tr>
<td>NRES 408/808</td>
<td>Microclimate: The Biological Environment</td>
<td>Junior standing, MATH 106 or equivalent, 5 hrs physics, major in any of the physical or biological sciences or engineering; 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. Control 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.</td>
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<tr>
<td>NRES 421/821</td>
<td>Field Techniques in Remote Sensing</td>
<td>NRES 418 or equivalent. Field techniques as they relate to remote-sensing campaigns. Research methods, systematic approaches to data collection, field spectroscopy, collecting ancillary information linked with spectroscopic data sets as well as aircraft or satellite missions and subsequent analyses of acquired data.</td>
<td>3</td>
<td>Lecture, Lab</td>
</tr>
<tr>
<td>NRES 452/852</td>
<td>Climate and Society</td>
<td>METR 200 or equivalent. Impact of climate and extreme climatic events on society and societal responses to those events. Global in scope and interdisciplinary.</td>
<td>3</td>
<td>Lecture</td>
</tr>
<tr>
<td>NRES 469</td>
<td>Bio-Atmospheric Instrumentation</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Crosslisted as</td>
<td>Credit Hours</td>
<td>Course Format</td>
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<tr>
<td>-------------</td>
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</tr>
<tr>
<td>469/869</td>
<td>Meteorology</td>
<td>GEOG 469/869,</td>
<td>3</td>
<td>Lecture 2,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>METR 469/869,</td>
<td></td>
<td>Lab 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HORT 469/869,</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>AGRO 469/869,</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>MSYM 469/869</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Offered fall semester of odd-numbered calendar years.</strong></td>
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</tbody>
</table>

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 are discussed and evaluated.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>477/877</td>
<td>Great Plains Field Pedology</td>
<td>GEOG 467/867,</td>
<td>4</td>
<td>Lab, Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AGRO 477, SOIL 477</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Prereqs:**
AGRO/SOIL 153

This course is a prerequisite for: GEOL 465

Spatial relationship of soil properties on various parts of landscape typical of the Plains, causal factors, and predictions of such relationships on other landscapes. Grouping these properties into classes, naming the classes, and the taxonomy that results from this grouping. Application of a taxonomy to a real situation through making a field soil survey in a region representative of the Plains border, predicting land use response of various mapped units as it affects the ecosystem, and evaluating the effectiveness of the taxonomic system used in the region surveyed.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>484/884</td>
<td>Water Resources Seminar</td>
<td>GEOG 484/884,</td>
<td>1</td>
<td>Lecture 1</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>GEOL 484/884,</td>
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<td></td>
<td></td>
<td>AGRO 484/884,</td>
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<tr>
<td></td>
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<td>WATS 484</td>
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</tbody>
</table>

**Prereqs:**
Junior or above standing, or permission.

Seminar on current water resources research and issues in Nebraska and the region.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>922</td>
<td>Seminar in Geographic Information Systems (GIS)</td>
<td>GEOG 922</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

**Prereqs:**
GEOG/NRES 812 and 822

Study of current research and trends in geographic information systems (GIS), GIScience, and GeoComputation. Advanced spatial analytical techniques and geospatial modeling emphasizing GIS applications in natural resources assessment, environmental analyses, agriculture, and land management.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>466/866</td>
<td>Pro-seminar in International Relations I</td>
<td>HIST 479/879,</td>
<td>3</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOCI 466/866,</td>
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<tr>
<td></td>
<td></td>
<td>ANTH 479/879,</td>
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<td></td>
<td></td>
<td>GEOG 448/848,</td>
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<td></td>
<td>ECON 466/866,</td>
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<tr>
<td></td>
<td></td>
<td>AECN 467</td>
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</tbody>
</table>

**Prereqs:**
Senior standing and permission.

Open to students with an interest in international relations.
Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Geography).

Coordinator and Geography Graduate Committee Chair: James W. Merchant, Ph.D.

**Graduate Committee:** Professors Amedeo, Archer, Dewey, Lonsdale, Merchant, Narumalani, Rundquist, Stoddard, Wilhite, Wishart; Associate Professors Hanson, Wardlow, Zygielbaum; Assistant Professors Guan, Knutson

Graduate students can pursue either an MA or PhD in Geography. Particularly strong programs exist in: (1) Geographic Information Science, emphasizing geographic information systems (GIS), remote sensing and cartography; (2) Historical and Human Geography, focusing on culture and settlement of the Great Plains, environmental perception and political behavior; (3) Natural Resources and Environmental Geography, emphasizing geospatial dimensions of conservation, water resources, natural hazards, climatology and related areas, and (4) Community and Regional Planning, a cross-disciplinary doctoral program combining strengths of the Faculty of Geography and GIScience and faculty of Community and Regional Planning. Graduate College approved specializations in geography include Community and Regional Planning (doctoral-level only), Environmental Geography, Ethnic Studies, Great Plains Studies, and GIS/Cartography/Remote Sensing. When completed successfully, specializations are explicitly indicated on the student transcript. Students may have concentrations of work in areas other than Graduate College approved specializations.

Geography graduate students have considerable flexibility in designing academic programs tailored to their individual interests and career goals. Teaching and research assistantships are provided on a competitive basis; internships with public agencies are often available as well. Many Geography faculty and students are affiliated with UNL research centers such as the Center for Advanced Land Management Information Technologies, the National Drought Mitigation Center, the High Plains Regional Climate Center and the Center for Great Plains Studies.

Prospective students should have either earned a prior degree in Geography or should be prepared to take a prescribed set of essential geography prerequisite courses if accepted into the graduate program. GRE scores (verbal and quantitative) are required for graduate admission.

Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Geography).

Gerontology

Courses for GERO (GERO)

**Educational Gerontology**

**GERO 410/810**

Introduction to the field of education for and about the aging. Institutions and processes of education will be analyzed to determine their relationships and value to persons who are now old and those who are aging.

**Issues in Aging**

**GERO 435/835**

**Prereqs:**
Junior or senior standing.

For students in gerontology and in other fields who are interested in a humanistic approach to understanding significant issues which affect the lives of older people.

**Psychology of Adult Development and Aging**

**GERO 446/846**

Crosslisted as **PSYC 446**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERO 447</td>
<td>Mental Health and Aging</td>
<td>PSYC 181 or GERO 200</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>447/847</td>
<td>Major social and psychological changes that occur as a function of aging. Both normal and abnormal patterns of developmental change including their implications for behavior.</td>
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</tr>
<tr>
<td>GERO 450</td>
<td>Legal Aspects of Aging</td>
<td>Junior or senior standing.</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>450/850</td>
<td>Mental health needs of older adults. Identifying both positive mental health and pathological conditions. Treatment interventions effective with older adults and their families.</td>
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<tr>
<td>GERO 451</td>
<td>Long-term Care Administration</td>
<td></td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>451/851</td>
<td>Consideration of the legal concerns which are likely to arise as people age. Includes introduction to the American legal system and emphasis on underlying legal concepts and issues of special importance to older persons.</td>
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<tr>
<td>GERO 455</td>
<td>Health Aspects of Aging</td>
<td></td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>455/855</td>
<td>Psychological, sociological, and physiological factors that influence the health of the aging, with particular emphasis given to biological changes that have implications for disease and health disorders.</td>
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<tr>
<td>GERO 459</td>
<td>Disorders of Communication in Older Adults</td>
<td></td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>459/859</td>
<td>Familiarizes the student with the identification and symptomology, basic assessment and intervention strategies associated with disorders of communication affecting older adults and geriatric patients. Beneficial to students majoring in gerontology, or speech pathology, as an elective course, or as a professional enrichment course for persons working in these or related fields.</td>
<td></td>
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<tr>
<td>GERO 467</td>
<td>Programs and Services for the Elderly</td>
<td></td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>467/867</td>
<td>Prereqs:</td>
<td></td>
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</tbody>
</table>
Junior or senior standing.

Historical overview of programs for the elderly, to examine the national policy process as it relates to the older American, and to review the principles and practices relative to the existing national programs for the aged.

**GERO 469/869**  
**Working with Minority Elderly**  
Crosslisted as **SOCW 404/804**

**Prereqs:**  
Junior or senior in gerontology or social work, or permission.

Interdisciplinary course designed to provide the student with knowledge of the differing status, attitudes, and experiences of the elderly within four major minority groups and to examine various service systems and practice models in terms of their relevance and effectiveness in meeting needs of minority elderly.

**GERO 472/872**  
**Baby Boomers and 21st century**

Marketing decisions and strategies apply to all businesses and are influenced by the target market. The economic realities and the character of America will change due to shifting demographics of baby boomers. Businesses that understand the power of the baby boomers will succeed; failure to understand that power may lead to economic consequences. Students from many disciplines will benefit from this cross-referenced course blending the realities of gerontology with the predictions of baby boomer behavior and the resulting impact to all businesses.

**GERO 475/875**  
**Mid-life Career Change and Pre-Retirement**

Examination of mid-life as it applies to the concept of second careers, existing resources, and the future of second careers; and the concept and practical implications of preretirement planning.

**GERO 485/885**  
**Hospice and Other Services for the Dying Patient/Family**  
Crosslisted as **SOCW 485**

**Prereqs:**  
Senior or graduate in social work or permission of School.

Designed to involve students in the recognition of fears, concerns, and needs of dying patients and their families by examining the hospice concept and other services available in our community. Factual information, readings, professional presentations, films, and experiential exercises are offered to aid the student in understanding that hospice is an alternative to the traditional medical model so that when the "cure" system is no longer functional, then the "care" system, hospice, can be offered.

**GERO 492/892**  
**Special Studies in Gerontology**

**Prereqs:**  
6 hrs gerontology or permission.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>494/894</td>
<td>Practicum</td>
<td>9 hrs gerontology and permission.</td>
<td>3</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/494">Link</a></td>
<td></td>
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<tr>
<td>498/898</td>
<td>Counseling Skills in Gerontology</td>
<td>Junior or senior standing.</td>
<td>3</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/498">Link</a></td>
<td></td>
</tr>
<tr>
<td>842</td>
<td>Therapeutic Recreation</td>
<td></td>
<td>3</td>
<td>Campus</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/842">Link</a></td>
</tr>
<tr>
<td>899</td>
<td>Master's Thesis</td>
<td>Permission</td>
<td>1-6</td>
<td>Campus</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/899">Link</a></td>
</tr>
<tr>
<td>911</td>
<td>Applied Social Gerontology</td>
<td></td>
<td>3</td>
<td>Campus</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/911">Link</a></td>
</tr>
<tr>
<td>946</td>
<td>Aging and Human Behavior</td>
<td></td>
<td>3</td>
<td>Campus</td>
<td>Classroom</td>
<td><a href="http://bulletin.unl.edu/courses/GERO/946">Link</a></td>
</tr>
</tbody>
</table>

Special studies designed around the interests and needs of the individual student in such areas as the psychology, sociology, economics, or politics of aging, as well as operation of various service systems. May be either a literature review project or a field project in which experience is gained in the community identifying and analyzing needs and services related to older people.

Opportunity for students to share field experiences; to obtain guidance concerning various relationships with agency, staff, and clients; and to develop a broadly based perspective of the field of aging.

Develops basic counseling skills for application in gerontology.

Introduces the student to the field of recreation for the aging in nursing homes and community-based recreation programs. A portion of the course involves students visiting recreation sites.

The thesis is written under the supervision of the thesis adviser and the thesis committee. Independent research project required of all students working toward the master of arts degree.

Restricted to graduate students only; required of gerontology students. Social gerontology with an emphasis on the interplay between social, psychological and physical elements in later life.

Intended primarily for graduate students in psychology and gerontology. Age-related changes in psychological processes and the implications of...
A degree program in social gerontology is available through the University of Nebraska at Omaha with courses 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 have gerontology as a primary academic interest and who intend to continue on in pursuit of a doctoral degree.

Doctoral Specialization in Gerontology

The departments of Child, Youth and Family studies and Gerontology, in conjunction with the Graduate College, offer a PhD (doctor of philosophy) in human sciences with a specialization in gerontology. The specialization draws on theory, research and practice in the field of education, gerontology and human development.

Due to the unique nature of this interdepartmental specialization, students are able to benefit from the broader range of expertise and perspectives. Students pursuing the specialization in gerontology will have the opportunity to create a program of study with advice and support of their doctoral advisory committee. Courses include those offered through Child, Youth and Family Studies and Gerontology and are available on the Lincoln and Omaha campuses.

Additional information can be obtained from:
Department of Gerontology
CPACS Building Room 210
6001 Dodge Street
University of Nebraska at Omaha
Omaha, NE 68182
phone: 402–554–2272
fax: 402–554–2317
or
Dr. Julie Masters, Department Chair
phone: 402–554–3953
email: jmasters@unomaha.edu

For Application Information:
Diane Carson
Child, Youth and Family Studies
University of Nebraska–Lincoln
135 Mabel Lee Hall
PO Box 880236
Lincoln, NE 68588–0236
phone: 402–472–8209
e-mail: dcarson2@unl.edu

Faculty

- Holley, Lyn M. –2004; Assistant Professor; BA 1964 American; MPA 1995, PhD 1999 Nebraska (Omaha)
- Kelly, Christopher M. –2006; Assistant Professor; BA 1994 Notre Dame; PhD 2004 Southern California
- Kercher, Kyle –2005; Professor; BA 1972 California State (Fresno); MA 1975 California (Santa Barbara); PhD 1984 Washington
- Kosloski, Karl D. –1994; Professor and Acting Chair; BA 1973 Minnesota; MA 1975 Middle Tennessee State; PhD 1984 Nevada (Reno)
- Masters, Julie -2001; Associate Professor; BA 1984 Nebraska (Omaha); MA 1985 Northern Colorado; PhD 1997 Nebraska (Lincoln)
- Thorson, James A. –1977; Professor; BS 1967 Northern Illinois; MEd 1971 North Carolina (Chapel Hill); EdD 1975 Georgia

Retrieved from "http://bulletin.unl.edu/graduate/Gerontology" (http://bulletin.unl.edu/graduate/Gerontology)
Course Delivery: Classroom

P/N. First course in a two-semester Preparing Future Faculty Program introducing advanced graduate students to various faculty roles. Seminar participants interact with faculty 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.

**Future Faculty II**

P/N. Second course in a two-semester Preparing Future Faculty Program introducing advanced graduate students to various faculty roles. Seminar participants interact with faculty 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.

**Future Faculty III**

P/N only. Third course in a three-semester sequence, Preparing Future Faculty program that introduces advanced graduate students to various faculty roles and to the use of technology in college instruction. Participants develop instructional technology applications and are mentored in the delivery of distance education.

**Professional Ethics**

Major ethical issues in the conduct of research and teaching. Topics identified by the National Academy of Science as critical to responsible research: the acquisition and maintenance of research data, including issues of informed consent and rules about safety and animal use; responsible reporting of research, including authorship issues, duplicate and fragmented publication, and reporting in the public media; peer review, including issues of confidentiality and conflict of interest; and the ethical training and supervision of students, including the assignment of mentors, appropriate supervision and fair performance evaluation, and the avoidance of exploitation.

**Grant Writing and Grant Management**

P/N only. Tips for writing successful grants, for identifying funding sources, and for making effective use of program officers. Core issues in grant management, including issues related to IRB review and approval, development of a budget and matching fund requests, and reporting responsibilities. Students develop and refine a submissable dissertation.
The Office of Graduate Studies offers a series of seminars designed to provide interdisciplinary professional development opportunities to graduate students enrolled in UNL graduate degree programs. The courses are designed to foster discussion about and develop skills necessary for the broad range of academic and non-academic careers.

Description

The Office of Graduate Studies offers a series of seminars designed to provide interdisciplinary professional development opportunities to graduate students enrolled in UNL graduate degree programs. The courses are designed to foster discussion about and develop skills necessary for the broad range of academic and non-academic careers.

Retrieved from "http://bulletin.unl.edu/graduate/Graduate_Studies"

Great Plains Studies

Courses for GPSP (GPSP)

Seminar in Great Plains Studies

Crosslisted as HIST 400/800, GEOG 400/800

Prereqs:
A course in the study of the Great Plains.

GPSP/GEOG/HIST 400 is required for a GPSP major or minor.

Topic varies.

Internship

Prereqs:
For GPSP 495: Junior standing, Great Plains major or minor, and permission.

Credit Hours: 1–6
Max credits per semester: 6
Course Format: Field
Description
(Interdepartmental Area of Specialization)

Director: James Stubbendieck

Advisory Committee: Professors Archer, Brandle, Edwards, Hayden, Horst, Kaye, R. Lee, Scholz, Supalla, Swinehart, Winkle; Associate Professors Ertl, Parsons, S. Wunder; Assistant Professors Demers, Garza, Heng-Moss

Majors Participating (Masters): Agricultural Economics; Agricultural Leadership, Education and Communication; Agronomy; Anthropology; Architecture; Communication Studies; Community and Regional Planning; English; Geography; Geosciences; History; Natural Resource Sciences; and Teaching, Learning and Teacher Education

Majors Participating (Doctoral): Agricultural Economics; Agronomy; Communication Studies; English; Geography; Geosciences; History; and Natural Resource Sciences

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. Regional 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. See our Web site: www.unl.edu/plains/academics/graduate.html.

Masters-level Specialization Requirements:
The specialization is available to any student accepted to pursue a masters degree within a participating department. 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 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.

Interdepartmental Courses

Agricultural Economics (AECN)
AECN 832. Economics of Agricultural Production
AECN 856. Environmental Law
AECN 857. Water Law
AECN 865. Resource & Environmental Economics II
AECN 868. Advanced Resource & Environmental Economics

Agricultural Leadership, Education and Communication (ALEC)
ALEC 801. Theoretical Foundations of Leadership
ALEC 810. Environmental Leadership: A Historical & Ethical Perspective
ALEC 833. Planning & Implementation of Cooperative Extension Programs for Domestic & Foreign Audiences
ALEC 901. Leading Change in Rural America & Beyond

Agronomy & Horticulture

- Agronomy (AGRO)

AGRO 808. Microclimate: The Biological Environment (GEOG/NRES 808)
AGRO 835. Agroecology (NRES 835)
AGRO 840. Great Plains Ecosystems (RNGE 440)
AGRO 842. Wildland Plants
AGRO 844. Vegetation Analysis
AGRO 845. Livestock Management on Range & Pasture
AGRO 850. Climate & Society (GEOG/ METR 850, NRES 852)
AGRO 875. Water Quality Strategy (CRPL/ GEOL/NRES 875)
AGRO 877. Great Plains Field Pedology (GEOG 867/NRES 877)
AGRO 881. Water Resources Seminar (GEOG 881, NRES 815)

- Horticulture (HORT)

HORT 909. Responses to Environment (AGRO/NRES 909)

Anthropology & Geography

- Anthropology (ANTH)

ANTH 816. Topics in Cultural Anthropology
ANTH 819. Art & Anthropology of Native North America
ANTH 833. North American Archaeology
ANTH 834. An Intro to Plains Archaeology
ANTH 851. Contemporary Issues of Indigenous Peoples in North America
ANTH 854. Traveling Ethnographic Field School
ANTH 876. Human Rights, Environment & Development
ANTH 880. Advanced Fieldwork
ANTH 883. Advanced Field Methods
ANTH 896. Special Readings in Anthropology
ANTH 898. Advanced Current Topics in Anthropology
ANTH 953. Seminar in Anthropology & Geography (GEOG 933)

- Geography (GEOG)

GEOG 850. Climate & Society (AGRO/ METR 850, NRES 852)
GEOG 877. Great Plains Field Pedology (AGRO/NRES 877)
GEOG 881. Water Resources Seminar (AGRO 881, GEOL/NRES 815)
GEOG 933. Seminar in Anthropology & Geography (ANTH 953)
GEOG 935. Seminar in Historical Geography: Great Plains

Architecture

IDES 860. Preservation & Conservation of Historic Interiors
ARCH 848. Architecture of the Great Plains
ARCH 860. Environmental Survey & Analysis (CRPL 872)
ARCH 863. Architectural Preservation

Art and Art History (AHIS)

AHIS 898. Special Topics: American Art & Regionalism; Great Plains

Biological Sciences (BIOS)

BIOS 855. Great Plains Flora
BIOS 859. Limnology (NRES 859)
BIOS 864. Fisheries Biology (NRES 864)
BIOS 870. Prairie Ecology
BIOS 882. Field Entomology
BIOS 887. Field Parasitology
BIOS 888. Natural History of the Invertebrates
BIOS 891. Ichthyology (NRES 889)
BIOS 894. Ornithology

Communication Studies (COMM)

COMM 830. Political Communication
COMM 950B. Seminar in Intercultural Communication
COMM 985. Cultural Criticism

Community and Regional Planning (CRPL)

CRPL 800. Intro to Planning
CRPL 804. Legal Aspects of Planning
CRPL 860. Planning & Design in the Built Environment
CRPL 870. Environmental Planning & Policy
CRPL 872. Environmental Survey & Analysis (ARCH 860)
CRPL 875. Water Quality Strategy (AGRO/GEOL/NRES 875)
CRPL 877. Recreation & Park Planning
CRPL 880. Economic Development Planning
CRPL 895H. Selected Topics: Housing: Issue & Innovations
CRPL 895Q. Selected Topics: Historic Preservation Planning
CRPL 895T. Selected Topics: Issues in Community Transit Planning
CRPL 896. Special Problems: Rural & Small Town Planning

Economics (ECON)
ECON 840. Regional Development
ECON 842. Regional Analysis
ECON 857. US Economic History: 19th Century
ECON 858. US Economic History: 20th Century
ECON 871. Public Finance
ECON 872. Efficiency in Government

English (ENGL)
ENGL 805K. Canadian Fiction
ENGL 811B. Plains Literature
ENGL 845K. Ethnic Literature: Native American Literature
ENGL 911. Seminars in Great Plains Literature
ENGL 933B. Seminar in American Authors since 1900: Willa Cather

Geosciences
- Geology (GEOL)
  GEOL 815. Water Resources Seminar (AGRO/GEOG 881, NRES 815)
  GEOL 823. Quaternary Ecology & Climate (BIOS 823)
  GEOL 850. Surficial Processes & Landscape Evolution
  GEOL 875. Water Quality Strategy (AGRO/CRPL/NRES 875)
  GEOL 881. Environmental & Urban Geology
  GEOL 888. Groundwater Geology (NRES 888)
  GEOL 889. Hydrogeology (NRES 887)
  GEOL 929. Mesozoic & Cenozoic Stratigraphy
  GEOL 934. Site Analysis in Vertebrate Paleontology
  GEOL 935. Cenozoic Vertebrate Paleoecology
  GEOL 953. Glacial Geology

- Meteorology (METR)
  METR 850. Climate & Society (AGRO/GEOG 850, NRES 852)

History (HIST)
HIST 852. American Frontier in the Nineteenth Century
HIST 864. Native American History: Selected Topics
HIST 865. History of Plains Indians
HIST 889L. Directed Readings: History of the Great Plains
HIST 889J. Directed Readings: The History & Culture of the American Indian

Natural Resource Sciences (NRES)
NRES 808. Microclimate: The Biological Environment (AGRO/GEOG 808)
NRES 815. Water Resources Seminar (AGRO/GEOG 881, GEOL 815)
NRES 823. Integrated Resource Management
NRES 835. Agroecology (AGRO 835)
NRES 850. Biology of Wildlife Populations
NRES 852. Climate & Society (AGRO/GEOG/METR 850)
NRES 859. Limnology (BIOS 859)
NRES 864. Fisheries Biology (BIOS 892)
NRES 868. Wetlands NRES 875.Water Quality Strategy (AGRO/CRPL/GEOL 875)
NRES 877. Great Plains Field Pedology (AGRO/GEOG 877)
NRES 887. Hydrogeology (GEOL 889)
NRES 888. Groundwater Geology (GEOL 888)
NRES 889. Ichthyology

Teaching, Learning & Teacher Education (TLTE)
TEAC 925E. Seminar in the Curriculum & Teaching of Social Studies: Great Plains

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History

Courses for HIST (HIST)

AHIS 988
Introduction to the Interdisciplinary Study of the Middle Ages
Crosslisted as ENGL 988, HIST 988, MODL 988, MUSC 988
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted as</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Pre-reqs</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Groups</th>
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<tbody>
<tr>
<td>AHIS 989</td>
<td>Introduction to the Interdisciplinary Study of the Renaissance</td>
<td>ENGL 989, HIST 989, MODL 989, MUSC 989</td>
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<tr>
<td>ANTH 478/878</td>
<td>Pro-seminar in Latin American Studies</td>
<td>HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878</td>
<td>3</td>
<td>6</td>
<td>Junior standing and permission.</td>
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<td>Classroom</td>
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<tr>
<td>CLAS 307/807</td>
<td>Early Christianity</td>
<td>HIST 307/807, RELG 307</td>
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<td>Lecture</td>
<td>Classroom</td>
<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>CLAS 409/809</td>
<td>Religion of Late Western Antiquity</td>
<td>HIST 409/809, RELG 409</td>
<td>2-3</td>
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<td>Lecture</td>
<td>Classroom</td>
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<tr>
<td>ECON 457/857</td>
<td>19th Century United States Economic History</td>
<td>HIST 457/857</td>
<td>3</td>
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<td><a href="http://bulletin.unl.edu/courses/ECON/211">ECON 211</a> and <a href="http://bulletin.unl.edu/courses/ECON/212">ECON 212</a></td>
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</tbody>
</table>
Transformation of the United States economy from an agrarian to an industrial society and the impact of that transformation on people's lives and livelihoods. The economics of slavery, the impact of the railroads, immigration, and the collective response of business and labor to industrialization.

**ECON 458/858**  
**20th Century United States Economic History**  
Crosslisted as HIST 458/858  
**Prereqs:**  
ECON 211 and ECON 212, or ECON 210.

Transformation of the United States economy in the twentieth century. Attention to the 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.

**ENGL 918**  
**Interdisciplinary Seminar in Nineteenth–Century Studies**  
Crosslisted as HIST 918, MODL 918  
Invention of the nineteenth century, gender, colonialism, class, realism science and technology.

**ENGL 919**  
**Interdisciplinary Approaches to the Nineteenth Century**  
Crosslisted as HIST 919, MODL 919  
Introduction to the nineteenth century in North America (focusing on the US), 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.

**GPSP 400/800**  
**Seminar in Great Plains Studies**  
Crosslisted as HIST 400/800, GEOG 400/800  
**Prereqs:**  
A course in the study of the Great Plains.  
GPSP/GEOG/HIST 400 is required for a GPSP major or minor.

Topic varies.

**HIST 303/803**  
**United States Military History, 1607–1917**  
**Prereqs:**  
Sophomore standing or permission.

This course satisfies the military history requirement of the advanced program.
Significance of military affairs in the context of American political, economic, and social history from the formation of the earliest colonial militias to the pre–WWI preparedness movement. Discusses all of the major wars of this period but also emphasizes such themes as the professionalization of the officer corps, the relationship between war and technology, and civil–military relations.

**United States Military History Since 1917**

**Prereqs:**
Sophomore standing or permission. This course satisfies the military history requirement of the advanced program.

Significance of military affairs in the context of American political, economic, and social history from America's entry into WWI to the present. Discusses all of the major wars of this period but also emphasizes such themes as the professionalization of the officer corps, the relationship between war and technology (especially nuclear weapons), and civil–military relations.

**History of Germany: 1914 to Present**

**Prereqs:**
Sophomore standing or permission.

Conflict and consensus in the history of Germany from World War I to the present. The Nazi dictatorship in European context, World War II and the Holocaust, the two Germanies from 1945, changes in 1989 and German unification, and developments in Germany and Europe since 9/11.

**War and Peace in Europe: 1914 to the Present**

**Prereqs:**
Sophomore standing or permission.

Survey of the diplomatic and military history of Europe from World War I to the present. Includes the strategy, tactics, and diplomacy of the two world wars; international relations in the years between the wars; the emergence of a new postwar Europe; and Europe's involvement in the rivalry between the superpowers since 1945.

**The Holocaust**

Crosslisted as JUDS 339

**Prereqs:**
Sophomore standing.

Europe-wide programs of persecution and genocide carried out under the auspices of the Nazi-German regime between 1933 and 1945. Focuses primarily on the Jewish dimension of the Holocaust, but also examines Nazi policies targeted against Poles, Gypsies, homosexuals, disabled Germans, and other groups. Events analyzed from the perspectives of victims, perpetrators, and bystanders.

**American Legal History**

**Prereqs:**
Sophomore standing.
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.

**American Urban and Social History I**

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. Analyzes the rise and transformation of the southern planter class and the slavery system which supported it; the development and change in character of both farmers and the urban working class; and the evolution of the northern, urban, middle class and its impact on all aspects of American life before the Civil War.

**American Urban and Social History II**

Survey and analysis of the impact of metropolitan development, mass-oriented industrialization and economic development, and the modernization of values, ideas, and mores on American society between the Civil War and the recent past. Includes the breakdown of old criteria of class or group definitions and their replacement by newer, more impersonal, economic categories. Attention to the declining role of the farmer in American life, the rise and fall of elite "society", and the further development of mass-oriented middle and working classes after World War II.

**American West to 1900**


**American West Since 1900**

History of the American West since 1900. History of race, class, and gender; urbanization and industrialization; political movements; population growth, new immigrations, and urban expansion; modern economic trends and environmental change; and the role of the federal government in the American West.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Groups</th>
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<tbody>
<tr>
<td>HIST 353/853</td>
<td>From Progressivism to the Great Crash</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>United States or Canadian History</td>
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<tr>
<td>HIST 354/854</td>
<td>The Era of Franklin D. Roosevelt</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>United States or Canadian History</td>
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<tr>
<td>HIST 355/855</td>
<td>Post–World War II America</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>United States or Canadian History</td>
</tr>
<tr>
<td>HIST 372/872</td>
<td>Revolutions in Twentieth–Century Latin America</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>Latin American, Asian, Middle Eastern or African History</td>
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<tr>
<td>HIST 381/881</td>
<td>History of Premodern Japan</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>Latin American, Asian, Middle Eastern or African History</td>
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<tr>
<td>HIST 382/882</td>
<td>History of Modern Japan</td>
<td>Sophomore standing or permission.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>Latin American, Asian, Middle Eastern or African History</td>
</tr>
</tbody>
</table>
### History of Premodern China

**383/883**

**Prereqs:**
Sophomore standing or permission.

Establishment of a modern state; foundations of economic power; liberalism and oligarchical rule; militarism; post-World War II developments.

LINK (http://bulletin.unl.edu/courses/HIST/383)

### Sexuality in Nineteenth and Twentieth Century America

**402/802**

Crosslisted as WMNS 402/802

**Prereqs:**
Sophomore standing or permission.

Pre-1800 content.

Sexual practices and ideologies in American history from the 1800's to the present.

LINK (http://bulletin.unl.edu/courses/HIST/402)

### Indians in American Popular Culture

**411/811**

Crosslisted as ETHN 411

**Prereqs:**
Junior standing.

Images of Native Americans in American popular culture. Dominant society's creation of images of Indians to serve societal needs. Reasons behind these creations, what purposes they served, and the enormous effect on white-Native relations. Covers art, literature, fiction, film, television, and sports "mascots".

LINK (http://bulletin.unl.edu/courses/HIST/411)

### Democracy and Tyranny in Classical Athens

**412/812**

Crosslisted as CLAS 412

**Prereqs:**
Junior standing or permission.

Pre-1800 content.

Development and influence of the Greek city-states, focusing on the establishment and transformation of the Athenian democracy in the 6th and 5th centuries BCE from popular sovereignty to the rule of written law. Including the three periods of tyranny, reaction to the Persian Invasions, and the impact of the Peloponnesian War.

LINK (http://bulletin.unl.edu/courses/HIST/412)

### Medieval Culture

**414/814**

LINK (http://bulletin.unl.edu/courses/HIST/414)
The Roman Revolution, 133 BC–68 AD

Prereqs: Junior standing or permission.
Pre-1800 content.

Historical context of changes in religion, literature, philosophy, and the arts, 400–1450.

Augustan Rome

Prereqs: HIST 100 or 210.
Pre-1800 content.

Augustus' constitutional transformation of Rome, and enforcement of a national identity and values through religion, social legislation, provincial governance policies, and patronage of public works, display, and literature.

The Italian Renaissance

Prereqs: Junior standing or permission.
Pre-1800 content.

Examines the 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 on the development of humanism and its role in the transition from medieval to modern values.

The German Reformation

Prereqs: Junior standing.
Pre-1800 content.

The cultural and intellectual developments of the German Reformation against its social background. The religious and political events of the first half of the sixteenth century. Transition from medieval to modern Christianity. The transmission and revolutionary nature of evangelical doctrines. The gradual institutionalization of the new churches.
### The Scientific Revolution

**Course Code:** HIST 422/822  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Groups:** European History, Pre-1800

**Prereqs:**  
Junior standing or permission.

**Pre-1800 content.**

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. Philosophical, religious, and social background to the Scientific Revolution examined closely, and the institutional bases of the new science considered. Attention to the role of mysticism and alchemy in the rise of modern science and to 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 illuminate these and other issues.

### The European Enlightenment

**Course Code:** HIST 423/823  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Groups:** European History, Pre-1800

**Prereqs:**  
Junior standing or permission.

**Pre-1800 content.**

Survey of European intellectual history from Locke and Bayle to Kant and Condorcet. Attempts to arrive at a definition of the Enlightenment through examination of both the writings of the philosophers and through secondary literature. Seeks to comprehend the Enlightenment in its social and political as well as its intellectual content.

### European Social and Cultural History Since 1815

**Course Code:** HIST 424/824  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Groups:** European History

**Prereqs:**  
Junior standing or permission.

European society and culture from the Enlightenment to the present with emphasis on institutions, ideas, and artistic expression.

### History of Fascism in Europe

**Course Code:** HIST 429/829  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Groups:** European History

**Prereqs:**  
Junior standing or permission.

Comparative study of the rise of fascism in Europe during the twenties; the drift to totalitarianism and the transition to dictatorship. Evolution of domestic and foreign policy to 1945.

### Early European History Through Biography

**Course Code:** HIST 430/830  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Groups:** European History, Pre-1800

**Prereqs:**  
Junior standing or permission.

**Pre-1800 content.**

Individuals from late medieval/early modern Europe, such as Joan of Arc, Henry V, and Eleanor of Aquitaine. Examines how history can be used to
serve social, cultural, and political needs, and the difficulties of determining historic truth about a person or event.

**Medieval England**

**HIST 431/831**

### Prereqs:
- Junior standing or permission

### Credit Hours:
3

### Course Format:
Lecture

### Course Delivery:
Classroom

### Groups:
European History, Pre-1800

Political, social, economic, institutional, and intellectual history of England from the Roman invasions through the accession of the Tudor dynasty in 1485.

**England: Reformation to Revolution, 1530–1660**

**HIST 432/832**

### Prereqs:
- Junior standing or permission

### Credit Hours:
3

### Course Format:
Lecture

### Course Delivery:
Classroom

### Groups:
European History, Pre-1800

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.

**Palestine and the Arab–Israeli Conflict**

**HIST 434/834**

Crosslisted as JUDS 434

### Prereqs:
- Junior standing

### Credit Hours:
3

### Course Format:
Lecture 3

### Course Delivery:
Classroom

### Groups:
Latin American, Asian, Middle Eastern or African History

Traces the history of the Arab–Israeli conflict from the 19th century up to the present. Explores the role of ideology, political actors, social history, economic and infrastructural problems, and regional and international interaction, as well as prospects for peace in the 21st century. Examines the related historiographical debates, especially those focusing on the Arab–Israeli Wars of 1948 and 1967.

**Saints, Witches, and Madwomen**

**HIST 436/836**

Crosslisted as WMNS 436/836

### Prereqs:
- Junior standing or permission

### Credit Hours:
3

### Course Format:
Lecture

### Course Delivery:
Classroom

### Groups:
European History, Pre-1800

Image of the madwoman throughout European and American history. Emphasis on how women on the margins have been labelled in different periods as saintly, as witches, or as insane.

**Seminar in U.S. Women's and Gender History**

**HIST 441/841**

Crosslisted as WMNS 441/841

### Credit Hours:
3

### Course Format:
Lecture 3

### Course Delivery:
Classroom

In-depth, advanced thematic seminar that cultivates historical research and writing skills.
Antebellum America 1800–1850

Prereqs:
Junior standing or permission.

American life during the first half of the nineteenth century, with special stress upon the nature of political processes, the many movements for the reform of society, the development of a national economy, and the rise of sectional conflict.

The American Civil War and Reconstruction

Prereqs:
Junior standing or permission.

Development of the sectional crisis, war and its impact on American institutions, reconstruction and reunion, from 1850 to 1877.

America in the "Gilded Age"

Prereqs:
Junior standing or permission.

Sectional adjustment, national politics, the "Gilded Age," economic growth, and the revival of imperialism in the period 1877 to 1901.

Women and Gender in African Societies

Crosslisted as ETHN 459, WMNS 459/859

Explores how the contemporary women’s movement has emerged within Africa and its relationship to social change.

The Civil Rights Movement

Crosslisted as ETHN 460

Survey and analysis of the origins, contours, activities, ideas, movement centers, personalities, and legacies of the Civil Rights and Black Power movements in the U.S. A. from the 1950’s through the 1970’s. The roles of the African-American masses, college and high school students, and women. The points of conflict and cooperation between African-American and mainstream American society.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Groups</th>
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<tbody>
<tr>
<td>HIST 462</td>
<td>Recent Russia</td>
<td>Fifty years of effort at implementing the mandate of the so-called &quot;October Revolution&quot; both domestically and in foreign affairs. The Soviet Union today.</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
<td>European History</td>
</tr>
<tr>
<td>HIST 463</td>
<td>Indigenous Peoples of Latin America</td>
<td>Includes Indian politics, ideologies about Latin American indigenous peoples, global issues, and inter-ethnic relationships in Latin America.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>HIST 464</td>
<td>Native American History: Selected Topics</td>
<td>Issues in Native American History. Topics may include: Native Americans and the environment; Native Americans in the 19th or 20th century; Native Americans and federal Indian policy; Native Americans and gender; and Native Americans of regions other than the Great Plains.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
<td>United States or Canadian History</td>
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<tr>
<td>HIST 465</td>
<td>History of Plains Indians</td>
<td>In-depth study of the 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 Indian nations of the Great Plains considered.</td>
<td>3</td>
<td>Classroom</td>
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<td>United States or Canadian History</td>
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<tr>
<td>HIST 466</td>
<td>Early Modern China</td>
<td>China during the last dynasty, the Qing, 1644 to 1911. Conquest and unification of China by the Manchus. Role of Confucianism in Chinese society. The growth of population during the 18th century. Rise of the opium trade. The Opium War. The Taiping Rebellion and reform efforts.</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>HIST 467</td>
<td>History of China in the 20th Century</td>
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**Course Delivery:** Classroom

**Groups:** Latin American, Asian, Middle Eastern or African History

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**HIST 468/868**

**Cultural History of Native America**

Crosslisted as ETHN 468

**Prereqs:**
Junior standing.

**Description:** Cultures of the indigenous peoples of the United States in an historical context. World view, language, spiritual beliefs, kinship organization, gender roles, music, dance, and art. Historical causes and effects of the changing of Native cultures over time. Contrasts between Native American oral history and Western methods.

**Credit Hours:** 3

**Course Format:** Lecture

**Course Delivery:** Classroom

**Groups:** United States or Canadian History

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**HIST 469/869**

**Global Environmental History**

**Prereqs:**
Junior standing.

**Description:** Past interactions among societies and nature in a comparative world perspective. Indigenous peoples’ resource management; ecological impacts of colonization; how political economies shape resource use; changing ideas about nature; and the historic roots of current environmental problems and possible solutions.

**Credit Hours:** 3

**Course Format:** Lecture

**Course Delivery:** Classroom

**Groups:** Latin American, Asian, Middle Eastern or African History

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**HIST 470/870**

**Digital History**

**Prereqs:**
Junior standing.

**Description:** Analysis of the theory, methods, and readings in humanities computing and digital history.

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Groups:** Additional History Courses

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**HIST 474/874**

**African Americans in the Jazz Age**

Crosslisted as ETHN 474

**Prereqs:**
Junior standing. A basic understanding of United States history is recommended.

**Description:** Race relations and African American experience from the 1910s through WW II. Jim Crow, the Great Migration, WW I, “The New Negro,” Harlem Renaissance, jazz/blues/gospel music, political radicalism, the Great Depression, and WW II.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Groups:** United States or Canadian History

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**HIST 476A/876A**

**Gender and Sexuality in Latin America**

Crosslisted as ETHN 476A, WMNS 476A/876A

**Prereqs:**
Junior standing.

**Description:**

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Groups:** United States or Canadian History
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<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>HIST 476B/876B</td>
<td>Race in Modern Latin America</td>
<td>Junior standing.</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as ETHN 476B</td>
<td></td>
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<tr>
<td></td>
<td>Experience of femininity and masculinity compared according to time and place, revealing the intimate connections with nation, modernity, race, and ethnicity.</td>
<td></td>
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</tr>
<tr>
<td>HIST 477/877</td>
<td>Indigenous Peoples of the World</td>
<td>Junior standing.</td>
<td>Lecture 3</td>
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<td></td>
<td>Crosslisted as ETHN 477</td>
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<tr>
<td>HIST 480/880</td>
<td>The Social and Economic History of China Since the Late Ming Era</td>
<td>Junior standing or permission; HIST 181 or 281 or 282 or 283 or 383 or 384</td>
<td>Lecture 3</td>
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<td></td>
<td>Crosslisted as ETHN 480</td>
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<tr>
<td></td>
<td>Analysis of the major social and economic changes in China during the previous six centuries. Includes the rapid growth of China's population, changes in family structure and peasant life, the development of China's commerce, China's relationship with the world economy, popular religion in China, and the social and economic transformation of China during the communist era.</td>
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<tr>
<td>HIST 486/886</td>
<td>History of South Africa</td>
<td>Junior standing.</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Crosslisted as ETHN 486</td>
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<tr>
<td></td>
<td>Survey of the history of South Africa from the Stone Age to the evolution of the political, economic, legal and social framework of apartheid, and the recent efforts to achieve political accommodation.</td>
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<tr>
<td>HIST 490</td>
<td>Topics in World History</td>
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### 490/890

**Prereqs:**  
Junior standing.  
Topic varies.

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#### Latin American, Asian, Middle Eastern or African History Groups:

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<tr>
<td>1-24</td>
<td>24</td>
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<td>Classroom</td>
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### Directed Readings (HIST 894)

**Prereqs:**  
Permission

[LINK](http://bulletin.unl.edu/courses/HIST/894)

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<tbody>
<tr>
<td>1-24</td>
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<td>Classroom</td>
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</tbody>
</table>

### Internship in Digital Humanities (HIST 895)

**Crosslisted as ENGL 895E, MODL 895**  
Active participation in an ongoing digital humanities project in the Center for Digital Research in the Humanities, including weekly meetings designed to build technical and project management skills.

[LINK](http://bulletin.unl.edu/courses/HIST/895)

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<th>Course Delivery:</th>
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<tr>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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### Masters Thesis (HIST 899)

**Prereqs:**  
Admission to masters degree program and permission of major adviser

[LINK](http://bulletin.unl.edu/courses/HIST/899)

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### Introduction to Historical Study (HIST 900)

[LINK](http://bulletin.unl.edu/courses/HIST/900)

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### Readings and Problems in Ancient History (HIST 901)

[LINK](http://bulletin.unl.edu/courses/HIST/901)

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<tr>
<td>HIST 911</td>
<td>Readings and Problems in Medieval History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/911">Link</a></td>
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<tr>
<td>HIST 912</td>
<td>Seminar in Medieval History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/912">Link</a></td>
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<tr>
<td>HIST 921</td>
<td>Readings and Problems in English History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/921">Link</a></td>
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<tr>
<td>HIST 922</td>
<td>Seminar in English History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/922">Link</a></td>
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<tr>
<td>HIST 928</td>
<td>Readings and Problems in Military History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/928">Link</a></td>
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<tr>
<td>HIST 929</td>
<td>Research Seminar in Military History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/929">Link</a></td>
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<tr>
<td>HIST 931</td>
<td>Readings and Problems in Early Modern European History</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/931">Link</a></td>
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Seminar in Early Modern European History  
Credit Hours: 1-24  
Campus:  
Course Delivery: Classroom

Readings and Problems in Recent European History  
Credit Hours: 1-24  
Campus:  
Course Delivery: Classroom

Seminar in Recent European History  
Credit Hours: 1-24  
Campus:  
Course Delivery: Classroom

Readings and Problems in American History Before 1877  
Credit Hours: 1-24  
Max credits per degree: 24  
Course Format: Lecture  
Campus:  
Course Delivery: Classroom

Seminar in American History  
Credit Hours: 1-24  
Campus:  
Course Delivery: Classroom

History of Women and Gender  
Crosslisted as WMNS 951  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom

Readings and Problems in 20th Century International History  
Credit Hours: 3  
Campus:
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<th>Course Delivery</th>
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<td>HIST 970</td>
<td>Seminar in Digital History</td>
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<td>HIST 970 (<a href="http://bulletin.unl.edu/courses/HIST/970">http://bulletin.unl.edu/courses/HIST/970</a>)</td>
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<td></td>
<td>HIST 970 is part of a suite of courses in the area of digital history.</td>
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<td>HIST 971</td>
<td>Readings and Problems in Latin American History</td>
<td>1-24</td>
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<tr>
<td>HIST 981</td>
<td>Readings and Problems in East Asian History</td>
<td>1-24</td>
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<tr>
<td>HIST 982</td>
<td>Seminar in East Asian History</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>HIST 990</td>
<td>Seminar in Special Problems of Teaching History</td>
<td>1-24</td>
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<td>Classroom</td>
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<tr>
<td>HIST 991</td>
<td>Readings and Problems in the History of the North American West</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>History of the North American West. Past and present historiography; modern themes and methodologies; and topical and comparative historical treatments.</td>
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<tr>
<td>HIST 993</td>
<td>Press Internship</td>
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</table>

Max credits per degree: 9
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: William Thomas, Ph.D.

Graduate Committee Chair: Professor Thomas (Tim) Borstelmann

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.

Master of Arts Degree.

The candidate for the masters degree must show competency by a written comprehensive examination 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 concentrate in the following fields: North America West, American Society and Culture, Indigenous Peoples, Military/Diplomatic/International History, Pre–Modern Europe, Modern Europe, German Studies, Comparative World History, and Women’s History. The candidate for the doctoral degree also must show competence by passing written comprehensive examinations in their general area and in comparative world history. Facility in one foreign language is required. The supervisory committee may require (an) additional foreign language(s) and/or alternate research tool 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:
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

For faculty list, research interests and department contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/History)

Retrieved from "http://bulletin.unl.edu/graduate/History" (http://bulletin.unl.edu/graduate/History)

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Horticulture

Subject Areas

- Horticulture (HORT) (#HORT)
- Turfgrass & Landscape Management (TLMT) (#TLMT)

Courses for HORT (HORT)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>426/826</td>
<td>Invasive Plants</td>
<td>Crosslisted as HORT 426/826, NRES 426/826</td>
<td></td>
<td>3</td>
<td>Lecture 2, Lab 2</td>
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<tr>
<td>AGRO</td>
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<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>426/826</td>
<td></td>
<td>AGRO/HORT/SOIL 153, BIOS 109</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>435/835</td>
<td>Agroecology</td>
<td>Crosslisted as HORT 435/835, NRES 435/835</td>
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<td>Lecture 3</td>
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<td>AGRO</td>
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<td>For AGRO/HORT/NRES 435: Senior standing or permission. For AGRO/NRES 835: 12 hrs biological or agricultural sciences or permission.</td>
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<td>Classroom</td>
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</table>

Capstone course. Team projects for developing communication skills and leadership skills.

Integration of principles of ecology, plant and animal sciences, crop protection, and rural landscape planning and management for sustainable agriculture. Includes natural and cultivated ecosystems, population and community ecology, nutrient cycling, pest management, hydrologic cycles, cropping and grazing systems, landscape ecology, biodiversity, and socioeconomic evaluation of systems.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>436/836</td>
<td>Agroecosystems Analysis</td>
<td>Crosslisted as HORT 436/836</td>
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<td>AGRO</td>
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<td>AGRO/HORT/NRES 436: Senior standing.</td>
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Cost of travel required. Summer travel course with multi–state faculty. Farm visits to Iowa, Minnesota and Nebraska.
Identification of grain quality characteristics desired by livestock feeders, human food processors and industrial users, and methods used to measure these characteristics.

**Organic Farming and Food Systems**

<table>
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<tr>
<th>Code</th>
<th>Title</th>
<th>Crosslisted As</th>
<th><a href="http://bulletin.unl.edu/courses/AGRO/439">Link</a></th>
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<tbody>
<tr>
<td>AGRO 439/839</td>
<td><strong>Organic Farming and Food Systems</strong></td>
<td>HORT 439/839</td>
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<tr>
<td></td>
<td><strong>Crosslisted as HORT 439/839</strong></td>
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<tr>
<td><strong>Prereqs:</strong></td>
<td>For 439, 12 credits of agricultural or biological science, economics, or natural resources. For 839, enrolled in M.S. or Ph.D. program.</td>
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<tr>
<td></td>
<td><strong>History of organic farming and horticultural systems, organic certification, nutrient and pest management in organic systems, planning organic enterprises including production and marketing, resilience of organic systems in ecological, economic, and social terms; future issues and potentials of organic food systems.</strong></td>
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**Perennial Plant Function, Growth, and Development**

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<th><a href="http://bulletin.unl.edu/courses/AGRO/441">Link</a></th>
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<tbody>
<tr>
<td>AGRO 441/841</td>
<td><strong>Perennial Plant Function, Growth, and Development</strong></td>
<td>HORT 441/841, RNGE 441</td>
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<td></td>
<td><strong>Crosslisted as HORT 441/841, RNGE 441</strong></td>
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<tr>
<td><strong>Prereqs:</strong></td>
<td>AGRO 325 or equivalent.</td>
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<tr>
<td></td>
<td><strong>Principles of crop physiology and developmental morphology in relation to function, growth, development, and survival of perennial forage, range, and turf plants. The relationship of physiology and morphological development on plant use and management.</strong></td>
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**Urbanization of Rural Landscapes**

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<tbody>
<tr>
<td>AGRO 489/889</td>
<td><strong>Urbanization of Rural Landscapes</strong></td>
<td>HORT 489/889, CRPL 489/889</td>
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<td></td>
<td><strong>Crosslisted as HORT 489/889, CRPL 489/889</strong></td>
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<tr>
<td><strong>Prereqs:</strong></td>
<td>Senior standing, graduate standing, or permission.</td>
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<tr>
<td></td>
<td><strong>Development converts rural landscapes into housing, roads, malls, parks, and commercial uses. This process fragments landscapes and changes ecosystem functions, drives up land prices, and pushes agriculture into more marginal areas. This multi-disciplinary, experiential course guides students in learning about the urbanization process, the impacts on landscapes, people, and the community, and the choices that are available to informed citizens.</strong></td>
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**Plant Molecular Biology**

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<tbody>
<tr>
<td>AGRO 810</td>
<td><strong>Plant Molecular Biology</strong></td>
<td>BIOS 810, BIOC 810, HORT 810</td>
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<td><strong>Crosslisted as BIOS 810, BIOC 810, HORT 810</strong></td>
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<tr>
<td><strong>Prereqs:</strong></td>
<td>AGRO 315 or BIOS 206 or BIOC 831 or permission.</td>
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<td></td>
<td><strong>Molecular genetic basis of biological function in higher plants. Genome organization, gene structure and function, regulation of gene expression, recombinant DNA, and genetic engineering principles. Material taken primarily from current literature.</strong></td>
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**Learning Biotechnology**

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<td>AGRO 821</td>
<td><strong>Learning Biotechnology</strong></td>
<td>HORT 821</td>
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<td><strong>Crosslisted as HORT 821</strong></td>
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<tr>
<td><strong>Course Delivery:</strong></td>
<td>Classroom</td>
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</table>

Investigate biotechnology and its application in solving problems and
**Integrated Weed Management**

Crosslisted as HORT 822

Prereqs:
12 hrs AGRO and/or closely related HORT and/or BIOS


**Turfgrass Science and Culture**

Crosslisted as HORT 825

Prereqs:
9 hrs agricultural plant science and 3 hrs soil science

Offered fall semester of odd-numbered calendar years. Methods and principles of establishment and maintenance of turfgrasses. Climate adaptation; methods of identification and propagation; equipment; fertility and watering practices; insects; diseases; and weed control.

**Learning Plant Science**

Crosslisted as HORT 832

The biology of plants grown for food, fiber, fuel and fun. Connect applied plant science to basic science concepts in biology and chemistry. Integrate individually-designed plant science lessons into learning standards.

**Agricultural Climatology**

Crosslisted as METR 907, HORT 907, NRES 907

Prereqs:
NRES 808 (http://bulletin.unl.edu/courses/NRES/808); STAT 801 (http://bulletin.unl.edu/courses/STAT/801) or equivalent

Offered spring semester of odd-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.

**Solar Radiation Interactions at the Earth’s Surface**

Crosslisted as METR 908, HORT 908, NRES 908

Prereqs:
MATH 208 (http://bulletin.unl.edu/courses/MATH/208); NRES 808 (http://bulletin.unl.edu/courses/NRES/808) or equivalent or permission

Offered spring semester of even-numbered calendar years. Quantitative study of radiative transfer to the earth’s surface and subsequent interactions of radiation with vegetative components and underlying surfaces. Applications of canopy radiative modeling and remote sensing techniques, particularly in understanding land–surface processes, are discussed.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted As</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Campus</th>
<th>Course Delivery</th>
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<td>AGRO 909</td>
<td>Crop Responses to Environment</td>
<td>HORT 909, NRES 909</td>
<td>3</td>
<td>MATH 208, NRES 808 or equivalent</td>
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<td>AGRO 919</td>
<td>Plant Genetics</td>
<td>HORT 919</td>
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<tr>
<td>AGRO 931</td>
<td>Population Genetics</td>
<td>ASCI 931, HORT 931</td>
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<td>AGRO 315, STAT 801</td>
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<td>Lecture 3</td>
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<tr>
<td>AGRO 963</td>
<td>Genetics of Host–Parasite Interaction</td>
<td>BIOS 963, HORT 963</td>
<td>3</td>
<td>BIOS 206 or 820</td>
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<tr>
<td>AGRO 991</td>
<td>Seminar Presentation and Evaluation</td>
<td>HORT 991</td>
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<td>AGRO 992</td>
<td>General Seminar</td>
<td>HORT 950, NRES 950</td>
<td>2</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
<td>Course Delivery</td>
<td>Groups</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>429A/829A</td>
<td>Food Security: A Global Perspective</td>
<td>Expected of all horticulture graduate students and all agronomy PhD students; optional for agronomy MS students. Presentation of thesis or non-thesis topics in agronomy, horticulture or related subjects. For course description, see AGRO 992.</td>
<td>1</td>
<td></td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>568/868</td>
<td>Planting Design</td>
<td>Junior standing</td>
<td>3</td>
<td>Lab 2, Lecture 2</td>
<td>Classroom</td>
<td>Additional Anthropology Courses</td>
</tr>
<tr>
<td>811</td>
<td>Plant Tissue Culture</td>
<td>BIOS 109 (AGRO 325 which includes CHEM 109), SOIL 153 and CNST 131 recommended. Lab exercises and field trips are required. Landscape construction, techniques and practices including site measurement and layout, topography, grading, cut-fill drainage and runoff calculations, topsoil protection; bioengineering and urban site erosion control; retaining walls; non-living landscape construction and design techniques as a part of the design process using problem-solving.</td>
<td>4</td>
<td>Lab 4, Lecture 2</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>849</td>
<td>Woody Plant Growth and Development</td>
<td>BIOS 251 (AGRO 325) and AGRO 325 with CHEM 109 for equivalent, Survey of techniques used in plant cell, tissue and organ culture, including current research. Laboratory emphasizes practical manipulation of plant cells, tissues, and organs, including examples from woody and herbaceous plant species.</td>
<td>3</td>
<td>Lecture 2</td>
<td>Classroom</td>
<td></td>
</tr>
</tbody>
</table>

Plant Nutrition and Nutrient Management
Crosslisted as AGRO 424/824

Prereqs:
AGRO 325 or basic course in plant physiology. A course in organic chemistry or biochemistry recommended.

Offered spring semesters.

Macro and micro nutrient elements and their function in the growth and development of plants. Role of single elements. Interaction and/or balances between elements and nutrient deficiency and/or toxicity symptoms as they affect the physiology of the whole plant. Relationship between crop nutrition and production and/or environmental considerations (e.g. yield, drought, temperature, pests).

Planting Design
Crosslisted as ARCH 467/567/867, LARC 467

Prereqs:
HORT/LARC/NRES 212; ARCH 210 or HORT/LARC 266.

Design processes, principles, and elements as applied to the use of native and ornamental plant materials. Aesthetic, functional, and micro-climatic arrangements of plant material in parks, on commercial property, on home grounds, along roadways, and in urban open spaces. Develop a palette of plants and graphics for designs.

Vines, Wines and You
Crosslisted as NUTR 471/871

Prereqs:
6 hrs science or equivalent experience; 21 years of age or older. Proof of age is required.

Origin, botany, historical and cultural significance of the grapevine and related species. Principles and practices of vineyard establishment, management and processing of grape products, importance and/or scope of grape and wine industry; global and local significance. Culinary applications, health, environmental and safety-related issues, business and industry relations and experience.

Business Management for Agricultural Enterprises
Crosslisted as ENTR 488/888, EAP 488/888, AGRO 488/888

HORT 488 requires the completion of a shadowing assignment and the analyses of case studies.

Research a specific agricultural enterprise. Develop and present a business plan using materials from the primary area of interest.

Topics in Landscape Architecture
Crosslisted as LARC 498/598

HORT 498/898

Link (http://bulletin.unl.edu/courses/HORT/424)  
Link (http://bulletin.unl.edu/courses/HORT/467)  
Link (http://bulletin.unl.edu/courses/HORT/471)  
Link (http://bulletin.unl.edu/courses/HORT/488)  
Link (http://bulletin.unl.edu/courses/HORT/498)
### Landscape Ecology

**Course Code:** HORT 812

**Course Name:** Landscape Ecology

**Prereqs:** Senior standing and permission.

**Course Description:**
Topical readings, theory, research, and practice in landscape architecture. Topics might include, but are not limited to, sustainable landscapes, visual and aesthetic assessment, restoration and reclamation, landscape management, recreational landscapes, art in the landscape, landscape ecology applied to design and planning, historical landscape preservation, and plant materials for the Great Plains landscape.

**Prereqs:**
Senior standing and permission.

**Course Format:** Lecture 1

**Course Delivery:** Classroom

**Credit Hours:** 1

***Crosslisted as NRES 810***

**Link:** [http://bulletin.unl.edu/courses/HORT/812](http://bulletin.unl.edu/courses/HORT/812)

### Turfgrass and Landscape Weed Management

**Course Code:** HORT 813

**Course Name:** Turfgrass and Landscape Weed Management

**Prereqs:**
12 hrs biological sciences or related fields including BIOS 320
([http://bulletin.unl.edu/courses/BIOS/320](http://bulletin.unl.edu/courses/BIOS/320)) or permission

**Course Description:**
Fundamental terminology associated with turfgrass and landscape weed management. Weed identification and the cultural practices and herbicide strategies to limit weed invasion and persistence.

**Prereqs:**
12 hrs biological sciences or related fields including BIOS 320
([http://bulletin.unl.edu/courses/BIOS/320](http://bulletin.unl.edu/courses/BIOS/320)) or permission

**Course Format:** Lab 2, Lecture 1

**Course Delivery:** Classroom

**Credit Hours:** 1

***Crosslisted as TLMT 813, AGRO 813***

**Link:** [http://bulletin.unl.edu/courses/HORT/813](http://bulletin.unl.edu/courses/HORT/813)

### Turfgrass and Landscape Integrated Pest Management

**Course Code:** HORT 840

**Course Name:** Turfgrass and Landscape Integrated Pest Management

**Prereqs:**
TLMT/HORT 440 ([http://bulletin.unl.edu/courses/HORT/440](http://bulletin.unl.edu/courses/HORT/440), [http://bulletin.unl.edu/courses/HORT/840](http://bulletin.unl.edu/courses/HORT/840)) is offered as a five-week course.

**Course Description:**
Principles of turfgrass and landscape plant pest management and tools to implement Integrated Pest Management (IPM) approaches. Creating healthy landscapes and effectiveness of IPM alternatives.

**Prereqs:**
TLMT/HORT 440 ([http://bulletin.unl.edu/courses/HORT/440](http://bulletin.unl.edu/courses/HORT/440), [http://bulletin.unl.edu/courses/HORT/840](http://bulletin.unl.edu/courses/HORT/840)) is offered as a five-week course.

**Course Format:** Lecture 1, Recitation 2

**Course Delivery:** Classroom

**Credit Hours:** 1

***Crosslisted as TLMT 840***

**Link:** [http://bulletin.unl.edu/courses/HORT/840](http://bulletin.unl.edu/courses/HORT/840)

### Plant Pathology

**Course Code:** HORT 842A

**Course Name:** Plant Pathology

**Course Description:**
Survey of the principles and practice of plant pathology. The main and genetic elements in plant disease will be covered. Many of the major diseases, as well as their causes and effects, will be surveyed.

**Course Description:**
Course is taught by faculty from the University of Nebraska–Kearney, and will be offered in the spring semester of even-numbered calendar years. To enroll, students must be accepted into the horticulture graduate certificate program or get permission.

**Prereqs:**
Course is taught by faculty from the University of Nebraska–Kearney, and will be offered in the spring semester of even-numbered calendar years. To enroll, students must be accepted into the horticulture graduate certificate program or get permission.

**Course Format:** Lecture 3

**Course Delivery:** Web

**Credit Hours:** 3

**Link:** [http://bulletin.unl.edu/courses/HORT/842A](http://bulletin.unl.edu/courses/HORT/842A)

### Plant Physiology

**Course Code:** HORT 842B

**Course Name:** Plant Physiology

**Course Description:**
Survey of the principles and practice of plant physiology. The main and genetic elements in plant disease will be covered. Many of the major diseases, as well as their causes and effects, will be surveyed.

**Course Description:**
Course is taught by faculty from the University of Nebraska–Kearney, and will be offered in the fall semester of even-numbered calendar years. To enroll, students must be accepted into the horticulture graduate certificate program or get permission.

**Course Format:** Lecture 3

**Course Delivery:** Web

**Credit Hours:** 3

**Link:** [http://bulletin.unl.edu/courses/HORT/842B](http://bulletin.unl.edu/courses/HORT/842B)
Life processes of plants, with an emphasis on water relations and hormonal and stress physiology. Includes fundamental concepts underlying the science of crop physiology, including crop phenology, canopy development and light interception, photosynthesis and respiration, and dry matter partitioning.

### Independent Study

**HORT 896**

**Prereqs:**
12 hrs plant sciences, permission and advance approval of plan of work

Individual or group projects in research and literature review under supervision and evaluation of a departmental faculty member.

**Credit Hours:** 1–5

**Campus:**

**Course Delivery:** Classroom

### Master of Applied Science Project

**HORT 897**

**Crosslisted as AGRI 897, ACRO 897, NRES 897**

**Prereqs:**
Admission to Master of Applied Science degree program

Project activity for the Master of Applied Science degree.

Design, develop and complete a project that requires synthesis of the course topics covered in the primary area of emphasis.

**Credit Hours:** 1–6

**Max credits per degree:** 6

**Campus:**

**Course Delivery:** Classroom

### Masters Thesis

**HORT 899**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Credit Hours:** 6–10

**Campus:**

**Course Delivery:** Classroom

### Research Other Than Thesis

**HORT 996**

**Prereqs:**
Permission

Investigations, without reference to thesis work, on genetic, physiological, ecological, meteorological, and morphological aspects of horticultural crops.

**Credit Hours:** 1–6

**Campus:**

**Course Delivery:** Classroom

### Doctoral Dissertation

**HORT 999**

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1–24

**Max credits per degree:** 55

**Campus:**

**Course Delivery:** Classroom

### Irrigation Systems Management

**MSYM 452/852**

**Crosslisted as HORT 452/852, WATS 452**

**Prereqs:**
MSYM 109 or general

**Credit Hours:** 3
Irrigation management and the selection, evaluation, and improvement of irrigation systems. Includes soil–water measurement, crop water use, irrigation scheduling, irrigation efficiency, measurement of water flow, irrigation systems, groundwater and wells, pumping systems, applying chemicals with irrigation systems, and environmental and water resource considerations. Two laboratory sections are available; one which emphasizes agricultural applications and one which emphasizes horticultural applications.

### Plant Ecophysiology: Theory and Practice

**Crosslisted as HORT 406/806, AGRO 406/806**

- **Prereqs:** Junior standing; 4 hrs ecology; and 4 hrs botany or plant physiology.

- **Offered fall semester of even-numbered calendar years.**

  Principles of plant physiology which underlie the relationship between plants and their physical, chemical and biotic environments. An introduction to the ecological niche, limiting factors and adaptation. An overview of the seed germination and ecology, plant and soil water relations, nutrients, plant energy budgets, photosynthesis, carbon balance and plant–animal interactions. An introduction to various field equipment used in ecophysiological studies.

### Microclimate: The Biological Environment

**Crosslisted as GEOG 408/808, METR 408/808, HORT 408/808, AGRO 408/808, WATS 408**

- **Prereqs:** Junior standing, MATH 106 or equivalent, 5 hrs physics, major in any of the physical or biological sciences or engineering; 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. Control 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.

### Agroforestry Systems in Sustainable Agriculture

**Crosslisted as HORT 418/818**

- **Prereqs:** 12 hours biological or agricultural sciences.

  At least one course in production agriculture and one course in natural resources is strongly suggested. Offered odd-numbered calendar years.

  The roles of woody plants in sustainable agricultural systems of temperate regions. Emphasis on the ecological and economic benefits of trees and shrubs in the agricultural landscape. Topics include: habitat diversity and biological control; shelterbelts structure, function, benefits and design; intercropping systems; silvopastoral systems; riparian systems; and production of timber and specialty crops. Comparison of temperate agroforestry systems to those of tropical areas.

### Bio–Atmospheric Instrumentation

**Crosslisted as GEOG 469/869, METR 469/869, HORT 407/807, AGRO 469/869, MSYM 469/869**

- **Prereqs:** 12 hours biological or agricultural sciences.

  At least one course in production agriculture and one course in natural resources is strongly suggested. Offered odd-numbered calendar years.

  The roles of woody plants in sustainable agricultural systems of temperate regions. Emphasis on the ecological and economic benefits of trees and shrubs in the agricultural landscape. Topics include: habitat diversity and biological control; shelterbelts structure, function, benefits and design; intercropping systems; silvopastoral systems; riparian systems; and production of timber and specialty crops. Comparison of temperate agroforestry systems to those of tropical areas.
### Xenobiotics in the Environment

**Prereqs:**
- Junior standing; MATH 106
- 4 hrs physics; physical or biological science major.
- Offered fall semester of odd-numbered calendar years.

**Description:**
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 are discussed and evaluated.

**Prereqs:**
- Recommend one course each in organic chemistry, soil science, biochemistry, plant physiology, microbiology and ecology

**ECTO 920** (http://bulletin.unl.edu/courses/ENTO/920) is offered in odd-numbered calendar years.

Fate and ecotoxicological impacts of biologically foreign compounds in soil-water-plant environments; uptake, mechanisms of toxicity and metabolism in plants and other biota. Herbicides and other pesticides.

### Turfgrass Disease Management

**Prereqs:**
- BIOS/PLPT 369 (http://bulletin.unl.edu/courses/PLPT/369) or one semester of introductory plant pathology.

**Description:**
Pathogens, epidemiology, and control of diseases specific to turfgrass.

### Turfgrass Systems Management

**Prereqs:**
- TLMT 227 (http://bulletin.unl.edu/courses/TLMT/227) and TLMT 327 (http://bulletin.unl.edu/courses/TLMT/327).

**Description:**
Critical evaluation of turfgrass settings to create economical and environmentally friendly management systems for professionally managed turf areas.

### Modified Rootzones

**Description:**
Modified rootzones and their applications in the turfgrass and landscape management industry. Correct applications and construction techniques.

**Prereqs:**
- TLMT 227 (http://bulletin.unl.edu/courses/TLMT/227) and TLMT 327 (http://bulletin.unl.edu/courses/TLMT/327).

**ECTO 920** (http://bulletin.unl.edu/courses/ENTO/920) is offered in odd-numbered calendar years.

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Pathogens, epidemiology, and control of diseases specific to turfgrass.

Critical evaluation of turfgrass settings to create economical and environmentally friendly management systems for professionally managed turf areas.
Courses for TLMT (TLMT)

**Turfgrass and Landscape Weed Management**

**TLMT/HORT 813**

Crosslisted as TLMT 813, AGRO 813

Fundamental terminology associated with turfgrass and landscape weed management. Weed identification and the cultural practices and herbicide strategies to limit weed invasion and persistence.

**Turfgrass and Landscape Integrated Pest Management**

**TLMT/HORT 840**

Crosslisted as TLMT 840

Principles of turfgrass and landscape plant pest management and tools to implement Integrated Pest Management (IPM) approaches. Creating healthy landscapes and effectiveness of IPM alternatives.

**Turfgrass Disease Management**

**TLMT 414/814**

Crosslisted as HORT 414/814, PLPT 414/814, AGRO 414/814

Prereqs: BIOS/PLPT 369 or one semester of introductory plant pathology.

Pathogens, epidemiology, and control of diseases specific to turfgrass.

**Turfgrass Systems Management**

**TLMT 427/827**

Crosslisted as HORT 427/827, AGRO 427/827

Prereqs: TLMT 227 and TLMT 327.

Critical evaluation of turfgrass settings to create economical and environmentally friendly management systems for professionally managed turf areas.

**Modified Rootzones**

**TLMT 480/880**

Crosslisted as HORT 480/880, AGRO 480/880

Offered as a five-week course.

Modified rootzones and their applications in the turfgrass and landscape management industry. Correct applications and construction techniques.

**Modified Rootzones**

**TLMT 880**

Crosslisted as HORT 880, AGRO 880

Offered as a five-week course.
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Interim Department Head: Roch Gaussoin, Ph.D.

Graduate Committee: Professors Lagrimini (chair), Arkebauer, Baenziger, Drijber, Ferguson, Holding, Waters

Graduate programs are available in the physiological, genetic, morphological, and environmental aspects of the production and utilization of horticultural crops.

A Graduate Record Examination (aptitude) is required before admission. A qualifying examination, which must be completed by the second semester in residence, will be required for all graduate students. For detailed information, see hort.unl.edu/.

Master of Science Degree.

Students intending to prepare for professional careers in horticulture may select a course of study under Option I, which includes the requirement of a thesis that contains results of original research. Students wishing to pursue an Option II masters degree must receive separate Horticulture Graduate Committee approval. For approval, the student must work with a major adviser and submit to the Graduate Committee the following items: list of the student’s committee, list of major and minor courses and the student’s project and plan. The requirements for admission to Candidacy and for the thesis are those of the Graduate College.

Horticulture also offers a specialization in Public Horticulture Administration. Most students will be expected to pursue an Option II masters degree although an Option I is possible. The program of studies includes required courses in business or communications, a project or thesis and an internship.

Horticulture also participates in the following interdepartmental areas of specialization for the master of science degree: environmental studies and water resources planning and management. Interested students should look under those areas for details of the program requirements.

A doctor of philosophy degree in horticulture is available.

The following may be used as a part of course work in constituting a major in horticulture: STAT 801, 802, 901, 902; AGRO 815, 914, 932, 966.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Horticulture"
For a brief description of the program, application requirements and contact information, view the home page for Human Rights and Humanitarian Affairs (http://humanrights.unl.edu/).

Retrieved from "http://bulletin.unl.edu/graduate/Human_Rights_and_Humanitarian_Affairs" (http://bulletin.unl.edu/graduate/Human_Rights_and_Humanitarian_Affairs)"  
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### Human Sciences

#### Description
For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/HumanSciences).

The Human Sciences major includes six specializations. Communications Disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies and Gerontology are sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Clothing and Design is based in the Department of Textiles, Clothing and Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.

Specific program and application information is available under each department’s listing in this bulletin. Up-to-date information is also available on-line at [cehs.unl.edu](http://cehs.unl.edu). Inquiries may be directed to [cehsgrad@unl.edu](mailto:cehsgrad@unl.edu) or to (402) 472-5333.

Retrieved from "http://bulletin.unl.edu/graduate/Human_Sciences" (http://bulletin.unl.edu/graduate/Human_Sciences)"

### Veterinary and Biomedical Sciences

#### Subject Areas
- Integrative Biomedical Sciences (IBMS) (#IBMS)
- Veterinary and Biomedical Sciences (VBMS) (#VBMS)
### Courses for IBMS (IBMS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>999</td>
<td>Doctoral Dissertation</td>
<td>Admission to IBMS doctoral degree program and supervisory committee chair</td>
<td>1-24</td>
<td>55</td>
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<td>Classroom</td>
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### Courses for VBMS (VBMS)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>442/842</td>
<td>Endocrinology</td>
<td>A course in vertebrate physiology and/or biochemistry.</td>
<td>3</td>
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<tr>
<td>847</td>
<td>Interdisciplinary Concepts in Beef Production</td>
<td>Degree in veterinary medicine or animal science, or allied agricultural degree, or permission</td>
<td>3</td>
<td>6</td>
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<tr>
<td>420/820</td>
<td>Molecular Genetics</td>
<td>12 hrs BIOS including BIOS 206 or equivalent.</td>
<td>3</td>
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<tr>
<td>440/840</td>
<td>Microbial Physiology</td>
<td>BIOS 312 and either 313 or 314, or permission.</td>
<td>3</td>
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</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Crosslisted as</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
<td>Campus</td>
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<tr>
<td>BIOS 443/843</td>
<td>Immunology</td>
<td>VBMS 843</td>
<td>BIOS 206 and one semester organic chemistry. BIOS 102 recommended.</td>
<td>3</td>
<td>Lecture</td>
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<tr>
<td>BIOS 816</td>
<td>Computer-Aided Sequence Analysis Primer</td>
<td>VBMS 818</td>
<td>BIOS 831 or BIOS 801 or 820</td>
<td>2</td>
<td>Lecture</td>
<td></td>
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<tr>
<td>BIOS 835</td>
<td>Animal Biochemistry</td>
<td>VBMS 835</td>
<td>BIOS 831 or permission</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BIOS 942</td>
<td>Genetics, Genomics, and Bioinformatics of Prokaryotes</td>
<td>VBMS 942</td>
<td>BIOS 241 and 312, or permission</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
<tr>
<td>BIOS 950</td>
<td>Medical Molecular Virology</td>
<td>VBMS 950</td>
<td>BIOS/CHM/BIOC 431/831 and 312, or permission</td>
<td>3</td>
<td>Lecture</td>
<td></td>
</tr>
</tbody>
</table>
Offered odd-numbered calendar years. Current topics in molecular virology relevant to the natural history and pathogenesis of viral diseases of humans and animals.

**Signal Transduction**

Crosslisted as VBMS 964

**Prereqs:**
BIOS 832, BIOS 820 or equivalent, or permission

Molecular basis of genetics in eukaryotes. Gene structure and regulation, transposable elements, chromosome structure, DNA replication and repair mechanisms and recombination.

**Advanced Viral Pathogenesis**

Crosslisted as VBMS 966

**Prereqs:**
BIOS 843; VBMS 852 or equivalent 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.

**Functional Histology**

Crosslisted as BIOS 408/808

**Prereqs:**

Microscopic anatomy of the tissues and organs of major vertebrate species, including humans. Normal cellular arrangements of tissues and organs as related to their macroscopic anatomy and function, with reference to subcellular characteristics and biochemical processes. Functional relationships among cells, tissues, organs and organ systems, contributory to organismal well being. General introduction to pathological processes and principles underlying some diseases.

**Basic Molecular Infectious Diseases**

**Prereqs:**
BIOS 312, AGRO 360 or equivalent, or permission.

Offered spring semester of odd-numbered calendar years.

Introduction to the molecular, genetic and cellular aspects of microbial pathogenesis in humans and animals.
Pathogenic Microbiology

**Prereqs:**
- BIOS 312 and either 313 or 314, or permission.

Fundamental principles involved in host-microorganism interrelationships. Identification of pathogens, isolation, propagation, mode of transmission, pathogenicity, symptoms, treatment, prevention of disease, epidemiology, and methods of control.

**Pathogenic Microbiology Laboratory**

**Prereqs:**
- BIOS 312 and 313 (314) or permission.

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 setting, to explore and test fundamentals of transmission, epidemiology and pathogenesis of selected infectious agents and to relate these to disease signs, treatments and methods of control.

**Introduction to Mechanisms of Disease**

**Prereqs:**
- ASCI 240 or equivalent, BIOC/BIOS/CHEM 831, VBMS/BIOS 841, or permission

Offered odd-numbered calendar years. Designed for students of biological, animal, and veterinary sciences. Introduction to general pathology emphasizing etiology, pathogenesis, morphologic features, and fundamental alterations associated with the fundamental changes of disease.

**Introduction to Veterinary Epidemiology**

**Prereqs:**
- Permission

Offered summer semester of odd-numbered years. Introduction to concepts of epidemiology including definition and uses of epidemiology. Casual web theory of causation discussed and compared to the Henle-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.

**Interdisciplinary Concepts in Beef Production I**

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
Interdisciplinary Concepts in Beef Production II

**Prereqs:**
VBMS 847A

**Course Delivery:** Classroom

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

Introduction to Veterinary Biotechnology

**Prereqs:**
12 hours of veterinary and biomedical sciences or DVM degree, or equivalent and permission

**Course Delivery:** Classroom

**Credit Hours:** 1–2

**Campus:**

**Course Delivery:** Classroom

Molecular Virology and Viral Pathogenesis

**Prereqs:**
BIOS 843

This course is a prerequisite for BIOS 966.

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

Information and assignments for VBMS 848 exchanged in the classroom and via Internet. Theoretical basis for emerging cellular, molecular and reproductive technologies, and their potential applications and impacts in the practice of food animal veterinary medicine.

Masters Thesis

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Course Delivery:** Classroom

**Credit Hours:** 6–10

**Campus:**

**Course Delivery:** Classroom

Diagnostic Techniques

**Course Delivery:** Classroom

**Credit Hours:** 1–10

**Campus:**

**Course Delivery:** Classroom

Application of the principles of pathology to current problems in the diagnostic laboratory.

T Cell Biology: Repertoire and Effector Functions

**Prereqs:**
BIOS 843 or permission

**Course Delivery:** Classroom

**Credit Hours:** 3

**Campus:**
Offered even-numbered calendar years. Analysis of the literature of the cellular and molecular biology of T cell recognition and effector functions. Subject areas: Scientific Methodologies; Antigen Presentation; T Cell Receptor and Coreceptor; Thymic Structure and Self/Nonself Discrimination; T Cell Regulation; Allergy and Autoimmune Diseases; and T-Cell-Mediated Inflammation and Cytokine Network.

### Seminar

**Course Code:** VBMS 909  
**P/N only.**

### Regulation of Eukaryotic Gene Expression

**Course Code:** VBMS 919  
**Prereqs:**
1) [BIOC 818](http://bulletin.unl.edu/courses/BIOC/818) or [BIOC 820](http://bulletin.unl.edu/courses/BIOC/820); 2) [BIOC 832](http://bulletin.unl.edu/courses/BIOC/832); and 3) [BIOC 838](http://bulletin.unl.edu/courses/BIOC/838) or [BIOS 837](http://bulletin.unl.edu/courses/BIOS/837) or related laboratory experience

Offered even-numbered calendar years. Basic mechanisms regulating gene expression in eukaryotes during various physiological states. Emphasis on understanding specific and unique mechanisms in mammalian systems. Techniques used to study gene regulation.

### Measurement of Animal Disease and Production

**Course Code:** VBMS 920  
**Prereqs:** VBMS *811 or permission

Offered odd-numbered calendar years. Measurements of disease and production, the basic tenants of epidemiology, taught in detail including incidence density, risk rates, morbidity, mortality, cause specific rates, and life tables. Methods and implications of measuring disease at the farm, regional, and national levels. Sampling strategies and the impact of these on the standard error of the estimate. Implications and biases of using retrospective production data versus prospective data. Clinical epidemiology which includes definition of tests in veterinary medicine, individual and herd level sensitivity and specificity, receiver operating characteristics curves, positive and negative predictive values, serial and parallel interpretation of tests, Kappa statistics, and issues of precision, validity, and accuracy.

### Analytic Observational Studies in Veterinary Epidemiology

**Course Code:** VBMS 921  
**Prereqs:** VBMS *811 and 920; or permission

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. Analyses includes chi-square tests, Cochrane Chi-square tests, and epidemiologic measures of strength of association, effect, and total effect. Design, implementation, analysis and interpretation of field trials taught specifically as they relate to the practitioner.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Link</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>925</td>
<td>Critical Reading of the Epidemiology Literature</td>
<td><a href="http://bulletin.unl.edu/courses/VBMS/925">link</a></td>
<td>1</td>
<td></td>
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<td>Classroom</td>
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<td></td>
<td><strong>Prereqs:</strong> VBMS *811 or 920; or permission. May be repeated for credit. Analysis of current epidemiology and animal health literature. Critical evaluation of study design, methods of analysis, biases, field applicability, and basis for conclusions.</td>
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<tr>
<td>930</td>
<td>Advanced Food Animal Production Medicine</td>
<td><a href="http://bulletin.unl.edu/courses/VBMS/930">link</a></td>
<td>2</td>
<td>Lab, Lecture</td>
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<td>Classroom</td>
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<td><strong>Prereqs:</strong> Permission</td>
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<td></td>
<td>Offered spring semester of even-numbered calendar years. Inter-relationships between animal health, disease, and well-being as they relate to the productivity and profitability of food animal production units. Integrates aspects of veterinary medicine, animal science, and agricultural economics. General concepts related to cattle, swine and sheep production systems, followed by specific issues that relate to different species.</td>
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<td>944</td>
<td>Immunovirology</td>
<td><a href="http://bulletin.unl.edu/courses/VBMS/944">link</a></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td><strong>Prereqs:</strong> Permission; organic chemistry; biochemistry; immunology and/or concepts in virology and viropathogenesis</td>
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<td>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 relationship to health and disease. Analysis of the hosts immune response to selected viral infections of the major systems: neural, respiratory, gastrointestinal and immune.</td>
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<td>948</td>
<td>Concepts in Experimental Immunology</td>
<td><a href="http://bulletin.unl.edu/courses/VBMS/948">link</a></td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td><strong>Prereqs:</strong> BIOS 843 or permission</td>
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<td>Recent advances in immunological techniques and review of conventional methods.</td>
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<tr>
<td>949</td>
<td>Vaccinology</td>
<td><a href="http://bulletin.unl.edu/courses/VBMS/949">link</a></td>
<td>2</td>
<td>Lecture</td>
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<td>Classroom</td>
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<td></td>
<td><strong>Prereqs:</strong> VBMS/BIOS 841; BIOS 843; VBMS 843; VBMS/BIOS 843; BIOS 852; or permission</td>
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<td>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.</td>
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<td>Course Code</td>
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<tr>
<td>VBMS 951</td>
<td>Advanced Molecular Infectious Diseases</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>Prereqs:</td>
<td>BIQC 832 or equivalent; 18 hours of biological, biomedical and/or veterinary sciences, including fundamental microbiology and genetics; or permission</td>
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<td></td>
<td>VBMS 824 and 843 (or equivalent)</td>
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<td>Offered:</td>
<td>Spring semester of even-numbered years. Molecular and cellular aspects of microbial pathogenesis. Key literature, synthesis of scientific problems into research proposals.</td>
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| VBMS 975    | Seminar in Veterinary Histopathology                     | 1            | Lecture 1     |        | Classroom       |
| Prereqs:    | VBMS 805 or equivalent                                    |              |               |        |                 |
| Offered:    | May be repeated for credit. Descriptive veterinary histopathology covering diseases of all body systems in animal species including domestic, laboratory, wildlife, birds, fishes, reptiles, and amphibians. Source material is worldwide in scope. |

| VBMS 996    | Research on Selected Problems in Veterinary Science       | 2-10         |               |        | Classroom       |
| Prereqs:    | Permission                                               |              |               |        |                 |
| Offered:    | The subject will be dependent on student demand and availability of staff. Reviews of specialized subject areas. |

| VBMS 998    | Special Topics in Veterinary Science                     | 1-10         |               |        | Classroom       |
| Prereqs:    | Permission                                               |              |               |        |                 |
| Offered:    | The subject will be dependent on student demand and availability of staff. Reviews of specialized subject areas. |

| VMED 630    | Veterinary Anatomy I                                     | 6            | Lab 6, Lecture 3|        | Classroom       |
| Prereqs:    | For VBMS 830: none. For VMED 630: First year standing in the Professional Program in Veterinary Medicine |
| Offered:    | Comparative and topographic anatomy of the dog, cat, and pig. |

| VMED 645    | Animal Physiology I                                      | 4            |               |        |                 |
| Prereqs:    | For ASCI/VBMS 845/BIOS 813: An undergraduate course in   |              |               |        |                 |
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Director: David Hardin, D.V.M.

Graduate Committee: Pickard (chair); Associate Professors Keen, Reddy, Somerville

The Department offers master of science and doctor of philosophy degrees with courses of study offered in virology, bacteriology, immunology, molecular biology, neurobiology, redox biology, pathology, epidemiology, and biomedical sciences/biochemistry. The master of science in veterinary science program is offered through Option I, Option II and Option III. The Department administers the interdepartmental doctoral program in Integrative Biomedical Sciences through which it offers the PhD degree. Biochemistry and/or biostatistics courses are required for the MS and PhD degree depending on the student’s field of study with the rest of the program of study tailored to the student’s research interests and career goals, upon approval by the student’s Graduate Supervisory Committee.

There is no generally specified language or research skill required for the PhD, but each student must meet the requirements set by the Graduate College, and approved by the Supervisory Committee, the Department and the Integrative Biomedical Sciences graduate committee.

In addition to the general requirements of the Graduate College, applicants for the MS and PhD degrees must submit scores from the Graduate Record Examination. 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, STAT 801 and 802 or BIOC 831 and 832, or one of each, may be used as part of the course work constituting a major in veterinary science (MS) or Integrative Biomedical Sciences (PhD).

Cooperative Program in Veterinary Science

The University of Nebraska–Lincoln (UNL), College of Agricultural Sciences and Natural Resources is home to Nebraska’s component of the Cooperative Program in Veterinary Medicine with Iowa State University (ISU). Students in this program begin their professional education on the UNL campus and will earn the 4-year doctor of veterinary medicine degree after continued study at ISU, College of Veterinary Medicine. The arrangement maintains tuition at the rate of ISU’s in-state professional tuition rate all four years.

This innovative program, whose inaugural class of 25 Nebraska residents entered the fall semester of 2007, is the first of its kind in the United States. Program planning and development was jointly undertaken by the University of Nebraska as well as Iowa State University and has been reviewed and approved by the American Veterinary Medical Association’s Council on Education. This approval insures that successful students in this program will meet requirements to take the North American Veterinary Licensure Exam (NAVLE) and subsequently attain licensure to practice veterinary medicine.

Though every professional veterinary program must provide a core curriculum, the unique opportunities provided by this program allow students to have more hands–on experience and a broader range of opportunities than some of their counterparts. Faculty at UNL are devoted to student learning and provide a strong basic science curriculum as the foundation for their veterinary students. While UNL’s departments of School of Veterinary and Biomedical Sciences, Animal Science
and Entomology form the core of this program, individuals and resources throughout UNL contribute to student success. Located on the University’s East Campus, the Cooperative Program in Veterinary Medicine offers updated facilities, state–of–the–art teaching resources and convenient access to the C.Y. Thompson Library. Other UNL facilities, such as Great Plains Veterinary Educational Center (GPVEC) at Clay Center, NE and the Agricultural Research and Development Center (ARDC) at Mead, NE, provide opportunities for enhanced learning through participation in animal health activities during the first two years of their professional education.

For more information about this program and admission requirements, please refer to [http://vetmed.unl.edu](http://vetmed.unl.edu) or call 402-472-7211.

**Faculty**
For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/VeterinaryAndBiomedSciences).

Retrieved from "[http://bulletin.unl.edu/graduate/Veterinary_and_Biomedical_Sciences](http://bulletin.unl.edu/graduate/Veterinary_and_Biomedical_Sciences)"

**Journalism and Mass Communications**

**Subject Areas**
- Advertising & Public Relations (ADPR) [#ADPR]
- Broadcasting (BRDC) [#BRDC]
- Journalism Core Courses (JOUR) [#JOUR]
- Journalism Graduate Courses (JGRD) [#JGRD]
- News Editorial (NEWS) [#NEWS]

**Courses for ADPR (ADPR)**

### Art Direction
**ADPR 433/833**

**Prereqs:**
- Junior standing and [JOMC 101](http://bulletin.unl.edu/courses/JOMC/101), 162
- [JOMC 162](http://bulletin.unl.edu/courses/JOMC/162), 163
- [JOMC 163](http://bulletin.unl.edu/courses/JOMC/163), 164
- [JOMC 164](http://bulletin.unl.edu/courses/JOMC/164) and [165](http://bulletin.unl.edu/courses/JOMC/165); and [ADPR 251](http://bulletin.unl.edu/courses/ADPR/251), 283
- [ADPR 283](http://bulletin.unl.edu/courses/ADPR/283) and [333](http://bulletin.unl.edu/courses/ADPR/333).

[ADPR 433](http://bulletin.unl.edu/courses/ADPR/433) has individual and team projects.

Visual and graphic design as applied to the corporate environments of advertising and public relations. Print and electronic design principles, strategies and elements using traditional and new digital technologies. Development of creative materials for actual clients, corporate identities, electronic presentations, professional creative portfolios, non–traditional resumes, and World Wide Web (WWW) sites.

### Digital Insight & Analytics
**ADPR 434/834**

**Prereqs:**
- [ADPR 283](http://bulletin.unl.edu/courses/ADPR/283).

A study of the digital communication landscape. Course explores how various channels of digital communication can be used to analyze audiences, connect with them and ultimately build brands.

### Global Advertising
**ADPR 438/838**

**Prereqs:**
- [ADPR 283](http://bulletin.unl.edu/courses/ADPR/283).

A study of the digital communication landscape. Course explores how various channels of digital communication can be used to analyze audiences, connect with them and ultimately build brands.
**Strategic and Creative Concepting**

**Prereqs:**
ADPR 251 and 283
ADPR 283
JOMC 101
JOMC 162
JOMC 163
JOMC 164
JOMC 165
ADPR 251
ADPR 283
JOMC 101
JOMC 162
JOMC 163
JOMC 164
JOMC 165

The alternative and advanced methods of communicating a message, a need, a perception or attitude. Creative storytelling and problem-solving, critique and analysis, and how to creatively communicate with strategic thinking and design.

**Public Relations Theory and Strategy**

**Prereqs:**
Junior standing and either ADPR 283 or BRDC 227
Junior standing and either ADPR 283 or JOUR 202

Philosophies and theories that underlie the discipline and profession of public relations. The critical and supportive perspectives used to gain insight into the history and direction of public relations.

**Public Relations Techniques**

**Prereqs:**
ADPR 251 and 283
ADPR 283
JOMC 101
JOMC 162
JOMC 163
JOMC 164
JOMC 165

Multimedia tools in advertising, public relations, direct marketing, and sales promotion. Promotional writing, publications development, and media relations.

**New Media Design**

**Prereqs:**
ADPR 251 and 283
ADPR 283
JOMC 101
JOMC 162
JOMC 163
JOMC 164
JOMC 165

Multimedia tools in advertising, public relations, direct marketing, and sales promotion. Promotional writing, publications development, and media relations.
The new media and interactive technologies used in a variety of print, broadcast, and electronic media, and digital communications. Writing, designing, and producing communications messages using traditional and new multimedia technologies.

**Writing for Digital Media**

**ADPR 459/859**

Prereqs:
Junior standing and either **ADPR 283** [Add Link] or **BRDC 228** [Add Link].

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. Regulations, responsibilities, audience analysis, and promotion.

**Japanese Visual Culture in Context**

**ADPR 480/880**

Crosslisted as **ARTP 480/880** [Add Link]

ADPR 480/880 is a study abroad course that includes four days on campus in Lincoln and two and one-half weeks in Japan. ADPR/ARTP 480 is 'letter grade only'.

Test and hone visual literacy skills in a foreign country. Observe, analyze, and interpret visual information without the aid of text in the native Japanese language. Sharpen perceptual and analytical skills through daily drawing, writing, and photography in Japan. Increase global awareness through analysis of an issue.

**Direct Advertising**

**ADPR 482/882**

Prereqs: **ADPR 283** [Add Link]

**ADPR 482** [Add Link] assignments provide practical experience.

Fundamentals of direct advertising, data base building and management, the economics of the industry, development and testing of effective creative materials, product selection and pricing, telemarketing, business to business direct advertising, lead-generating programs, the use of electronic and print media in the direct advertising mix and fund-raising for worthy causes.

**Portfolio Development**

**ADPR 483/883**

Prereqs: Senior standing and **ADPR 251** [Add Link], **ADPR 283** [Add Link] and **JOMC 101** [Add Link], **JOMC 162** [Add Link], **JOMC 163** [Add Link], **JOMC 164** [Add Link] and **JOMC 165** [Add Link].

[18x767](http://bulletin.unl.edu/courses/JOMC/165): and Junior standing.
How to improve individual portfolios of creative work and execute a variety of creative pieces that demonstrate improvement in their collections.

**Brands & Branding**

Prereqs:
Junior standing: ADPR 251 (http://bulletin.unl.edu/courses/ADPR/251), 283 (http://bulletin.unl.edu/courses/ADPR/283), JOMC 101 (http://bulletin.unl.edu/courses/JOMC/101), 162 (http://bulletin.unl.edu/courses/JOMC/162), 163 (http://bulletin.unl.edu/courses/JOMC/163), 164 (http://bulletin.unl.edu/courses/JOMC/164) and 165 (http://bulletin.unl.edu/courses/JOMC/165).

The managerial philosophy, techniques, and processes in advertising. Organizational structures, integrated marketing communications, strategic planning, marketing planning, advertising planning, advertising research, budgeting, and decision paradigms.

**Media Sales and Promotion**

Prereqs:
For ADPR majors: ADPR 283 (http://bulletin.unl.edu/courses/ADPR/283); Junior standing for BRDC majors.

Techniques for print and electronic media sales and promotion. Rate structures, legal requirements, and social and economic effects.

**Advertising and Public Relations Campaigns**

Prereqs:
Senior standing and nine hours selected from JOUR 201 (http://bulletin.unl.edu/courses/JOUR/201), JOUR 202 (http://bulletin.unl.edu/courses/JOUR/202), ADPR 207 (http://bulletin.unl.edu/courses/ADPR/207), or from 300- or 400- level ADPR electives.

ADPR 489 (http://bulletin.unl.edu/courses/ADPR/489) requires working in teams.

Conduct research and evaluate the findings to develop and present an integrated marketing communications strategy and creative materials for a multimedia advertising and public relations campaign needed by a client. Application of knowledge, experience, and skills learned in previous courses to a new situation.

**Special Topics in Advertising**

ADPR 491 (http://bulletin.unl.edu/courses/ADPR/491) (http://bulletin.unl.edu/courses/ADPR/891) may be repeated up to three times so long as the topics are different.

Topics vary each term.
Independent Study in Advertising and Public Relations

Prereqs:
Permission.

Credit Hours: 1-24
Max credits per degree: 24
Course Format: Independent Study
Course Delivery: Classroom

Strategic Communications: Advertising Issues and Strategies

Seminar for graduate students who do not have the equivalent of an undergraduate degree in advertising. Business of advertising and promotion, and the processes and planning involved in strategic promotional communication. Current issues and strategies faced by advertising practitioners, the importance of branding, integrated marketing communications and promotion. Creation of a strategic marketing plan.

Credit Hours: 3
Course Format: Lecture 3
Campus: Classroom

Special Topics in Advertising

Course may be repeated up to three times so long as the topics are different. Topic varies each semester.

Credit Hours: 1-4
Max credits per degree: 12
Campus: Classroom

Senior Assessment

Prereqs:
Senior standing; ADPR major; candidate for degree.

All seniors must complete an exit interview to remain eligible for graduation. ADPR 98 uses Blackboard. Pass/No Pass only.

Appropriate career-related announcements, activities, and responsibilities.

Credit Hours: 0
Course Format: Independent Study
Course Delivery: Web

Courses for BRDC (BRDC)

Advanced Television Production

Prereqs:
BRDC 228.

Theory of visualization for television. Practical application of directing techniques. Programs analyzed in relation to translation of facts, ideas, emotions and attitudes through television. Program production experience in the studios of the university station, KUON-TV.

Credit Hours: 3
Course Delivery: Classroom

Broadcast Management

Credit Hours: 3
Course Delivery: Classroom
Prereqs:
Senior standing and major in broadcasting.

Organizational and management procedures as they relate to the telecommunications media.

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<tr>
<th>Course Code</th>
<th>Title</th>
<th>Prereqs</th>
<th>Link</th>
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<tbody>
<tr>
<td>455/855</td>
<td>Broadcast Programming</td>
<td>Senior standing and major in broadcasting.</td>
<td><a href="http://bulletin.unl.edu/courses/BRDC/455">LINK</a></td>
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<tr>
<td>456/856</td>
<td>Cable Telecommunications</td>
<td>Senior standing and major in broadcasting.</td>
<td><a href="http://bulletin.unl.edu/courses/BRDC/456">LINK</a></td>
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<tr>
<td>461/861</td>
<td>Instructional Television</td>
<td>Senior standing in broadcasting.</td>
<td><a href="http://bulletin.unl.edu/courses/BRDC/461">LINK</a></td>
</tr>
<tr>
<td>465/865</td>
<td>International Broadcasting</td>
<td>Senior standing in broadcasting or international studies.</td>
<td><a href="http://bulletin.unl.edu/courses/BRDC/465">LINK</a></td>
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<tr>
<td>466/866</td>
<td>Telecommunication and Information Systems</td>
<td>Permission of department head.</td>
<td><a href="http://bulletin.unl.edu/courses/BRDC/466">LINK</a></td>
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</tbody>
</table>

The telephone industry, voice and data communication and networking systems. Explores the development and structure of telecommunications, issues, services, applications, technology and management.
### Advanced Cinematography/Videography

**Prereqs:**
- BRDC 359 and 369

**Course**
- Production of single and double system sound films. Production of videotapes for television.

### Broadcast Documentary

**Prereqs:**
- Senior standing in broadcasting; BRDC 372

**Course**
- Depth reporting and advanced production techniques necessary for the preparation of a broadcast documentary program.

### Advanced Broadcast Writing

**Prereqs:**
- Senior standing.

**Course**
- Techniques of planning, preparing and writing radio, television and motion picture scripts including announcements, interviews, talk programs, features, editorials, investigative reports and dramatic adaptations.

### Special Topics in Broadcasting

**Course**
- Course may be repeated up to three times so long as the topics are different. Topic varies each term.

### Courses for JOUR (JOUR)

### Depth Reporting

**Prereqs:**
- JOUR 302

**Course**
- Long–form writing, interviewing, computer–generated research, refined writing and teamwork in the creation of a single–subject project.
Digital Photojournalism I

**404/804**

**Prereqs:**
JOMC 101 and 162

This course is a prerequisite for JOUR 406.

*Student work in JOUR 404 will appear on student news World Wide Web (WWW) site.*

News, feature, sports and picture-story journalism.

Digital Photojournalism II

**406/806**

**Prereqs:**
JOUR 404 and 804

*Work in JOUR 406 will appear on the student news World Wide Web (WWW) site.*

Building visual skills to recognize action, reaction and/or emotion, and incorporating them into the shootings and pictures.

Investigative and Computer-assisted Reporting

**407/807**

Conduct investigative and in-depth reporting by using documents and computer databases, interviewing, and field research to write compelling stories.

Page Design

**410/810**

**Prereqs:**
JOMC 162, 163, 164, 165, JOUR 201

Designing elements of news presentation, including newspapers, magazines, and web sites.

Government Controls of Information

**414/814**

Laws, regulations, and practices by which federal, state, and local government enhance or retard access to information about the executive, legislative, and judicial branches.
**School Publications**

**JOUR 467/867**

JOUR 467 (http://bulletin.unl.edu/courses/JOUR/467) is open only to students seeking a 7-12 journalism teaching endorsement.

Problems and procedures involved in producing school newspapers, yearbooks, literary magazines, and radio and/or video projects.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom

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**Media Economics**

**JOUR 813**

Economic theory applied to analysis of mass media industries. Structure, performance, and competitions across print media, advertising, broadcasting, and new digital media. Preparation for conducting economic analyses of mass media behavior and performance.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

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**Senior Assessment**

**JOUR 98**

Prereqs:  
Senior standing; JOUR major; candidate for degree.

All seniors must complete an exit interview to remain eligible for graduation. JOUR 98 (http://bulletin.unl.edu/courses/JOUR/98) uses Blackboard. JOUR 98 (http://bulletin.unl.edu/courses/JOUR/98) is 'Pass/No Pass only'.

Appropriate career-related announcements, activities, and responsibilities.

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**Courses for JGRD (JGRD)**

**Media Law Seminar**

**JGRD 809**

Reading, discussion, and research on current issues in mass media law or theoretical bases for freedom of expression.

**Credit Hours:** 3  
**Course Format:** Lecture, Recitation  
**Campus:**  
**Course Delivery:** Classroom

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**Seminar in Media History**

**JGRD 811**

Readings and discussion of major issues, events, and people in the history of mass media in the United States.

**Credit Hours:** 3  
**Course Format:** Lecture, Recitation  
**Campus:**  
**Course Delivery:** Classroom

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**Mass Media: Introduction**

**JGRD**

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### JGRD 820
**Prereqs:** Permission
- Mass media structure, development, systems, responsibilities and ethics, and criticisms.

### JGRD 831
**Strategic Communications: Writing and Design**
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Classroom
- Seminar for graduate students who do not have an undergraduate degree in advertising. Strategic and creative components of advertising, both from the visual and textual perspectives. Specific strategies for writing and designing advertising, promotional and public relations materials; creative aspects related to strategic planning.

### JGRD 835
**International Communications**
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Classroom
- Systems of mass communications in foreign countries and across international boundaries.

### JGRD 891
**Special Topics**
**Credit Hours:** 1-4
**Max credits per degree:** 12
**Campus:** Classroom
**Course Delivery:** Classroom
- [JGRD 891](http://bulletin.unl.edu/courses/JGRD/891) may be repeated up to three times so long as the topics are different.
- Topics vary.

### JGRD 896
**Independent Study**
**Credit Hours:** 1-3
**Max credits per degree:** 3
**Campus:** Classroom
**Course Delivery:** Classroom
- Prereqs: Permission of major adviser

### JGRD 899
**Masters Thesis**
**Credit Hours:** 6
**Campus:** Classroom
**Course Delivery:** Classroom
- Prereqs: Admission to masters degree program and permission of major adviser

### JGRD 901
**Ethics and Issues in Mass Communication**
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Classroom
- [JGRD 899](http://bulletin.unl.edu/courses/JGRD/899)
Multi-platform Journalism

Skills and technologies involved with multi-platform journalism and management.

903 Media Management

Current issues in business management related to the media environment.

915 Mass Communication Theory

Process and effects of mass communication.

919 Methods of Mass Communication Research

Research concepts and procedures with emphasis on methodology 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.

954 Mass Media and Government

Process and effects of regulatory information control procedures of federal, state, and local government.

Professional Project

Development of thesis topic may come from JGRD 992. JGRD 992 is designed for increasing competency in professional practice and depending on goals, may be
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Interim Dean: Jim O'Hanlon, PhD
Graduate Chair: Laurie Lee, PhD

The graduate program in journalism and mass communications is designed to prepare students to enter a variety of media professions. Students hone their abilities to communicate effectively to audiences in the midst of a changing media environment by focusing their studies in advertising, broadcasting, news–editorial or a combination of areas.
Students interested in news-editorial and broadcasting can select the professional journalism track, designed to combine principles and practices to prepare them to be leaders in the field, or a thesis track, created to help them build a foundation for a successful future in the academic world. Students interested in an academic career in advertising, publication and strategic communication can also choose the thesis track.

Students entering the graduate program, with the exception of those in the 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 of study 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. For students admitted to an advertising graduate option, an undergraduate or graduate level statistics course is a prerequisite. 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 program in journalism and mass communications.

Master of Arts in Journalism and Mass Communications.

All candidates must complete a program that conforms to the general requirements of the Graduate College. Refer to "Requirements for Graduate Degrees" in this bulletin. Completion of a minimum of 30 semester hours credit in approved courses is required for those choosing the thesis track, Option I (refer to "Requirements for the Masters Degree"). Up to 9 hours in graduate-level courses may be included from academic course work from outside the College or outside the student's area of specialization within the college. Journalism course numbers that are required in Option I are: 915 Mass Communication Theory (3 cr); 919 Methods of Mass Communication Research (3 cr); 954 Mass Media and Government (3 cr); 992 Professional Project or advanced level course work (6 cr); 899 Masters Thesis (6–10 cr).

News-editorial and broadcasting students in the professional journalism specialization follow the guidelines for Option III. This requires students to complete 36 hours of course work, including a professional project and intensive course work in place of a minor. Fifteen hours of course work are required, including JGRD 901 Mass Media Issues and Ethics (3 cr); JGRD 902 Multi–Platform Journalism (3 cr); JGRD 903 Media Management (3 cr); and JGRD 992 Professional Project (6 cr). Students select 21 hours of approved electives. Eighteen credit hours must be earned in courses open exclusively to graduate students. A minimum of 18 credit hours must be taken in the college.

All applicants to the graduate program must provide Graduate Record Examination scores. Competitive applicants have a combined score of 1,000 with a verbal score of 500 and an analytical writing score of 4.5. Applicants with lower scores will also be considered. In addition, applicants who speak English as a second language must present documentation of a TOEFL score of 600 or higher (100 computer-based) and a minimum of 25 on the speak portion of the TOEFL exam, if they do not have a bachelors degree from a U.S. post-secondary institution.

Specializations available for the MA in Journalism and Mass Communications:

Integrated Media Communications (IMC); Media Studies; and Professional Journalism.

Please note that Journalism and Mass Communications offers a media specialization in cooperation with the doctoral program in Political Science (http://www.unl.edu/gradstudies/prospective/programs/PoliticalScience.shtml). Students may also obtain a joint degree (JD/MA) in conjunction with the College of Law (http://law.unl.edu/academics/degree_programs.shtml#jurisdoctor).

Faculty

For faculty list, research interests and department contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/JournalismAndMassComm)

Law/Legal Studies

Courses for LAW (LAW)

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted as</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Cost</th>
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</thead>
<tbody>
<tr>
<td>ACCT 837</td>
<td>Taxation–Individual Income</td>
<td>LAW 637G</td>
<td>LAW 632, 638G</td>
<td>3–4</td>
<td>4</td>
<td>Classroom</td>
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<td></td>
<td>The structure and content of the federal income tax system, focusing on taxation of individuals. Income, deductions, 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.</td>
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<tr>
<td>ACCT 848</td>
<td>Business Planning</td>
<td>LAW 648G</td>
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<tr>
<td></td>
<td>Prereqs:</td>
<td>LAW 632, 638/G</td>
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</tbody>
</table>
Series of separate, rather detailed planning problems. Each problem calls for the selection and planning of a transaction to meet the needs of the parties involved, in light of applicable corporate, partnership, tax, and securities considerations.

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>URL</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 863</td>
<td><strong>Taxation-Individual Income II</strong></td>
<td>LAW 663G</td>
<td><a href="http://bulletin.unl.edu/courses/ACCT/863">Link</a></td>
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<td>Classroom</td>
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<tr>
<td>ACCT 967</td>
<td><strong>Estate Planning</strong></td>
<td>LAW 767G</td>
<td><a href="http://bulletin.unl.edu/courses/ACCT/967">Link</a></td>
<td>1-4</td>
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<td>Classroom</td>
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<tr>
<td>ACCT 969</td>
<td><strong>Tax Policy Seminar</strong></td>
<td>LAW 769G</td>
<td><a href="http://bulletin.unl.edu/courses/ACCT/969">Link</a></td>
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</tr>
<tr>
<td>AECN 804</td>
<td><strong>Agricultural Law</strong></td>
<td>LAW 704G</td>
<td><a href="http://bulletin.unl.edu/courses/AECN/804">Link</a></td>
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<tr>
<td>AECN 841</td>
<td><strong>Environmental Law</strong></td>
<td>LAW 641G</td>
<td><a href="http://bulletin.unl.edu/courses/AECN/841">Link</a></td>
<td>1-4</td>
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<td>Classroom</td>
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<tr>
<td>AECN 876</td>
<td><strong>Water Law, Planning and Policy</strong></td>
<td>LAW 776G</td>
<td><a href="http://bulletin.unl.edu/courses/AECN/876">Link</a></td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
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<tr>
<td>AECN 893</td>
<td>Law and Economics</td>
<td>LAW 693G</td>
<td>Economic principles to problems of legal interpretation and policy. Gives economic background for substantive courses in such areas as antitrust, regulated industries, and environmental law and also demonstrates the power of economic analysis when applied to problems in such diverse areas as contracts, property, torts, criminal law, family law, corporations, taxation, securities, procedure, and constitutional law.</td>
<td>1-4</td>
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<td>Classroom</td>
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<tr>
<td>CIVE 916</td>
<td>Environmental Law and Water Resource Management Seminar</td>
<td>NRES 916, LAW 774G</td>
<td>An interdisciplinary seminar with the Department of Civil Engineering. Contemporary environmental issues and water resource management.</td>
<td>1-4</td>
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<td>Classroom</td>
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<tr>
<td>CYAF 950</td>
<td>Family Law</td>
<td>LAW 630G</td>
<td>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.</td>
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<tr>
<td>ECON 814</td>
<td>Insurance Law</td>
<td>LAW 783G</td>
<td>Principles of insurance law. Focuses on features of common insurance contracts and the legislative, judicial and administrative supervision of both insurance contracts and the insurance industry.</td>
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<td>Classroom</td>
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<tr>
<td>ECON 827</td>
<td>Land Use Planning</td>
<td>LAW 699G</td>
<td>Legal and administrative aspects of the regulation of land use and development, the problems and techniques of urban planning at the various levels of government, and the relationship of private owners and builders to the government policies involved in shaping the physical environment.</td>
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<td>Classroom</td>
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<tr>
<td>ECON 828</td>
<td>Antitrust and Trade Regulation</td>
<td>LAW 628G</td>
<td>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.</td>
<td>1-4</td>
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<td>Classroom</td>
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</tbody>
</table>
Unfair Competition
Crosslisted as LAW 645G

Federal and state statutory provisions and common law doctrines restricting unfair methods of competition. Includes the law of trademarks, trade secrets, misappropriation, false advertising, disparagement, and the role of the FTC in regulating deceptive practices, together with brief introductions to copyright and patent law.

Credit Hours: 1-4
Campus:
Course Delivery: Classroom

Products Liability Seminar
Crosslisted as LAW 793G

Selected problems in products liability, with emphasis on research and writing projects analyzing the problems.

Credit Hours: 1-4
Campus:
Course Delivery: Classroom

Labor Law
Crosslisted as LAW 753G

Legislative and judicial patterns of the modern labor movement; the objectives of labor combinations; the forms of pressure employed for their realization and prevention; strikes, boycotts, picketing, and lockouts; the legal devices utilized in carving out the permissible bounds of damage suits involving labor activity; the labor injunction; the National Labor Relations Board; the nature of collective bargaining agreements; extra legal procedure for settling labor disputes—the techniques of mediation, conciliation, and arbitration.

Credit Hours: 1-4
Campus:
Course Delivery: Classroom

Administrative Law
Crosslisted as LAW 633G

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 state administrative tribunals, their powers and functions, and problems of administrative procedure, judicial and other controls upon the administrative process.

Credit Hours: 1-4
Campus:
Course Delivery: Classroom

Constitutional Law I
Crosslisted as LAW 609G

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.

Credit Hours: 1-4
Campus:
Course Delivery: Classroom

Constitutional Law II
Crosslisted as LAW 732G

Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom of speech, association, and press; and constitutional principles enforcing the first amendment’s command that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.”

Credit Hours: 1-4
Campus:
Course Delivery: Classroom
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDAD 874</td>
<td>Torts I</td>
<td>LAW 503G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/874">link</a></td>
<td>1-6</td>
<td>6</td>
<td>Classroom</td>
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<td></td>
<td>Legal protection afforded in civil proceedings against interference with the security of one's person, property, relations, and other intangible interests. 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.</td>
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<tr>
<td>EDAD 956</td>
<td>Employment Law Seminar</td>
<td>LAW 759G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/956">link</a></td>
<td>1-4</td>
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<tr>
<td></td>
<td>Selected current national and state legal issues pertaining to private and public employment.</td>
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<tr>
<td>EDAD 959</td>
<td>Law and Educational Administration</td>
<td>LAW 695G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/959">link</a></td>
<td>1-4</td>
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<td>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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.</td>
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<tr>
<td>EDAD 963</td>
<td>Legislation Seminar</td>
<td>LAW 777G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/963">link</a></td>
<td>1-4</td>
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<td>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.</td>
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<tr>
<td>EDAD 964</td>
<td>Local Government Law</td>
<td>LAW 788G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/964">link</a></td>
<td>1-4</td>
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<td></td>
<td>Law of local government units with emphasis on current problems in the operation and administration of local government, models and theories of local government.</td>
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<tr>
<td>EDAD 968</td>
<td>Education Law Seminar</td>
<td>LAW 621G</td>
<td><a href="http://bulletin.unl.edu/courses/EDAD/968">link</a></td>
<td>1-4</td>
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<td></td>
<td>Selected current national and state legal issues pertaining to education.</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
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<tr>
<td>EDAD 970</td>
<td>Criminal Law</td>
<td>LAW 508G</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDAD 971</td>
<td>Evidence</td>
<td>LAW 646G</td>
<td>1-4</td>
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<td>Classroom</td>
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<td>Relevancy and admission of evidence, including hearsay, opinions, privileges, other exclusionary rules, examination of witnesses, judicial notice, and physical evidence.</td>
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<tr>
<td>EDAD 973</td>
<td>Jurisprudence</td>
<td>LAW 672G</td>
<td>3</td>
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<td>What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.</td>
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<tr>
<td>EDAD 976</td>
<td>Legal Control of Discrimination</td>
<td>LAW 680G</td>
<td>1-4</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Selected legal issues pertaining to the legal control of discrimination.</td>
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<tr>
<td>EDAD 977</td>
<td>Constitutional History</td>
<td>LAW 619/619G</td>
<td>1-4</td>
<td>Lecture</td>
<td>Classroom</td>
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<td>American constitutional history with a focus on &quot;transformative&quot; moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.</td>
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<tr>
<td>EDAD 978</td>
<td>Mass Communications Law</td>
<td>LAW 649G</td>
<td>1-4</td>
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<td>Classroom</td>
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<td>In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.</td>
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<tr>
<td>IMSE 801</td>
<td>Products Liability</td>
<td>LAW 755G</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
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<td></td>
<td>Liability issues arising out of manufacturing defects, design defects and warning defects in various product categories. Specific issues related to</td>
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product liability, such as identifying proper defendants, establishing
causation and the issue of post-sale warnings. Broader policy questions
about the role of litigation versus regulation in a democracy and a market
economy.

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<th>Course</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td><strong>Contracts I</strong></td>
<td>3–6</td>
<td>6</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>LAW 501G</td>
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<tr>
<td>When taken for 6 credits, includes both LAW 501G (<a href="http://bulletin.unl.edu/courses/LAW/501G">http://bulletin.unl.edu/courses/LAW/501G</a>) and 502G (<a href="http://bulletin.unl.edu/courses/LAW/502G">http://bulletin.unl.edu/courses/LAW/502G</a>). Basic principles governing the creation, interpretation and enforcement of private agreements. Offer and acceptance, consideration, the effect of changed or unforeseen circumstances, conditions and remedies.</td>
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<tbody>
<tr>
<td><strong>Contracts II</strong></td>
<td>3–6</td>
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<td>Classroom</td>
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<tr>
<td>LAW 502G</td>
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<tr>
<td>For course description, see LAW 501G (<a href="http://bulletin.unl.edu/courses/LAW/501G">http://bulletin.unl.edu/courses/LAW/501G</a>).</td>
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<th>Course Delivery</th>
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<tbody>
<tr>
<td><strong>Property I</strong></td>
<td>3–6</td>
<td>6</td>
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<td>Classroom</td>
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<tr>
<td>LAW 505G</td>
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<tr>
<td>Problems in possession, gifts of personal property, bona fide purchasers of personal property, estates in land, landlord and tenant, the modern land transaction, controlling the use of land, easements, licenses and equitable servitudes and constitutional limitations on the power of government to restrict individual economic liberties.</td>
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<th>Course Delivery</th>
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<tr>
<td><strong>Property II</strong></td>
<td>3–6</td>
<td>6</td>
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<td>Classroom</td>
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<tr>
<td>LAW 506G</td>
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<tr>
<td>For course description, see LAW 505G (<a href="http://bulletin.unl.edu/courses/LAW/505G">http://bulletin.unl.edu/courses/LAW/505G</a>).</td>
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<th>Course Delivery</th>
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<tr>
<td><strong>Foundational Legal Skills: Research, Writing and Professionalism</strong></td>
<td>2</td>
<td>Lecture 2</td>
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<td>Classroom</td>
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<tr>
<td>LAW 513G</td>
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<td>The emphasis of this course is on the development of legal research and writing skills; writing is the lawyer’s most commonly used skill, and effective writing rests on effective research. Communicating like a lawyer, however, means not only communicating professionally but also conducting oneself ethically. In addition to providing sustained and intensive instruction on legal research and writing, this course introduces students to many facets of professionalism and to the skills necessary to make ethical and professional choices.</td>
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<th>Course Delivery</th>
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<tr>
<td><strong>Foundational Legal Skills: Research, Writing, and Professionalism II</strong></td>
<td>2</td>
<td>Lecture 2</td>
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<td>Classroom</td>
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<tr>
<td>LAW 514G</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>514G</td>
<td>Legal Research and Writing</td>
<td>The emphasis of this course is on the development of legal research and writing skills; writing is the lawyer's most commonly used skill, and effective writing rests on effective research. Communicating like a lawyer, however, means not only communicating professionally but also conducting oneself ethically. In addition to providing sustained and intensive instruction on legal research and writing, this course introduces students to many facets of professionalism and to the skills necessary to make ethical and professional choices.</td>
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<tr>
<td>516G</td>
<td>Civil Procedure I</td>
<td>This course is a prerequisite for LAW 729G. Introduction to federal and state court organization, jurisdiction, and procedure. Emphasis on pre-trial, trial, and post-trial procedures, including pleading, enforcement of judgements, motion practice, appellate review, and the effects of res judicata and collateral estoppel.</td>
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<tr>
<td>517G</td>
<td>Civil Procedure II</td>
<td>For course description, see LAW 516G.</td>
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include the legal and social science aspects of: ethical issues related to client legal capacity, health care decision making, Medicare, Medicaid, Social Security, long-term informal and formal care (including guardianship), financial aspects of aging, ageism, and elder maltreatment.

**Law Office Management (603/603G)**

Issues confronted by the small firm and/or sole practitioner. Firm organization, e.g., partnerships, professional corporations, limited liability companies, limited liability partnerships and partnership and shareholder agreements. The role of partners, shareholders, associates and non-lawyer staff, e.g., law clerks paralegals and legal secretaries. Ethical issues involved in the marketing of legal services, firm financial matters and dealing with clients within the organizational structure. Managing the legal product as well as physical resource needs such as traditional libraries through electronic information resources.

**Appellate Advocacy (610G)**

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.

**International Litigation and Arbitration (611G)**

Issues that United States courts face when international disputes arise. Jurisdiction, international service, international evidence gathering, extraterritorial application of United States domestic law, the act of state doctrine, foreign sovereign immunity, and enforcement of international judgments. Resolving conflicts through arbitration and comparative perspectives about methods of resolving international commercial disputes.

**Electronic Commerce (613G)**

Participation on Blackboard required. There are no prerequisites, although students who have taken a Uniform Commercial Code course will find that helpful. Issues arising in electronic commerce, including setting up a business in cyberspace, the privacy issues associated with online data collection, and the laws governing the sale of goods, licensing, secured transactions and payments in an electronic environment. A variety of state, federal and international legislation and directives will be considered, including the Communications Decency Act, the Digital Millennium Copyright Act, the Fair Credit Reporting Act, the Electronic Communications Privacy Act, the USA Patriot Act of 2001, the financial privacy provisions of the Gramm-Leach-Bliley Act, digital signature statutes and the Children’s Online Privacy Protection Act.

**Election Law (614G)**

Legal doctrine and policy as it relates to the democratic political process. Text of the Constitution and federal legislation that governs voting and the
Course Delivery: Classroom

**political process, the decisions of the United States Supreme Court**

interpreting the Constitution and federal statutes, and the federal
regulations that impact our democracy. Campaign finance, the Voting Rights
Act, "one person, one vote," racial and partisan gerrymandering, direct
democracy, the regulation of political parties, and the Help America Vote
Act. Where the law of our democracy has been, where it is today, and where
it might be headed.

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**International Human Rights Law**

Students previously enrolled in Seminar (707G) 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. fact–finding and implementation mechanisms; the
relationship between U.N. peacekeeping and peacemaking and international
humanitarian law; the activities of regional human rights systems; the effect
of the United State’s recent signature and ratification of 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.

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**Construction Practice**

Major facets of the construction process. Project concept stage, terms and
provisions of the construction contract, contract execution stage,
performance stage, disputes and relationships among the contracting
parties, and architect–engineer.

---

**Corporations Seminar**

Prereqs:

- LAW 632 [Link](http://bulletin.unl.edu/courses/LAW/632)
- LAW 789 [Link](http://bulletin.unl.edu/courses/LAW/789)

Selected issues in corporate and securities law.

---

**Environmental Ethics and Law Seminar**

Key theories in environmental ethics and environmental law; enhanced
ability to analyze critically and communicate clearly and persuasively in an
interdisciplinary forum through writing, informal discussion, and formal
presentations; and a deeper understanding of sustainability as a principle of
environmental law and ethics especially in agriculturally dominated
landscapes. Nature of ethics and its relation to law; climate change; bio–fuels with implications for farm communities, water resources, and food
supplies; and genetically modified organisms (GMO’s).

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**Immigration Law**

History of immigration to the United States, federal authority to regulate
immigration, immigrant visas, nonimmigrant visas, deportation, political
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<th>Course Code</th>
<th>Course Name</th>
<th>Course Delivery</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Format</th>
<th>Max credits per degree</th>
<th>This course is a prerequisite for:</th>
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<tbody>
<tr>
<td>LAW 625G</td>
<td>Copyright Seminar</td>
<td>Classroom</td>
<td>1-4</td>
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<td></td>
<td>The protection of literary, artistic, musical, and audiovisual works under the laws of copyright and unfair competition. Rights in computer programs, characters, titles, and useful articles. Home recording, photocopying, computer uses/Internet, and public performance.</td>
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<tr>
<td>LAW 626G</td>
<td>Emerging Family Law Issues</td>
<td>Classroom</td>
<td>3</td>
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<td>Lecture 2.5</td>
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<td>This course focuses on cutting-edge legal issues related to family law and policy. Topics may include the regulation of reproduction, sexuality and family formation, but will largely be dictated by family law controversies in the courts at the time of the course. Family Law is not a pre-requisite for this course.</td>
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<tr>
<td>LAW 627G</td>
<td>Payment Systems</td>
<td>Classroom</td>
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<td>Negotiable instruments, bank collections, negotiable documents, selected aspects of sales, and products liability.</td>
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<td>LAW 629G</td>
<td>Accounting for Lawyers</td>
<td>Classroom</td>
<td>1-4</td>
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<td>Those who had 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.</td>
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<tr>
<td>LAW 631G</td>
<td>Criminal Procedure</td>
<td>Classroom</td>
<td>1-4</td>
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<td></td>
<td>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.</td>
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</table>
### Oil and Gas Law (634G)

Legal issues encountered in the development of oil and gas reserves.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Family Law Practice (635G)

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.

**Credit Hours:** 1-5  
**Campus:**  
**Course Delivery:** Classroom

### Corporate Mergers and Acquisitions (636G)

Corporate 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.

**Prereqs:** LAW 632G

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Wills and Trusts (639G)

Intestate succession and related matters, execution of wills, revocation of wills, problems created by the time gap in wills, limitations on the power to devise, construction of wills (mistake and ambiguity), the elements of trust, formalities in the creation of a trust, the interest of the beneficiary, charitable trusts, and problems of trust administration.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Conflict of Laws (642G)

Legal and constitutional concepts involved in choosing the applicable law when the essential facts of a case are not confined to one state or national sovereignty.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Advanced Torts (643G)

Selected topics in tort law. Advanced class in tort law, considering the general legal theory of tort, as well as specific topics not studied in detail.

**Credit Hours:** 1-4  
**Campus:**
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
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<tbody>
<tr>
<td>LAW 644G</td>
<td>Secured Transactions</td>
<td>Creditors' remedies outside of bankruptcy, secured financing of personal property, and the impact of federal bankruptcy law on secured creditors.</td>
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<tr>
<td>LAW 647G</td>
<td>Employment Law</td>
<td>Analysis of the employment relationship as it has developed outside of the collective bargaining context. History and current status of the employment relationship, including discharge—of—will, occupational safety and health, minimum wage/maximum hour legislation, unemployment compensation and noncompetition agreements.</td>
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<tr>
<td>LAW 650G</td>
<td>Taxation—International</td>
<td>Introduction to the US federal income tax rules that apply to US persons (including corporations, partnerships and individuals) living or doing business abroad or receiving income from foreign sources, and to foreign persons living or doing business in the US or receiving income from US sources. Effect of US tax treaties on these rules.</td>
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<tr>
<td>LAW 652G</td>
<td>Comparative Law Seminar</td>
<td>Introduction to major families of legal systems outside the common law orbit. Emphasis is on Western European and Socialist (Marxist) legal systems; others treated less intensively.</td>
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<tr>
<td>LAW 653G</td>
<td>Refugee and Asylum Law and Practice</td>
<td>Each student will be required to write a 15 page paper for the course. This paper requirement will not fulfill the Law College seminar requirement for graduation. Introduces students to US refugee and asylum law. Refugee issues in the context of domestic and international political environments.</td>
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Asylum reform, gender-based persecution, persecution of lesbians and gays, deficiencies in international and domestic refugee law, and firm resettlement of displaced persons. With an interdisciplinary focus, interplay among political, social, economic, cultural and psychological phenomena as refugees, governments of host countries, and international and nongovernmental organizations interact in the context of ongoing crises around the world. Contrasting viewpoints discussed. Along with relevant substantive law and procedure, participation in simulations designed to teach practical skills necessary to an asylum and refugee law practice, including working with translators, interviewing and case advocacy. Asylum cases serve as the foundation for role play exercises.

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<th>Course Code</th>
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<th>Course Delivery</th>
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<tr>
<td>LAW 654G</td>
<td>Comparative Law</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/654G">Link</a></td>
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<td>Major foreign legal systems and their impact on US law, lawyers and clients. Compares the Anglo-American common law system with the civil law systems of continental Europe; surveys other major foreign legal systems (e.g. Muslim, Hindu, Japanese, Chinese, African and Socialist legal systems); and addresses proof and pleading problems that arise when foreign law is at issue in US courts.</td>
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<tr>
<td>LAW 655G</td>
<td>Commercial Law: Sales</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/655G">Link</a></td>
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<td>Classroom</td>
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<td>Law governing the sale of goods with emphasis on Article 2 of the Uniform Commercial Code. Includes: contract formation; acceptance and rejection of goods; warranties; risk of loss; remedies, including non-Uniform Commercial Code remedies in consumer transactions; documentary sales and leases.</td>
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<tr>
<td>LAW 656G</td>
<td>Banking Law</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/656G">Link</a></td>
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<td>Law of commercial banking. History and structure of the American banking system; the formation of a new bank; the regulation of traditional banking activity, including lending limitations; reserve requirements; capital adequacy; equal credit laws; failed banks; branch banking; and future trends in banking.</td>
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<tr>
<td>LAW 657G</td>
<td>Empirical Legal Studies</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/657G">Link</a></td>
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<td>Students fulfill the course requirements through writing a paper, participating in class, presenting their research to the class, and completing several exercises. Students will learn to use computer statistical software packages (SPSS) for these exercises.</td>
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<td>Introduction to one of the fastest growing areas of legal scholarship and practice — the use of empirical techniques in research and litigation. Learning how to be sophisticated and critical consumers of empirical research that lawyers and experts often use to resolve legal cases and controversies, to shape legislation, and to use as argument in public policy debates. Introduction to survey research methodology, designing and conducting experiments, data gathering and analysis through descriptive and inferential statistics. In addition to discussing how to perform these techniques, students read cases and articles in which each of the techniques has played an important role. The course introduces law students to the social sciences through a “hands on” approach. Students will collect and analyze their own data by completing small research projects related to their areas of interest. Class sessions include discussion of social science and legal materials, lectures on the basics of empirical analysis, assistance with</td>
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analyzing statistical data with computer packages, assistance with interpreting data, and student presentations.

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>LAW 658G</td>
<td>Clinical Practice–Entrepreneurship</td>
<td>Law 632G and 637G</td>
<td>6</td>
<td>Lab 5</td>
<td>Classroom</td>
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<td>Students, under close faculty</td>
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<td>supervision, advise and represent</td>
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<td>startup business clients in a variety</td>
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<td>of early-stage legal matters,</td>
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<td>including entity formation, contract</td>
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<td>drafting and review, intellectual</td>
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<td>property protection, real estate,</td>
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<td>financing, regulatory, compliance</td>
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<td>and other transactional matters.</td>
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<td>Participation in a concurrent</td>
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<td>seminar concentrating on the</td>
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<td>effectively advise entrepreneurial</td>
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<td>clients is required. Limited</td>
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<tr>
<td>LAW 659G</td>
<td>State Constitutional Law</td>
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<td>Constitutions of the individual</td>
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<td>states, including: state expansion</td>
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<td>of individual rights, state–federal</td>
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<td>constitutional relationships, state</td>
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<td>innovations, “interpretation”</td>
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<td>theories in the state context,</td>
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<td>constitutions in contrast with</td>
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<td>statutes, balance of powers,</td>
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<td>processes of revision, and</td>
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<td>procedures relevant to the</td>
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<tr>
<td>LAW 660G</td>
<td>Science and the Law</td>
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<td>Analysis of the role of science in</td>
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<td>the law. This class will explore</td>
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<td>issues such as biotechnology,</td>
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<td>computers, scientific evidence,</td>
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<td>regulatory approval, antitrust,</td>
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<td>and environmental law to explore</td>
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<td>the intersection of science, technology, and the effect on the law and legal decision making.</td>
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<td>LAW 661G</td>
<td>Aviation Law</td>
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<td>Public international air law, with</td>
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<td>of air traffic rights, and the</td>
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<td>aviation security treaties. Selected</td>
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<td>areas of private international air</td>
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<td>law including international air</td>
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<td>and Montreal Conventions. In</td>
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<td>addition to international aviation</td>
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<td>law, this course also examines</td>
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<td>various aspects of U.S. aviation law</td>
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<td>including liability and Federal</td>
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<td>regulation of the aviation</td>
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<td>industry.</td>
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<tr>
<td>LAW 662G</td>
<td>International Intellectual Property</td>
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<td>Lecture 3</td>
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<td>Overview of the United States laws</td>
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<td>of copyright, patent, trade secret</td>
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<td>and trademark for students of all</td>
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<td>backgrounds and discussions of the</td>
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<td>laws and mechanisms to protect</td>
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<td>intellectual property rights abroad</td>
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<td>background is requisite.</td>
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</table>
Gender, Race, and Class Issues in the Law

Credit toward the degree may be earned in only one of: Gender Issues in the Law (LAW 771) and (LAW 664), but not both. The role of gender, race, and class in shaping socio-legal relationships and policies. Selected procedural substantive areas of the law that affect and are affected by gender, race, and class. Employment, property, torts, constitutional law and contractual relationships, and the complex relationship between gender, race, class, and the law.

International Trade Law and Policy Seminar

Prereqs: LAW 671 or LAW 640

Selected issues of international trade law and policy. Several prominent issues of international trade law and policy, including trade in agricultural goods, new issues facing the international trading system, and other topics selected by students for research papers. Visiting scholars, government officials, or faculty from other departments at the university may make presentations to the seminar.

International Environmental Law

Analysis of the legal rules and institutions used to address international environmental issues. Includes the sources and nature of international environmental law, extraterritorial application of domestic environmental law, transboundary pollution, sustainable development, protection of the global environment, and the impacts of international trade policy and international development policy on the environment.

Construction Law

Legal principles in the construction area. Legal and equitable issues which result from the construction relationship and disputes relating to that relationship.

International Trade and Transactions

Regulation of international trade and investment by individuals, governments (particularly the United States) and international agreements.

Research in a Selected Field I

Before registering for this course, a student must (1) obtain the approval of
the faculty member involved and (2) submit the Research in a Selected Field form to the College of Law registrar. Absent the prior approval of the dean, no student may take more than 6 hours of Research in a Selected Field and/or Psycholegal Research. Individual study under the supervision of a faculty member.

### LAW 670G

**Research in a Selected Field II**

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<th>Campus:</th>
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<td><strong>Credit Hours:</strong></td>
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Before registering for this course, a student must (1) obtain the approval of the faculty member involved and (2) submit the Research in a Selected Field form to the College of Law registrar. Absent the prior approval of the dean, no student may take more than 6 hours of Research in a Selected Field and/or Psycholegal Research. For course description, see [LAW 669G](http://bulletin.unl.edu/courses/LAW/669G).

### LAW 671G

**International Trade Law**

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<th>Campus:</th>
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<td><strong>Credit Hours:</strong></td>
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</table>

Students who have taken [LAW 668G](http://bulletin.unl.edu/courses/LAW/668G) may not enroll in this course. This class may be taught in alternate years with International Trade and Transactions. Central theme of this field of law is the tension between generally accepted economic theories which support free trade as a means of increasing economic efficiency and raising standards of living for all trading partners, and the non–economic objectives that must be balanced against those principles. Includes: international monetary, development and trade policy; customs law, legal restraints on fair and unfair international trade practices; international transfers of intellectual property rights; and the regulation of foreign investment.

### LAW 673G

**International Business Transactions**

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<th>Campus:</th>
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<td><strong>Credit Hours:</strong></td>
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</table>

Students who have taken [LAW 668G](http://bulletin.unl.edu/courses/LAW/668G) may not enroll in this course. Regulation of international trade by private parties through contractual arrangements. Contract formation and interpretation; dispute resolution; letters of credit and other transfers of payment; insurance; transportation; and countertrade arrangements. Contract negotiating and drafting exercise.

### LAW 674G

**Juvenile Law**

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Investigation of the relationship between children, the family, and the state. Both public and private law considerations with emphasis on the juvenile justice system and general considerations of children’s constitutional rights.

### LAW 675G

**Advanced Legal Writing**

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<td><strong>Credit Hours:</strong></td>
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Legal writing and analysis and experience with a variety of forms of legal writing. Topics selected from appellate brief writing and oral advocacy, interpreting and drafting statutes and rules, drafting jury instructions, drafting contracts, drafting pleadings, motion practice, drafting interrogatories, general correspondence, opinion letters, drafting wills and trusts, and advanced legal research.
**Toxic Substances and Hazardous Waste Law**

LAW 677G is not a prerequisite for this course. Students who have taken LAW 641G may not enroll in this course. Legal problems associated with the control of hazardous and toxic substances. Toxic torts and regulatory actions to protect private and public interests.

**Federal Regulation of Food Safety**

This course examines the federal laws and regulations that govern food safety and food labeling shared by federal agencies, including the Food and Drug Administration, U.S. Department of Agriculture, U.S. Department of Commerce, and U.S. Environmental Protection Agency. Students will have the opportunity to learn the history of federal food safety laws and enforcement and will discuss case studies highlighting current issues in the news, e.g., salmonella contamination of eggs, tort liability for "defective" foods, regulation of biotechnology use in foods, and the science underlying food safety regulation and food production. The course will conclude with analysis of the policy goals and implementation of the FDA Food Safety Modernization Act signed into law by President Obama on January 4, 2011, which provides for a new system of federal oversight of domestically produced and imported foods.

**Cyberlaw**

Areas in which the law interacts with the Internet and the increasing digitization of information. Possible topics: commercial law issues arising out of e-commerce including the proposed Article 2B of the Uniform Commercial Code on information licensing and various electronic signature statues; intellectual property issues including the regulation of the Internet, the domain name as a trademark controversy, database protection schemes, and issues relating to online liability for copyright and trademark infringement; privacy issues such as encryption of data and access to personal identification data; criminal law issues involving cybercrimes (e-mail theft, cyberrape, etc.); and Y2K problems.

**Legal Control of Discrimination Seminar**

Legal issues pertaining to the legal control of discrimination.

**Patents and International Intellectual Property**

Two separate components; one involving patent law and one involving international intellectual property. The patent law component looks at some of the central issues of the protection and enforcement of patents with emphasis on the policy issues that arise from patent protection. Focus of the international intellectual property component is on private law. Materials emphasize issues that an American lawyer representing an American company should understand. Relative emphasis between patents and international intellectual property determined each term.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>LAW 684G</td>
<td>Bioethics and Law</td>
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<td>1-4</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Role of law in controlling, shaping, and responding to scientific and technological developments in the field of medicine and the biological sciences. May include contraception, abortion, sterilization, artificial conception, genetic engineering, the right to refuse treatment, euthanasia, the right to treatment of defective newborns, organ transplantation, and experimentation with human subjects.</td>
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<td>LAW 685G</td>
<td>Capital Punishment</td>
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<td>Lecture 3</td>
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<td>Legal doctrine and policy regarding capital punishment in the United States. Draws heavily but not exclusively on decisions by the US Supreme Court. Includes: various Constitutional challenges and limitations according to Supreme Court decisions; aggravating and mitigating circumstances; jury selection and qualification; discriminatory application; the use of clinical testimony; and the role of counsel. Differs significantly from the Jurisprudence course that addresses capital punishment and directs primary attention to jurisprudential arguments regarding the justification of capital punishment in principle and in practice, with only secondary attention to a few of the central court cases. Court cases and legal doctrine and policy issues arising out of those court cases. Thus, the two courses are complimentary with relatively little overlap, and neither presupposes the other.</td>
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<td>LAW 686G</td>
<td>Gender Issues in the Law</td>
<td>LAW 630G</td>
<td>1-4</td>
<td>Lecture 3</td>
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<td>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.</td>
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<td>LAW 687G</td>
<td>Investment Companies and Investment Advisers</td>
<td>LAW 632G</td>
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<td>Lecture 3</td>
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<td>LAW 688G</td>
<td>Sex-Based Discrimination</td>
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<td>Lecture 3</td>
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|             | Introduces two theoretical frameworks applicable to anti-discrimination law and uses them to examine efforts to curb discrimination against women and men. Feminist Legal Theory and Masculinities Theory are used as foundations through which students can analyze whether legal controls on discrimination are effective. Specific topics that may be discussed include the law as it is related to the military (male mandatory registration and female integration); obscenity (pornography and art); family (custody-related sex preferences and family structure); crime (rape and sex work); education (Title IX athletics and single-sex education); and employment (sex-specific
### Real Estate Transactions

**690G**

Contracts for the sale of land; real estate financing including mortgages and installment land contracts, and more advanced devices such as sale leasebacks, ground leases, leasehold mortgages, equity participations, variable rate mortgages, and others; title examination and protection; shared facilities such as cooperatives, condominiums, and home owners associations.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Health Care Finance

**691G**

Institutional, economic, and legal dimensions of “health insurance”. Although the course considers the interface between private and public insurance mechanism, the focus is on private sector developments in “managed care”.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Modern Real Estate Seminar

**692G**

Legal aspects of commercial real estate practice including acquisition, disposition, financing, and management of commercial real estate entities such as apartment complexes, housing subdivisions, condominiums, and shopping centers. Land use controls.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Sports Law

**694G**

Selected legal issues affecting amateur and professional sports. May include applicability of antitrust, communications, contract, labor, and tax laws to professional sports; the ethical and professional aspects of player representation; the extra–governmental regulation of amateur athletics; and the internal organization of the professional sports leagues.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Client Interviewing and Counseling

**696G**

Introduction to the basics of legal interviewing (lawyer interaction with a client for the purpose of identifying the client’s problem and gathering information on which the solution to that problem can be based) and counseling (a process in which lawyers help clients reach decisions). Class discussion of reading materials and videotaped demonstrations, and role play exercises.

**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom

### Patent Law

**697/697G**

Introduction to the basic principles of the law of patents in the United States including the history, utility and function of the patent system; statutory and procedural requirements for patentability; recent case law; and patent enforcement mechanisms, remedies and defenses. Foundation in patent law

**Credit Hours:** 3  
**Course Format:** Lecture 3  
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<th>Course Code</th>
<th>Course Title</th>
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<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>LAW 698G</td>
<td>Lands and Natural Resources</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/698G">Link</a></td>
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<td>Acquisition and disposition of the public domain; jurisdiction over public lands; withdrawals and reservations; mining and mineral leasing on public lands; range, forest, and wildlife management, recreation, and preservation.</td>
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<td>LAW 701G</td>
<td>Health Care Finance Seminar</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/701G">Link</a></td>
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<td>Analysis of specific issues in the design and control of market and governmental mechanisms for the diversification of risk.</td>
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<td>LAW 702G</td>
<td>International Trade Law and Policy</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/702G">Link</a></td>
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<td>Prereqs: LAW 671/G, 673/G, or 640/G</td>
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<td>Students previously enrolled in Seminar (665/G) may not enroll in this course. Two night sessions of three hours each for a negotiation exercise that will take the place of six class sessions. Selected issues of international trade law and policy. Several prominent issues: trade in agricultural goods, new issues facing the international trading system, and other topics selected by students for research papers. Visiting scholars or government officials or faculty from other departments at the university may also make presentations to the seminar.</td>
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<td>LAW 703G</td>
<td>Law and Medicine</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/703G">Link</a></td>
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<td>Major topics at the intersection of law and medicine in America today. Most relate to the legal implications of health care quality and cost, to the legal implications of access to health care, or to issues in the area of bioethics. In particular, time devoted to the organization and legal credentialling of health care providers, individual and institutional; to medical malpractice law and its reform; to legal mechanisms of cost-control in health care delivery; to publicly-subsidized health care for the needy; and to the medicolegal issues surrounding morally controversial topics in modern medicine, such as issues relating to facilitating or avoiding reproduction, to the right to treatment, to the right to refuse treatment, to yet other issues.</td>
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<td>LAW 705G</td>
<td>Agricultural Law Seminar</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/705G">Link</a></td>
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<td></td>
<td>Selected problems in agricultural law.</td>
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<td>LAW 706G</td>
<td>Rural Development and Energy Law</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/706G">Link</a></td>
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Rural Development and Energy Law Seminar (Law 706)(3 credit hours) This course will cover specific laws and regulations, as well as business and policy considerations, that inform efforts to develop rural infrastructure, stimulate jobs, establish community-based financial and non-profit institutions, and encourage rural entrepreneurship. Particular emphasis will be placed on how energy law and policy may be shaping the rural future. This course will also include a comparative element, with literature from the Law and Development movement, international development, and the affordable housing and urban renewal contexts considered in conjunction with current rural development concerns.

International Human Rights Law Seminar  
Students required to write a substantial research paper on a topic of their choice. Interested students have the opportunity to research subjects of relevance to the work of the International Criminal Tribunal for the Former Yugoslavia. Historical, political 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 UN fact-finding and implementation mechanisms; the relationship between UN peacekeeping and peacemaking, on the one hand, and international humanitarian law, on the other; the activities of regional human rights systems; the effect of the United States’ recent signature and ratification of UN human rights conventions and the role of such conventions, and international human rights law generally, in US courts; and contemporary efforts to enforce international human rights law through the criminal process.

Alternative Dispute Resolution  
Theoretical, practical, ethical and legal issues confronted by mediators, arbitrators, neutral evaluators, and other dispute resolution specialists and the parties they serve. Legal context within which alternative forms of dispute resolution take place. Procedures examined: agreements arising from negotiations, mediations, arbitrations, summary jury trials, mini-trials, private judges, early neutral evaluations, neutral experts and masters, negotiated rulemaking, and claims facilities. Status of these procedures examined in light of existing case and statutory law and from a public policy point of view. Issues: confidentiality and privilege, conflicts of interest, finality/enforceability of resolutions, liability and ethical standards applicable to third parties, the extent of judicial review of decisions, arbitramility of disputes, international law, and public interest concerns. Disputes in a variety of settings considered: family, employment, medical, commercial, criminal, and international.

Arbitration  
Law, process, and skills; federal and state laws; commercial, labor, employment, securities, construction, international, and court-annexed arbitration; and other topics related to arbitration.

Mediation  

Process in which a trained neutral third party assists others in resolving a dispute or planning a transaction. Training in basic mediation skills through readings, demonstrations, simulations, and the keeping of a mediation notebook. The nature of mediation and its relationship to other forms of dispute resolution, the nature of conflict, models and styles of mediation, negotiation theory, communication skills, the interest-based mediation process, the representation of clients in mediation, special issues relating to attorney mediators, and mediators standards and ethics.

**Copyright Law**

Protection of literary, artistic, musical, and audiovisual works under the laws of copyright and unfair competition. Rights in characters, computer programs, nonfiction works, titles, and useful articles, in addition to more traditional subject matter such as art, literature, and music; issues of infringement including home recording, photocopying, computer transmission and public performance; procedural aspects of the 1976 Copyright Act, including notice, registration, transfer and duration.

**Law and Literature**

Interdisciplinary study of the relations between law and literature, exploring the law in literature and the law as literature. The law in literature: Novelists, poets, and playwrights have seen the human interest in the law and in legal events; the law and lawyers have therefore been central to some major works of literature. Examines ways the law and lawyers have appeared in literature, and attempts to draw some lessons from them. The law as literature: Primary and secondary writing in the law employs most of the literary devices found in the imaginative literatures, and the tools of literary interpretation and analysis can therefore be brought to bear on legal texts. Exploring the literary aspects of the law, and deriving practical and theoretical insights from this exploration.

**Style and Composition in Legal Writing**

Skills course. Requires as much practical writing as reading and study. Discusses various causes of poor legal writing—legal writing that is unnecessarily difficult to read—and attempts to understand what constitutes good legal writing, and what makes it work. Focuses on developing clarity, coherence, and concision in legal writing. Students should develop a better understanding of the linguistic causes of good and bad legal writing, and a set of concrete writing tools for the improvement of their own writing.

**Comparative Law: International Gender Issues**


**Transnational and International Criminal Law**
715G

This course will provide an introduction to several international law topics of current interest and special importance to the international community, particularly related to transnational criminal activities, terrorism, and international criminal law offenses. Specific topics will include: the conclusion, interpretation and termination of international agreements; state sovereignty over land, sea and air; extraterritorial state criminal jurisdiction; nationality; extradition; international criminal law; war crimes; the International Criminal Court, and; the United Nations Charter regime and related structures, including the ad hoc international criminal tribunals.

716G

Comparative Law: International Gender Issues Seminar


717G

Education Law

The role that law plays in education in the United States. The rights of students and teachers, special education and disability, school finance, school searches, student discipline, privacy of records, liability of school officials and discrimination based on gender and race. The emerging case law on state constitutional claims of education equity and adequacy.

718G

Refugee and Asylum Law Seminar

Refugee issues in the context of domestic and international political environments. Asylum reform, gender-based persecution, persecution of gays and lesbians, deficiencies in international and domestic refugee law, and firm resettlement of displaced persons. Interdisciplinary focus: considers the interplay among political, social, economic, cultural and psychological phenomena as refugees, governments of host countries, and international and non-governmental organizations interact in the context of ongoing crises around the world.

721G

Law & Liberty in Time of Crisis

Law & Liberty in Time of Crisis Seminar (Law 721)(3 credit hours) An examination of constitutional rights and limits on liberty during times of crisis. The foundation will be a review of selected events such as the Alien and Sedition Acts, habeas corpus in the Civil War, the World War I Espionage Act, World War II internment of aliens, the Steel Seizure, the 1950's Red Scare, and the Pentagon Papers. Students will use this foundation to prepare a seminar paper addressing a selected issue about law and liberty under post-9/11 legislation and executive action.
### Agricultural Environmental Law

**Course Format:** Lecture 3  
**Credit Hours:** 3

Environmental law in agriculture, the Clean Water Act as it applies to agriculture, the environmental and conservative provisions of the farm program, pesticide regulation and liability, and other areas where environmental concerns and the agriculture industry intersect.

### Securities Brokers, Mutual Funds, and Investment Advisers

**Prereqs:**  
[LINK](http://bulletin.unl.edu/courses/LAW/632G)

Neither securities regulation or any knowledge of federal securities law is a prerequisite for this course.

### Economic Justice Seminar

**Course Format:** Lecture 3  
**Credit Hours:** 3

A social justice critique of free markets. The relationship of legal rules to the distribution of wealth. Introduction of a range of materials and critique the economic theory underlying various approaches to law and economics. Readings will include an interdisciplinary perspective. Current topics in economic inequality, e.g., access to credit, housing and others.

### Domestic Telecommunications Law

**Course Format:** Lecture  
**Credit Hours:** 1–2

Legal framework applied in the U.S. to most wireline and wireless communications (not including the Internet). Cable television, landline telephone, broadcast and satellite radio and television, and mobile technologies. Economic, technological, national security, and statutory and constitutional issues, current policies, and academic debates.

### Statutory Interpretation: Practice & Policy

**Course Format:** Lecture 3  
**Credit Hours:** 3

### Civil Rights Litigation

**Prereqs:**  
[LINK](http://bulletin.unl.edu/courses/LAW/516G), [LINK](http://bulletin.unl.edu/courses/LAW/517G) and [LINK](http://bulletin.unl.edu/courses/LAW/609G)

**Course Format:** Lecture  
**Credit Hours:** 1–4

**Course Delivery:** Classroom
Major substantive and procedural issues in litigation to protect civil rights. Established theories of liability and defenses, possible new developments in legal doctrine, and pending statutory changes.

**LAW 731**

**Tribal Gaming Law**

This seminar will examine the history of tribal gaming, the landmark case of California v. Cabazon Band of Mission Indians, 480 U.S. 202 (1987) and the resulting Indian Gaming Regulatory Act (IGRA). Tribal gaming is regulated by tribal, federal, and state law and is a complex mix of issues: what constitutes a tribe and tribal lands; how do newly acquired lands become Indian Country; what is the role, structure, and authority of the National Indian Gaming Commission; what defines and distinguishes Class I, Class II and Class III gaming; how are tribal – state compacts formed; who may claim a portion of gaming revenues through fees or taxes; and what institutions and political players are crucial to the public debates on tribal and state revenue sharing, tribal economic development, and off-reservation casinos.

**LAW 731G**

**Tribal Gaming Law**

This seminar will examine the history of tribal gaming, the landmark case of California v. Cabazon Band of Mission Indians, 480 U.S. 202 (1987) and the resulting Indian Gaming Regulatory Act (IGRA). Tribal gaming is regulated by tribal, federal, and state law and is a complex mix of issues: what constitutes a tribe and tribal lands; how do newly acquired lands become Indian Country; what is the role, structure, and authority of the National Indian Gaming Commission; what defines and distinguishes Class I, Class II and Class III gaming; how are tribal – state compacts formed; who may claim a portion of gaming revenues through fees or taxes; and what institutions and political players are crucial to the public debates on tribal and state revenue sharing, tribal economic development, and off-reservation casinos.

**LAW 733G**

**Advanced Legal Research**

Advanced exposure to the tools of legal research: the nature of and philosophies surrounding organization and production of the materials themselves.

**LAW 735G**

**Criminal Trial and Post Conviction Procedure**

Criminal procedure issues arising after a suspect's arrest. "Trial" issues include pre-trial preliminary hearings and grand jury proceedings as well as trial questions relating to joinder and severance, representation of multiple defendants, treatment of incarcerated defendants (including bail), right to jury trial, the fair trial–free press conflict, right to speedy trial, and discovery. "Post-trial" issues include sentencing, appeal, post conviction remedies, and corrections. Professional responsibility of attorneys in criminal cases.

**LAW 736G**

**Bankruptcy**

This course is a prerequisite for: LAW 738G (http://bulletin.unl.edu/courses/LAW/738G)
After surveying the rights of creditors and debtors under state law, considers the impact of bankruptcy upon secured and unsecured creditors and upon stockholders. The bankruptcy trustee’s avoiding powers are studied. Code Chapter 12: Adjustments of Debt for Family Farmers considered in some detail. Chapters 7, 11, and 13 liquidations and reorganizations surveyed with selected topics considered in depth. The negotiated settlements and "workout agreements" which characterize this area of practice emphasized.

**Law of Provider and Patient**

Students may also enroll in LAW 713G Style and Composition in Legal Writing for an additional hour of Law College credit. A limited but central topic in the larger field of health-care law—the law bearing on the relationship between a health-care provider and a patient. Surveys the legal rights and obligations of patients and their health care providers, individual and institutional. Covering qualification as a health care provider (institutional and individual licensure); the legal doctrines relating to the formation of provider–patient relationship; the locus of decisional authority in the relationship; the provider’s fiduciary duties to the patient (to deliver care of professionally acceptable quality [including traditional malpractice law], to avoid conflicts of interest, to respect the patient’s privacy, and to protect the confidentiality of medical information about the patient); the reciprocal obligation of the patient to take reasonable steps to assure payment and to comply with medical directives; and the legal doctrines relating to the termination of provider–patient relationships.

**Advanced Bankruptcy**

Selected legal issues under the bankruptcy code with an emphasis upon corporate and farm reorganizations. Includes the treatment of executory contracts and leases; avoidance of pre-bankruptcy transfers; business reorganizations under Chapter 11; farm reorganizations under Chapter 12; use, sale, and lease of property; obtaining credit during the pendency of bankruptcy proceedings; negotiation and drafting of post-petition credit arrangements; relief from the automatic stay; adequate protection of lienholders; and plan confirmation standards under Chapter 11 and Chapter 12.

**Criminal Law II**

Scope and content of federal crimes. Fraud and political corruption, drug trafficking, money laundering, organized crime, false statement, obstruction of justice and federal sentencing guidelines.

**Negotiations**

Students expected to complete a journal which relates class discussions, lectures, readings, and personal experiences into a guide book for future negotiation practice. Variety of negotiation styles and an opportunity to apply these styles in a series of increasingly complex negotiation problems. Negotiation problems include plea bargains, personal injury cases,
commercial negotiations, and labor management disputes. Strategic and psychological factors present in negotiation styles. To improve negotiation performance and broaden the repertoire of strategic and stylistic choices available to the student negotiator.

**LAW 741G Pretrial Litigation**

This course is a prerequisite for LAW 798G.

Application of procedural rules to the bringing and defending of civil law suits and on considering the tactical and strategic aspects of litigation. Weekly exercises on pleading, motion practice and discovery.

**Credit Hours:** 1–4

**Campus:**

**Course Delivery:** Classroom

**LAW 742G Securities Fraud**

Civil actions for damages caused to investors by misrepresentations in securities markets. Specific topics vary.

**Credit Hours:** 1

**Campus:**

**Course Delivery:** Classroom

**LAW 743G Remedies and Damages**

The interplay and choice of possible recoveries in property, personal, and business interest situations. Damages: object of an award in contract and tort, limitations on recovery, and elements of damage. Equity: specific performance and injunctions. Examines the place and scope of restitution in the remedial structure, theories of recovery in basic contract and tort situations including vendor and vendee relationships, conversion, personal injury, defamation, privacy, unfair competition and employer–employee relationships, and the use of legal and equitable remedies in modern codes.

**Credit Hours:** 1–4

**Campus:**

**Course Delivery:** Classroom

**LAW 744G Legislation and the Political Process**

This course will examine the basic structure of American legislative institutions and the process of law-making with emphasis on legislative process and external influences shaping the consideration, composition, enactment and implementation of new laws. The course will draw on real-world, “hot topic” issues for various practical exercises, including the drafting of statutes and written comments for agency and congressional submission. In addition, the course will familiarize students with various kinds of materials, including bills, committee reports, legislative rules, floor debates, and statutes. Collectively, these exercises and readings will allow the class to fully explore and evaluate the legislative process in its various contexts.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**LAW 746G Corporate Finance**

Introduction to the theories and applications of modern corporate finance. The course will explore a range of topics, including: valuation theories; the efficient capital market hypothesis; risk, return, the capital asset pricing model, and arbitrage pricing theory; investment and financing decisions; optimal capital structure; the role of classical finance theory in legal decisions; and option theory. Prerequisite: Business Associations or permission of instructor.

**Credit Hours:** 3

**Course Format:** Lecture

**Course Delivery:** Classroom
**Corporate Finance Governance**

**LAW 746G**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
[LAW 632G](http://bulletin.unl.edu/courses/LAW/632G)

The financial structure and governance of the modern corporation and other similar entities. Issues of valuation relating to the corporation enterprise, alternatives for managing corporate risk, sources of corporate funding, and right of competing corporate stakeholders. Legal duties imposed on corporate management, factors influencing management’s decisions, and how management can act to satisfy its duties and maximize corporate value.

**Space Law**

**LAW 748G**

**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom

This course is a prerequisite for:  
[LAW 766G](http://bulletin.unl.edu/courses/LAW/766G)

Space law and policy for intelligence gathering and weaponization, telecommunications, satellite launch, space tourism, and remote sensing. Application of five major international space treaties to regulation of modern space activities and arms control agreements. New and growing problems of orbital debris, protection of in-space assets and terrorism.

**Commercial Law Seminar**

**LAW 749G**

**Credit Hours:** 1–4  
**Campus:**  
**Course Delivery:** Classroom

Students write and present a paper addressing an area of interest in commercial or banking law. Increasingly, attorneys are facing new legal dilemmas posed by several developments in commercial practices. Explores several current issues in commercial and banking law. Includes "Technology and the Uniform Commercial Code," "Consumer Protection and the UCC," "Banks and Community Needs" and various issues arising from proposed revisions to the Uniform Commercial Code (UCC).

**American Foreign Affairs Law and Policy Seminar**

**LAW 750G**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

**Prereqs:**  
Previous enrollment in an international law course recommended

Structural and organizational issues related to United States foreign policymaking such as separation of powers and federalism. United States foreign policy in substantive areas such as the war on terror, non-proliferation, trade, foreign aid, global warming, relations with the European Union, and relations with Latin America.

**Pension and Employee Benefit Law**

**LAW 751G**

**Credit Hours:** 1–4  
**Campus:**  
**Course Delivery:** Classroom

Law relating to pensions and employee benefits. The role of pensions and employee benefits in the compensation package, taxation of pensions, regulation of pension and benefit plans, ERISA fiduciary law, and issues relating to the termination of pension plans.

**Labor and Employment Law: Theory and Practice**

**LAW 752G**
The class will have a limited enrollment. Preference given to students who have earned at least 6 credits from the following courses: Civil Rights Litigation, Civil Rights Litigation Seminar, Employment Law, Employment Law Seminar, Labor Law, Labor Law Seminar, Legal Control of Discrimination, Legal Control of Discrimination Seminar, Pension and Employee Benefit Law, Public Employment Law. A modest bridge between classroom instruction in labor and employment law and real world practice in the area. Local practitioners collaborate with faculty member to formulate problems for the class and participate in several class sessions. Students engage in intensive analysis of issues arising out of the problems; they may be asked to prepare and discuss work products that fall anywhere on a continuum between the scholarily (such as law review-type analyses of complex issues) and the intensely practical (such as drafting interrogatories).

**Federal Courts**

Advanced study of United States constitutional law in the litigational context and focused on the power, history, and development of the federal judicial system and the distribution of power between the federal and state systems.

**International Telecommunications Law**

National and international regimes for regulating telecommunications and media communications by cable, phone and fiber, and by satellite, broadcast, and wireless. International lawmaking through the International Telecommunications Union and the World Trade Organization including international allocation of spectrum for wireless services and orbital slots for satellites as well as issues about international copyright and/or broadcasting and those surrounding submarine cables. Jurisdiction among different international and national bodies and conflicts among nation states. Historical regulation and how the convergence between telephone, television and computer services can upset existing regulatory apparatuses. Comparative analysis of different nations’ communications policies. Exploration of how the United States addresses global communications issues, consideration of domestic U.S. regulations limiting, and setting a framework for foreign involvement in certain communications industries within the U.S.

**Psycholegal Research Other than Thesis I**

Crosslisted as PSYC 995

Research is supervised and approved by a faculty member in the Law/Psychology program. Absent the prior approval of the Dean, only those students enrolled in the Law/Psychology Joint Degree Program may register for this course. Absent the prior approval of the Dean, no student may take more than 6 hours of research in a selected and/or psycholegal research. A substantial research and writing project on a psychological topic.

**Psycholegal Research Other than Thesis II**

Crosslisted as PSYC 995A

Research is supervised and approved by a faculty member in the Law/Psychology program. Absent the prior approval of the Dean, only those students enrolled in the Law/Psychology Joint Degree Program may register for this course. Absent the prior approval of the Dean, no student may take
more than 6 hours of research in a selected and/or psycholegal research. For course description, see [LAW 757G](http://bulletin.unl.edu/courses/LAW/757G).

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<tr>
<td>LAW 760G</td>
<td>Arms Control</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/760G">Link</a></td>
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<tr>
<td>LAW 762G</td>
<td>Law and Behavioral Science</td>
<td><a href="http://bulletin.unl.edu/courses/LAW/762G">Link</a></td>
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<td>General issues in the interaction between law and the behavioral sciences; discussion of the use/misuse/nonuse 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.</td>
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<td>LAW 763G</td>
<td>Mental Health Law</td>
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<td>Credit may only be earned in either LAW 763G (<a href="http://bulletin.unl.edu/courses/LAW/763G">Link</a>) or LAW 772G (<a href="http://bulletin.unl.edu/courses/LAW/772G">Link</a>).</td>
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<td>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.</td>
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<td>LAW 764G</td>
<td>Topics in Law and Psychology I</td>
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<td>May be repeated once. Analysis of specific psycholegal topics. Previous course titles include Privacy, Mental Health Policy, Legal Decision Making, Institutional Reform and Deinstitutionalization, Legal Policy and Child Development, and Domestic Violence.</td>
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<td>May be repeated once. For course description, see <a href="http://bulletin.unl.edu/courses/LAW/764G">LAW 764G</a>.</td>
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<tr>
<td>LAW 766G</td>
<td>National Space Legislation</td>
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<td>Prereqs: LAW 748G (<a href="http://bulletin.unl.edu/courses/LAW/748G">Link</a>)</td>
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<td>Implementation of international space treaties and other international space law by means of the establishment of national space legislation. Licensing regimes dealing with liability issues or other control mechanisms. Ways in</td>
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which countries across the world have chosen to implement relevant international requirements as well as to assert national space policies by means of national law. Discussion of national U.S. law regarding satellite communications, satellite remote sensing, and space tourism.

### Gender Issues in the Law Seminar

**Course Code:** LAW 771G  
**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  

Critical review of gender role in shaping socio-legal relationships and policies. Procedural and substantive areas of the law that affect and are affected by gender. Employment, property, torts, Constitutional law, and contractual relationships. Complex relationship between gender, race and class.

### Mental Health Law Seminar

**Course Code:** LAW 772G  
**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom  

Credit may only be earned in either LAW 763G or LAW 772G.  

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.

### Criminal Sanction Seminar

**Course Code:** LAW 773G  
**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  

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.

### Jurisprudence Seminar

**Course Code:** LAW 775G  
**Credit Hours:** 1-4  
**Campus:**  
**Course Delivery:** Classroom  

Judicial process, the principal schools of jurists, 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.

### Deregulation Seminar

**Course Code:** LAW 779G  
**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  

Each student will be required to write a paper examining a Nebraska regulatory provision and considering whether that particular regulation should be eliminated or modified. A review of the policy arguments for and against government regulation and their application to particular regulatory provisions.

### Constitutional Problems Seminar

**Course Code:** LAW 781G  
**Credit Hours:**  
**Campus:**  
**Course Delivery:**  

Critical review of gender role in shaping socio-legal relationships and policies. Procedural and substantive areas of the law that affect and are affected by gender. Employment, property, torts, Constitutional law, and contractual relationships. Complex relationship between gender, race and class.
**Advanced Trial Advocacy**

Prereqs: [LAW 761G](http://bulletin.unl.edu/courses/LAW/761G).

Credit Hours: 3

Course Delivery: Classroom

Enrollment limited to 16 students per semester. Simulation exercises concerning advanced trial advocacy topics including jury selection, expert witnesses, problem witnesses, development of a trial theme and multi-party litigation. Students perform simulated jury trial.

**Introduction to European Union Law**

This course is a prerequisite for: [LAW 786G](http://bulletin.unl.edu/courses/LAW/786G).

Overview of the development of establishment of the European Union and the current transition from the failed Constitutional Treaty to the new Reform Treaty. The unique character of the EC/EU as a half–way house between a classical intergovernmental organization and a federal state, respective roles of the Council the European Commission, the European Parliament, and the European Court of Justice in the process of law-making, regulations, directives, and decisions at the European level. Major substantive elements of EC law, such as the freedom of movement of goods, services, person, capital, and the competition regime.

**European Regulation of Space and Technology**

Prereqs: [LAW 785G](http://bulletin.unl.edu/courses/LAW/785G).

Interaction between EC/EU and the European Space Agency in the development of European space activities and policies, in regard to EUTELSAT and EUMETSAT, and their institutional integration. The development of Galileo and the Global Monitoring for Environment Security project; general legislative and regulatory competencies of commercial space and satellite communications; gradual development of an internal market for SATCOM services.

**Securities Regulation**

Prereqs: [LAW 632G](http://bulletin.unl.edu/courses/LAW/632G).

A comprehensive but intensive survey of the statutes and regulations governing the distribution of securities, trading on the stock exchanges and the over–the–counter markets, and the growing role of federal law in corporate governance. Primary focus on the Securities Act of 1933 and the Securities Exchange Act of 1934, with limited attention to state "blue sky" securities legislation.

**Legal Profession**
**790G**  
This course meets the faculty’s requirement for a course in professional responsibility. A systematic study of the principles of professional responsibility governing the practice of law in the United States.

**791G**  
**Legal Profession Seminar**  
When so designated by the instructor, this seminar meets the faculty’s requirement for a course in professional responsibility. Problems related to the American legal profession.

**796G**  
**Native American Law**  
Concepts used historically to fit Native Americans into the legal structure of the United States. The power of the federal government, the power of the states, and the historical and contemporary power of the tribes explained.

**797G**  
**Native American Law Seminar**  
Concepts used historically to fit Native Americans into the legal structure of the United States. The power of the federal government, the power of the states, and the historical and contemporary power of the tribes explained.

**798G**  
**Clinical Practice–Civil**  
**Prereqs:**  
Parallel LAW 741G.  
Open only to students with senior standing. Students are also required to attend a seminar on lawyering skills and the representation of clients. Students, under close faculty supervision, advise and represent clients in a variety of civil cases, including landlord-tenant, consumer, collection, bankruptcy, immigration, tax, and domestic relations cases.

**799G**  
**Clinical Practice–Criminal**  
**Prereqs:**  
LAW 761G.  
Open only to students with senior standing. Participation in a seminar concentrating on the development of skills necessary to the prosecution and defense of criminal cases is required. Students prosecute a variety of misdemeanor offenses under the close supervision of a member of the faculty. Cases are prosecuted through the Lancaster County Attorney’s Office and the practice component of the course is conducted out of that office.
Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/LegalStudies).

Graduate Committee: Professors Lawson (Chair), Beard, Berger, Blankley, Bradford, Burksland-Reid, Denicola, Duncan, Frank, Gardner, Gradwohl, Kirst, Leiter, Lenich, Lepard, Lyons, Medill, Moberly, Poser, Potato, Ruser, Schaefer, Schmidt, Schopp, Schutz, Shavers, Sheppard, Willborn, Wilson, Works, Zellmer

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 can 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. The required courses are Foundational Legal Skills (2 credit hours, fall semester only) as well as one of the following courses: Contracts, Property or Torts. Contracts and Property are full-year 6 credit hour courses – 3 hours in the fall semester and 3 hours in the spring semester. Torts is a 4 credit hour course, offered in the fall semester only. 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 MLS degree program, the program’s course and academic requirements, and the differences between a JD and an MLS degree, should contact the College of Law Admissions Office.

See the course listing for 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.

Faculty

For faculty list, research interests and department/college contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/LegalStudies).

Leadership Education & Leadership Studies

Courses for ALEC (ALEC)

### Overview to Program Planning

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Web

Theoretical and applied considerations for identifying content, design, implementation, and evaluation of educational programs that vary in length from several hours to several months.

### Supervisory Leadership

**Crosslisted as CYAF 807**

Knowledge and theoretical basis for practicing supervisors in a changing workplace where supervisors have increasing responsibilities due to the flattening or organizational structures, solving supervisory challenges in organizing and planning, problem solving and decision making, performance appraisal and leading a diverse workforce.

### Environmental Leadership

**Crosslisted as NRES 413/813**

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 can 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. The required courses are Foundational Legal Skills (2 credit hours, fall semester only) as well as one of the following courses: Contracts, Property or Torts. Contracts and Property are full-year 6 credit hour courses – 3 hours in the fall semester and 3 hours in the spring semester. Torts is a 4 credit hour course, offered in the fall semester only. 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 MLS degree program, the program’s course and academic requirements, and the differences between a JD and an MLS degree, should contact the College of Law Admissions Office.

See the course listing for 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.

Faculty

For faculty list, research interests and department/college contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/LegalStudies).
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 412</td>
<td>Multimedia Applications for Education and Training</td>
<td>Practical applications in developing and evaluating multimedia resources for students. Surveys new applications, creates and develops various instructional materials, and reviews current practice against relevant theory. Use current software packages to develop materials for various audiences.</td>
</tr>
<tr>
<td>ALEC 420</td>
<td>Improvement of Instructional Programs for Post-High-School Occupational Education</td>
<td>Designing new instructional programs, expanding the impact of student behavioral objectives, and evaluating the total instructional program.</td>
</tr>
<tr>
<td>ALEC 424</td>
<td>Foundations of Career and Technical Education</td>
<td>Scope and structure of career and technical education within the educational system. Teacher’s role and responsibilities in dealing with legislative mandates in the planning, management, and evaluation of a local program.</td>
</tr>
<tr>
<td>ALEC 466</td>
<td>Leadership and Diversity in Organizations and Communities</td>
<td>Leadership theories and their applications to human diversity in organizations and communities.</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>Leadership and Motivation</td>
<td>Classic and contemporary motivation theories applied to leadership in organizations and communities.</td>
</tr>
<tr>
<td>ALEC 488</td>
<td>Leadership, Power and Influence</td>
<td>Organizational influence processes, power, and politics in organizations and communities.</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
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</tr>
<tr>
<td>ALEC 496/896</td>
<td>Independent Study in Leadership Education</td>
<td>Permission.</td>
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<tr>
<td></td>
<td></td>
<td>Projects to research, literature review, or extension of course work.</td>
</tr>
<tr>
<td>ALEC 801</td>
<td>Theoretical Foundations of Leadership</td>
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<td></td>
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<td>Major research thrusts in leadership field. Historical and contemporary research studies, surveying the literature, developing theory, and conceptualizing original research questions and problems.</td>
</tr>
<tr>
<td>ALEC 802</td>
<td>Developing Leadership Capacity in Organizations and Communities</td>
<td>ALEC *801 or equivalent</td>
</tr>
<tr>
<td></td>
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<td>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.</td>
</tr>
<tr>
<td>ALEC 804</td>
<td>Problems of Beginning Agriscience Teachers</td>
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<td></td>
<td></td>
<td>Problems in instructional planning and methodology and in organizing secondary and continuing education, FFA, and agriculture experience programs.</td>
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<tr>
<td>ALEC 806</td>
<td>Introduction to Distance Education</td>
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<td></td>
<td></td>
<td>Course is not offered at this time.</td>
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<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>ALEC 814</td>
<td>Classic Figures in Leadership</td>
<td></td>
</tr>
</tbody>
</table>
Management Strategies in Distance Education Environments

Course is not offered at this time.

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, private and public, and established and emerging organizations.

Program Evaluation

Prereqs:
ALEC *833 recommended

Builds upon program development in extension programming and provides a basic overview of program evaluation principles and methods. Applies program evaluation principles in extension education.

Workshop Seminars

Prereqs:
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

Prereqs:
Permission

Group study of technology in agricultural occupations. Workshops, special meetings, and assignments.

Special Topics

Readings, in-depth discussions and analysis of current theory, issues and problems, research and practice in leadership education and/or communication. Offered to address emerging topics not covered in other courses.

Masters Thesis
**Leading Change in Rural America and Beyond**  
Credit Hours: 3  
Course Format: Field, Lecture  
Campus:  
Course Delivery: Classroom  
Prereqs: 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. Develop a change plan for a community or organization.

**Teacher Education in Agriscience**  
Credit Hours: 1-3  
Course Format: Lecture  
Campus:  
Course Delivery: Classroom  
Prereqs: ALEC 801 recommended  
Preparation of agriscience teachers to supervise and mentor student teachers, evaluate/coach performance, and instructional delivery.

**Seminar in Leadership Studies**  
Credit Hours: 1  
Max credits per degree: 4  
Campus:  
Course Delivery: Classroom  
Prereqs: ALEC *806 recommended  
Ideas, theories, and practices on recent and emerging leadership research themes.

**Theoretical Foundations of Distance Education**  
Credit Hours: 3  
Course Format: Lecture  
Campus:  
Course Delivery: Classroom  
Prereqs: ALEC *806 recommended  
Course is not offered at this time.  
Major theoretical concepts and research finding of distance education, as broadly conceived. Emphasis on analyzing and deconstruction of major ideas influencing distance education in formal and non-formal settings.

**Organization of the Agricultural Mechanics Program**  
Credit Hours: 2-3  
Course Format: Lab, Lecture  
Campus:  
Philosophy, objectives, procedures, and techniques used in organizing the program of agricultural mechanics instruction for secondary and post-high school students and adults. Determining units of instruction, evaluating student effort, procedures in shop instruction, selection of equipment, and
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 910</td>
<td>Leadership in Cross-cultural Systems</td>
<td>ALEC 801 recommended</td>
<td>3</td>
<td>Lecture</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Issues of leading people in the global marketplace. Focus on understanding the impact of cultural differences, comparing and contrasting domestic and multinational leadership challenges, and review of current multinational leadership.</td>
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<tr>
<td>ALEC 913</td>
<td>Program Development in Occupational Education</td>
<td></td>
<td>3</td>
<td>Lecture</td>
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<td>Classroom</td>
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<td>Philosophy and objectives of occupational education. Techniques of program development, choosing instructional areas, determining sequences, planning time distributions, integrated course of study and meeting individual needs, youth activities.</td>
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<tr>
<td>ALEC 914</td>
<td>Leadership and Personality</td>
<td></td>
<td>2</td>
<td>Lecture 2</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Course is not offered at this time.</td>
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<td></td>
<td>Personality type and its implications for personal, team, and organizational leadership effectiveness.</td>
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<tr>
<td>ALEC 995</td>
<td>Doctoral Seminar in Leadership Studies</td>
<td>Permission</td>
<td>3</td>
<td>Lecture</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>ALEC 996</td>
<td>Research Other Than Thesis</td>
<td>Permission</td>
<td>2–6</td>
<td>Lecture</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Research in selected problems in leadership education.</td>
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<tr>
<td>ALEC 999</td>
<td>Doctoral Dissertation</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
<td>1–24</td>
<td>Lecture</td>
<td></td>
<td>Classroom</td>
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</tr>
</tbody>
</table>
Research in Leadership Education
Crosslisted as ALEC 845
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.

Science Writing
Crosslisted as ALEC 444
Prereqs:
Permission.
Open to all majors. Articles may be submitted for publication.
Advanced writing about science for the non-expert and/or for the general public. Issues in science communication through reading the best writers in science and journalism. Research and write short articles and longer profiles about science and scientists at the University of Nebraska-Lincoln (UNL) and elsewhere. Polish writing skills for doing work in science classes.

Leadership in Public Organizations
Crosslisted as ALEC 428
Prereqs:
Junior standing.
Leadership in theories, research, and practices in public organizations and natural resource agencies.

Advanced Teaching Strategies
Crosslisted as ALEC 805, NUTR 806
This course is a prerequisite for: ALEC 400
Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs public schools, and other settings. Students 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.

Practicum in Postsecondary Teaching
Crosslisted as ALEC 905
Prereqs:
ALEC *805 or permission
Work with a faculty mentor in a discipline of choice and an instructional supervisor to prepare instruction and teach students in a postsecondary setting. Practicum students are assisted in arranging for the practicum and are provided consultation and feedback during the practicum. Lesson planning and reflective papers are part of the practicum experience.
Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/LeadershipEducation).

Department Head: Mark A. Balschweid, Ph.D.

Graduate Committee Chair: Assistant Professor Matkin

Web Site: alec.unl.edu

Master of Science in Leadership Education

Candidates for the degree must possess a bachelor's degree from an accredited institution. The program welcomes applicants from a variety of disciplines and fields. The MS in leadership education may be earned in an area emphasis in Leadership Development or Teaching and Extension Education. Leadership Education students may also participate in the interdisciplinary specialization of Environmental Studies or Great Plains Studies. Programs are planned to meet individual student background experiences and desired graduate program goals. The degree may be earned by successfully completing a minimum of 30 credit hours (Option I) or 36 credit hours (Options II and III) beyond the bachelor's degree. Option I includes a thesis. Option II is non-thesis and requires a minor from another department. Option III is a non-thesis, course based program. In Agricultural Leadership, Education, and Communication, the degree may be pursued in the areas described below. The Graduate Record Exam (GRE) is required for admission to the MS program. International students must also submit a TOEFL iBT minimum of 79.

**Leadership Development Emphasis.** The Leadership Development emphasis immerses students in the increasingly complex area of leadership. The program is designed to enhance prior education and experience to prepare for careers related to leadership, organization, or community development. Leadership courses offered range from the foundations of leadership to applications for leadership development, leading change, community leadership and leadership in cross-cultural settings.

**Teaching and Extension Education Specialization.** The Teaching and Extension Education specialization prepares students for careers in community college or university teaching, public school teaching, outreach programs and Cooperative Extension. The specialization is valuable to international students planning teaching careers, as well as for individuals providing educational services. Teaching and extension courses range from teaching strategies to program planning and use of technology in education.

**Leadership Studies Doctoral Specialization, Doctoral Program in Human Sciences**

The Department offers a doctoral specialization in Leadership Studies within the Education and Human Sciences doctoral program. The EdD degree is recommended for those whose primary interest is in the application of theory and knowledge to improve leadership practice. Most EdD graduates pursue practitioner-based careers in the leadership field. The PhD is designed for students seeking to conduct research to generate new knowledge or reform leadership theory. Most PhD Graduate pursue faculty or high-level leadership careers. The most current information for the Leadership Studies Specialization is available online at [alec.unl.edu](http://alec.unl.edu).

For additional information see "Requirements for Doctoral Degrees" in the Education and Human Sciences Doctoral Program, under Human Sciences. The graduate Record Exam (GRE) is required for admission to the doctoral specialization. International students must also submit a TOEFL iBT minimum of 79.

For additional information regarding the programs listed above, please visit the Department of Agricultural Leadership, Education and Communication's Web site at [alec.unl.edu](http://alec.unl.edu) or by contacting:

Department of Agricultural Leadership, Education and Communication
University of Nebraska-Lincoln
300 Agricultural Hall
PO Box 830709
Lincoln, NE 68583–0709
(402) 472–2807
email: ag-webmaster2@unl.edu

Faculty List

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/LeadershipEducation).

Retrieved from "[http://bulletin.unl.edu/graduate/Leadership_Education_%26_Leadership_Studies](http://bulletin.unl.edu/graduate/Leadership_Education_%26_Leadership_Studies)"

Management Information Systems and Technology

Courses for MIST (MIST)

<table>
<thead>
<tr>
<th>MIST 452/852</th>
<th>Database Organization and Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crosslisted as SCMS 452, MNGT 452/852</td>
<td></td>
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</tbody>
</table>

[LINK](http://bulletin.unl.edu/courses/MIST/452)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIST 454</td>
<td>Information Systems Analysis and Design</td>
<td>MNIST/MIST 350 (link)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>MIST 456</td>
<td>Object-Oriented Systems Development</td>
<td>MNIST/MIST 350 (link)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>MIST 457</td>
<td>Business Data Communications</td>
<td>MNIST/MIST 350 (link)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>MIST 458</td>
<td>Electronic Business</td>
<td>MNIST/MIST 350 (link)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Data Mining and Warehousing</td>
<td>MNIST 950 (link) or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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</tbody>
</table>
### Mathematics

#### Courses for MATH (MATH)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSCE 340/840</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/340</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>CSCE 155A</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/155A</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>CSCE 155E</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/155E</td>
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</tr>
<tr>
<td>CSCE 155H</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/155H</td>
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<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td>CSCE 155N</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/155N</td>
<td>3</td>
<td>Lecture 3</td>
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</tr>
<tr>
<td>CSCE 155ST</td>
<td>Numerical Analysis I</td>
<td>Link on bulletin.unl.edu/courses/CSCE/155ST</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

This course is a prerequisite for CSCE 447.

### Courses for MATH (MATH)

#### Mobile and Ubiquitous Commerce

**455/855**

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Description**

The impact of wireless and mobile technology on the ways in which business is conducted and the strategic implications of wireless applications in organizations.

**Prereqs:** MIST/MNGT 350

#### Global Information Systems

**459/859**

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

The worldwide political and economic changes in the last decade that have propelled city, state, country governments, and corporations to expand business globally and enter into new markets. Information technology (IT) as a key role in the globalization of businesses. The necessary concepts and ideas to understand the issues in the global or international use of information technology. IT environments around the world, national infrastructures and regulatory regimes, global IT applications, global IS development strategies, global management support systems, and global IT management strategies.

### Courses for MATH (MATH)

#### Numerical Analysis I

**340/840**

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Description**

Algorithm formulation for the practical solution of problems, interpolation,
Approximation of Functions
Crosslisted as MATH 441/841

Prereqs:
A programming language, MATH 221 and 314.

Polynomial interpolation, uniform approximation, orthogonal polynomials, least-first-power approximation, polynomial and spline interpolation, approximation and interpolation by rational functions.

Numerical Analysis II
Crosslisted as MATH 447/847

Prereqs:
CSCE 340, MATH 221 and 314.

Numerical matrix methods and numerical solutions of ordinary differential equations.

Numerical Analysis III
Crosslisted as MATH 942

Prereqs:
CSCE/MATH 840 or 841 or 847 or permission.

Advanced topics in numerical analysis.

Differential Equations

Prereqs:
A grade of "P" or "C" or better in MATH 208.

This course is a prerequisite for: METR 812, MATH 324, MATH 427, CSCE 441, CSCE 447, ENG 480, METR 480, METR 484, METR 489, METR 924.

Not open to MA or MS students in mathematics or statistics.

First- and second-order methods for ordinary differential equations including: separable, linear, Laplace transforms, linear systems, and some applications.

Mathematical Methods for Biology and Medicine
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>ACE Outcomes</th>
<th>Groups</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>238/838</td>
<td>Mathematical Modeling, discrete and continuous probability, parameter estimation, discrete and continuous dynamical systems, and Markov chains. Application of mathematical models in the life sciences. Methods include regression analysis, cobweb diagrams, the phase line, nulcline analysis, eigenvalue analysis, linearization, and likelihood analysis. Applications include fisheries, stage-structured populations, pharmacokinetics, epidemiology, and medical testing.</td>
<td>MATH 106 (<a href="http://bulletin.unl.edu/courses/MATH/106">http://bulletin.unl.edu/courses/MATH/106</a>), MATH 106B (<a href="http://bulletin.unl.edu/courses/MATH/106B">http://bulletin.unl.edu/courses/MATH/106B</a>), MATH 108H (<a href="http://bulletin.unl.edu/courses/MATH/108H">http://bulletin.unl.edu/courses/MATH/108H</a>).</td>
<td>5</td>
<td>Lecture 5</td>
<td>Classroom</td>
<td>3</td>
<td>Advanced Mathematics Courses</td>
<td></td>
</tr>
<tr>
<td>314/814</td>
<td>Applied Linear Algebra (Matrix Theory)</td>
<td>MATH 106 (<a href="http://bulletin.unl.edu/courses/MATH/106">http://bulletin.unl.edu/courses/MATH/106</a>), MATH 106B (<a href="http://bulletin.unl.edu/courses/MATH/106B">http://bulletin.unl.edu/courses/MATH/106B</a>), MATH 108H (<a href="http://bulletin.unl.edu/courses/MATH/108H">http://bulletin.unl.edu/courses/MATH/108H</a>).</td>
<td>3</td>
<td>Classroom</td>
<td>Classroom</td>
<td>3</td>
<td>Advanced Mathematics Courses</td>
<td>This course is a prerequisite for: MATH 409 (<a href="http://bulletin.unl.edu/courses/MATH/409">http://bulletin.unl.edu/courses/MATH/409</a>), MATH 415 (<a href="http://bulletin.unl.edu/courses/MATH/415">http://bulletin.unl.edu/courses/MATH/415</a>), MATH 428 (<a href="http://bulletin.unl.edu/courses/MATH/428">http://bulletin.unl.edu/courses/MATH/428</a>), MATH 432 (<a href="http://bulletin.unl.edu/courses/MATH/432">http://bulletin.unl.edu/courses/MATH/432</a>), MATH 433 (<a href="http://bulletin.unl.edu/courses/MATH/433">http://bulletin.unl.edu/courses/MATH/433</a>), CSCE 410 (<a href="http://bulletin.unl.edu/courses/CSCE/410">http://bulletin.unl.edu/courses/CSCE/410</a>), MATH 436 (<a href="http://bulletin.unl.edu/courses/MATH/436">http://bulletin.unl.edu/courses/MATH/436</a>), MATH 437 (<a href="http://bulletin.unl.edu/courses/MATH/437">http://bulletin.unl.edu/courses/MATH/437</a>), MATH 485 (<a href="http://bulletin.unl.edu/courses/MATH/485">http://bulletin.unl.edu/courses/MATH/485</a>), STAT 473 (<a href="http://bulletin.unl.edu/courses/STAT/473">http://bulletin.unl.edu/courses/STAT/473</a>). Not open to MA or MS students in mathematics or statistics. Fundamental concepts of linear algebra from the point of view of matrix manipulation with emphasis on concepts that are most important in applications. Includes solving systems of linear equations, vector spaces, inner products, determinants, eigenvalues, similarity of matrices, and Jordan Canonical Form.</td>
</tr>
<tr>
<td>322/822</td>
<td>Advanced Calculus</td>
<td>MATH 221 (<a href="http://bulletin.unl.edu/courses/MATH/221">http://bulletin.unl.edu/courses/MATH/221</a>).</td>
<td>3</td>
<td>Classroom</td>
<td>Classroom</td>
<td>3</td>
<td>Advanced Mathematics Courses</td>
<td>Not open to MA or MS students in mathematics or statistics. Uniform convergence of sequences and series of functions, Green's theorem, Stoke's theorem, divergence theorem, line integrals, implicit and inverse function theorems, and general coordinate transformations.</td>
</tr>
<tr>
<td>324/824</td>
<td>Introduction to Partial Differential Equations</td>
<td>MATH 221 (<a href="http://bulletin.unl.edu/courses/MATH/221">http://bulletin.unl.edu/courses/MATH/221</a>).</td>
<td>3</td>
<td>Classroom</td>
<td>Classroom</td>
<td>3</td>
<td>Advanced Mathematics Courses</td>
<td>Not open to MA or MS students in mathematics or statistics.</td>
</tr>
</tbody>
</table>
Derivation of the heat, wave, and potential equations; separation of variables 
method of solution; solutions of boundary value problems by use of Fourier 
series, Fourier transforms, eigenfunction expansions with emphasis on the 
Bessel and Legendre functions; interpretations of solutions in various 
physical settings.

**Math for High School Teachers II, Using Math to Understand Our World**

**MATH 409/809**

**Prereqs:**
Math 310, Math 314, Math 380/Stat 380

Not open to MA or MS students in Mathematics. This course is for students 
seeking a mathematics major under the Education Option and for students 
in CEHS who are seeking their secondary mathematics teaching certificate.

This course is designed around a series of projects in which students create 
mathematical models to examine the mathematics underlying several 
socially-relevant questions.

**Theory of Linear Transformations**

**MATH 415/815**

**Prereqs:**
Math 314/814 and either Math 325 or Math 310.

Topics fundamental to the study of linear transformations on finite and 
infinite dimensional vector spaces over the real and complex number fields 
including: subspaces, direct sums, quotient spaces, dual spaces, matrix of a 
transformation, adjoint map, invariant subspaces, triangularization and 
diagonalization. Additional topics may include: Riesz Representation 
theorem, projections, normal operators, spectral theorem, polar 
decomposition, singular value decomposition, determinant as an n–linear 
functional, Cayley-Hamilton theorem, nilpotent operators, and Jordan 
canonical form.

**Introduction to Complex Variable Theory**

**MATH 423/823**

Advanced introductory course for engineering, physical sciences, and 
mathematics majors. Complex numbers, functions of complex variables, 
analytic functions, complex integration, Cauchy's integral formulas, Taylor 
and Laurent series, calculus of residues and contour integration, conformal 
mappings, harmonic functions, and some applications.

**Mathematical Methods in the Physical Sciences**

**MATH 427/827**

**Prereqs:**
MATH 221

Not open to mathematics majors. Not open to MA or MS students in 
mathematics.

Matrix operations, transformations, inverses, orthogonal matrices, rotations 
in space. Eigenvalues and eigenvectors, diagonalization, applications of 
diagonalization. Curvilinear coordinate systems, differential operations in 
curvilinear coordinate systems, Jacobians, changes of variables in multiple 
integration. Scalar, vector and tensor fields, tensor operations, applications 
or tensors. Complex function theory, integration by residues, conformal 
mappings.
### Principles of Operations Research

**Course Code:** MATH 428/828  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10  
**Groups:** Advanced Mathematics Courses  
**Prereqs:**  
- MATH 314 or equivalent  
- Either STAT 380 or IMSE 321 or equivalent  

**Description:** Introduction to techniques and applications of operations research. Includes linear programming, queueing theory, decision analysis, network analysis, and simulation.

### Linear Optimization

**Course Code:** MATH 432/832  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Groups:** Advanced Mathematics Courses  
**Prereqs:**  
- MATH 314 or equivalent  
- MATH 814 or equivalent  

**Description:** Mathematical theory of linear optimization, convex sets, simplex algorithm, duality, multiple objective linear programs, formulation of mathematical models.

### Nonlinear Optimization

**Course Code:** MATH 433/833  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Groups:** Advanced Mathematics Courses  
**Prereqs:**  
- MATH 314 or equivalent  

**Description:** Mathematical theory of constrained and unconstrained optimization, conjugate direction and quasi-Newton methods, convex functions, Lagrange multiplier theory, constraint qualifications.

### Mathematical Models in Biology

**Course Code:** MATH 439/839  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Groups:** Advanced Mathematics Courses  
**Prereqs:**  
- MATH 107 or permission  
- MATH 439 or equivalent  

**Description:** Discrete and continuous models in ecology, population models, predation and food webs, the spread of infectious diseases and life histories. Probability and random processes in nature, elementary models for molecular events, and pharmacokinetics.

### Introduction to the Theory of Numbers

**Course Code:** MATH 445/845  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
**Groups:** Advanced Mathematics Courses  
**Prereqs:**  
- MATH 310 or equivalent  
- Either MATH 310 or 310H

**Description:** Arithmetic functions, congruences, reciprocity theorem, primitive roots, Diophantine equations, and continued fractions.
**Introduction to Mathematical Logic**

Semantical and syntactical developments of propositional logic, discussion of several propositional calculi, applications to Boolean algebra and related topics, semantics and syntax of first-order predicate logic including Godel's completeness theorem, the compactness theorem.

**Probability Theory**

Prereqs: Math 314 and Math 325.

Probability, conditional probability, Bayes' theorem, independence, discrete and continuous random variables, density and distribution functions, multivariate distributions, probability and moment generating functions, the central limit theorem, convergence of sequences of random variables, random walks, Poisson processes, and applications.

**Stochastic Processes and Advanced Mathematical Finance**

Prereqs: MATH 221 and/or STAT/MATH 380 and/or STAT 880.


**Seminar in Mathematics**

Prereqs: Permission.

**Number and Operation for K–3 Mathematics Specialists**

Prereqs: Admission to the MAT or MSCT program in mathematics or to a graduate program in the College of Education and Human Sciences.
Number and operations. Place value and its role in arithmetic operations. Development of fractions and number systems. Develop the habits of mind of a mathematical thinker and to develop a depth of understanding of number and operations sufficient to enable the teacher to be a disciplinary resource for other K-3 teachers.

**MATH 800T**  
**Mathematics as a Second Language**  
**Prereqs:**  
Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences  

*MATH 800T* (http://bulletin.unl.edu/courses/MATH/800T) is intended for mid-level mathematics teachers.

Numbers and operations. Careful reasoning, problem solving, and communicating mathematics both orally and in writing. Connections with other areas of mathematics. Development of mathematical thinking habits.

**MATH 801P**  
**Geometry, Measurement, and Algebraic Thinking for K–3 Mathematics Specialists**  
**Prereqs:**  
Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences

Polygons, polyhedra, rigid motions, symmetry, congruence, similarity, measurement in one, two and three dimensions, functions, mathematical expressions, solving equations, sequences. Develop the habits of mind of a mathematical thinker and to develop a depth of understanding of geometry, measurement and algebraic thinking to enable the teacher to be a disciplinary resource for other K-3 teachers.

**MATH 802P**  
**Number, Geometry and Algebraic Thinking II for K–3 Math Specialists**  
**Prereqs:**  
Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences.

*MATH *802P will not count toward the MA or MS degree in mathematics or statistics.

Number sense and operations in the context of rational numbers, geometry and algebra in grades 4–6 curriculum, and how the mathematical content in grades K–3 (e.g., Taylor–Cox, 2003) lays a foundation for abstract thinking beginning in grades 4 and beyond. Designed to develop a depth of understanding sufficient to enable the teacher to be a disciplinary resource to other K-3 teachers.

**MATH 802T**  
**Functions, Algebra, and Geometry for Middle Level Teachers**  
**Prereqs:**  
Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences

*MATH *802T is intended for mid-level mathematics teachers.

Variables and functions. Use of functions in problem solving. Theory of measurement, especially length, area, and volume. Geometric modeling in algebra. Graphs, inverse functions, linear and quadratic functions, the fundamental theorem of arithmetic, modular arithmetic, congruence and similarity. Ways these concepts develop across the middle level curriculum.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 804T</td>
<td>Experimentation, Conjecture and Reasoning</td>
<td>Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 805T</td>
<td>Discrete Mathematics for Middle Level Teachers</td>
<td>Admission to the MAT–MScT program in MATH or to a graduate program in the College of Education and Human Sciences</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 806T</td>
<td>Number Theory and Cryptology for Middle Level Teachers</td>
<td>Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 807</td>
<td>Mathematics for High School Teachers I</td>
<td>MATH 208 and 310</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 807T</td>
<td>Using Mathematics to Understand Our World</td>
<td>Admission to the MAT–MScT program in MATH or to a graduate program in the College of Education and Human Sciences</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
</tr>
</tbody>
</table>
MATH *807T is intended for middle-level mathematics teachers.

The mathematics underlying several socially-relevant questions from a variety of academic disciplines. Construct mathematical models of the problems and study them using concepts developed from algebra, linear and exponential functions, statistics and probability. Original documentation, such as government data, reports and research papers, in order to provide a sense of the role mathematics plays in society, both past and present.

MATH 808
Mathematics for High School Teachers II

Prereqs:
MATH 310 (http://bulletin.unl.edu/courses/MATH/310) and 350 (http://bulletin.unl.edu/courses/MATH/350)

Analysis of the connections between college mathematics and high school algebra and geometry.

MATH 808T
Concepts of Calculus for Middle-Level Teachers

Prereqs:
Admission to the MAT-MScT program in MATH or to a graduate program in the College of Education and Human Sciences

MATH *808T is intended for middle-level mathematics teachers.

The processes of differentiation and integration, their applications and the relationship between the two processes. Rates of change, slopes of tangent lines, limits, derivatives, extrema, derivatives of products and quotients, anti-derivatives, areas, integrals, and the Fundamental Theorem of Calculus. Connections to concepts in the middle level curriculum.

MATH 810T
Algebra for Algebra Teachers

Prereqs:
Admission to the MAT or MScT program in mathematics or to a graduate program in the College of Education and Human Sciences

The integers. The Euclidean algorithm, the Fundamental Theorem of Arithmetics, and the integers mod n. Polynomials with coefficients in a field. The division algorithm, the Euclidean algorithm, the unique factorization theorem, and its applications. Polynomials whose coefficients are rational, real or complex. Polynomial interpolation. The habits of mind of a mathematical thinker. The conceptual underpinnings of school algebra.

MATH 811T
Functions for High School Teachers

Prereqs:
A valid secondary mathematics teaching certificate or by permission.

Course examines mathematics underlying pre–calculus material through problem solving. Connections to other topics in mathematics, including algebra, geometry and advanced mathematics are highlighted.

MATH 812T
Geometry for Geometry Teachers

Prereqs:

Course examines mathematics underlying pre–calculus material through problem solving. Connections to other topics in mathematics, including algebra, geometry and advanced mathematics are highlighted.
Course examines mathematics underlying high school geometry through problem solving. Topics include Spherical, Euclidean and Hyperbolic geometry, introduction to Neutral geometry, Platonic and Archimedean solids and projective geometry.

**Math in the City for Teachers**

Prereqs:
A valid secondary mathematics teaching certificate.

A modeling course run in collaboration with area businesses or organizations in which real world problems are studied. Course emphasizes how mathematics is used outside academia.

**Introduction to Modern Algebra I**

Prereqs:
MATH 417

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.

**Introduction to Modern Algebra II**

Prereqs:
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.

**Mathematical Analysis I**

Prereqs:
MATH 325

This course is a prerequisite for MATH 826.
### Mathematical Analysis II

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Prereqs:**  
MATH 825 (http://bulletin.unl.edu/courses/MATH/825)  
This course is a prerequisite for: MATH 924 (http://bulletin.unl.edu/courses/MATH/924); MATH 925 (http://bulletin.unl.edu/courses/MATH/925); MATH 932 (http://bulletin.unl.edu/courses/MATH/932); MATH 933 (http://bulletin.unl.edu/courses/MATH/933); MATH 941 (http://bulletin.unl.edu/courses/MATH/941)  
Real number system, topology of Euclidean space and metric spaces, continuous functions, derivatives and the mean value theorem, the Riemann and Riemann-Stieltjes integral, convergence, the uniformity concept, implicit functions, line and surface integrals.

### Ordinary Differential Equations I

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Prereqs:**  
MATH 325 (http://bulletin.unl.edu/courses/MATH/325)  
This course is a prerequisite for: MATH 831 (http://bulletin.unl.edu/courses/MATH/831)  
The Picard existence theorem, linear equations and linear systems, Sturm separation theorems, boundary value problems, phase plane analysis, stability theory, limit cycles and periodic solutions.

### Ordinary Differential Equations II

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Prereqs:**  
MATH 830 (http://bulletin.unl.edu/courses/MATH/830)  
The Picard existence theorem, linear equations and linear systems, Sturm separation theorems, boundary value problems, phase plane analysis, stability theory, limit cycles and periodic solutions.

### Methods of Applied Mathematics I

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**  
**Prereqs:**  
MATH 821 (http://bulletin.unl.edu/courses/MATH/821) and 814 (http://bulletin.unl.edu/courses/MATH/814), or their equivalents  
This course is a prerequisite for: MATH 843 (http://bulletin.unl.edu/courses/MATH/843); MATH 938 (http://bulletin.unl.edu/courses/MATH/938)  
Interdependence between mathematics and the physical and applied sciences. Includes the calculus of variations, scaling and dimensional analysis, regular and singular perturbation methods.

### Methods of Applied Mathematics II

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**  
**Prereqs:**  
MATH 842 (http://bulletin.unl.edu/courses/MATH/842)  
This course is a prerequisite for: MATH 843 (http://bulletin.unl.edu/courses/MATH/843)
Application of partial differential equation models to problems in the physical and applied sciences. Includes derivation of partial differential equations, the theory of continuous media, linear and nonlinear wave propagation, diffusion, transform methods, and potential theory.

**MATH 850**

**Discrete Mathematics I**  
[LINK](http://bulletin.unl.edu/courses/MATH/850)

**Prereqs:**  
MATH 310 [or 325](http://bulletin.unl.edu/courses/MATH/310)  

**Description:**  

**MATH 852**

**Discrete Mathematics II**  
[LINK](http://bulletin.unl.edu/courses/MATH/852)

**Prereqs:**  
MATH 850

**Description:**  

**MATH 856**

**Differential Topology**  
[LINK](http://bulletin.unl.edu/courses/MATH/856)

**Prereqs:**  
MATH 471 [or 871](http://bulletin.unl.edu/courses/MATH/471)

**Description:**  
Introduction to a selection of topics in differentiable manifolds, smooth maps, vector fields and vector bundles, embeddings and immersions, differential forms, integration on manifolds, and applications.

**MATH 858**

**Topics in Geometry**  
[LINK](http://bulletin.unl.edu/courses/MATH/858)

**Prereqs:**  
MATH 208

**Description:**  
Selected topics in some branch of geometry.

**MATH 871**

**Topology I**  
[LINK](http://bulletin.unl.edu/courses/MATH/871)

**Prereqs:**  
MATH 325 [or 417](http://bulletin.unl.edu/courses/MATH/325)

**Description:**  
This course is a prerequisite for MATH 937 [LINK](http://bulletin.unl.edu/courses/MATH/937)
Topological spaces, continuous functions, product and quotient spaces, compactness and connectedness, homotopy, fundamental groups.

**MATH 872 Topology II**

**Prereqs:**
MATH 871 and MATH 417

Fundamental groups and the van Kampen theorem, covering spaces and the Galois correspondence, applications to groups, homology and the Mayer–Vietoris theorem.

**MATH 874M Mathematics Integration**

MATH 874M may be counted towards the MAT and MScT degrees in mathematics and statistics, not the MA, MS, or PhD.

**MATH 897 Reading Course**

**MATH 899 Masters Thesis**

Prereqs: Admission to masters degree program and permission of major adviser

**MATH 901 Algebra I**

Prereqs: MATH 818 or permission

This course is a prerequisite for MATH 953

In-depth treatment of groups, rings, modules, algebraic field extensions, Galois theory, multilinear products, categories.

**MATH 902 Algebra II**

Prereqs: MATH 818 or permission

Credit Hours: 3

Campus: Classroom
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>MATH 905</td>
<td>Commutative Algebra</td>
<td>MATH 818 (or permission)</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td>MATH 909</td>
<td>Theory of Semigroups</td>
<td>MATH 818 (or permission)</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td>MATH 911</td>
<td>Theory of Groups</td>
<td>MATH 818 (or permission)</td>
<td>3-6</td>
<td>18</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 913</td>
<td>Introduction to the Theory of Rings</td>
<td>MATH 818</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>MATH 915</td>
<td>Homological Algebra</td>
<td>MATH 902 (or permission)</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
</tr>
</tbody>
</table>

In-depth treatment of groups, rings, modules, algebraic field extensions, Galois theory, multilinear products, categories.

Selected topics from classical ideal theory, Dedekind rings, completions, local rings, valuation theory.

Selected topics from semigroups of transformations, ideal structure and homomorphisms, free semigroups, inverse semigroups, matrix representation, decompositions and extensions.

Basic topics of infinite and finite group theory from among geometric, combinatorial, and algorithmic group theory, homology of groups, solvable and nilpotent groups and representation theory.

Elementary ring theory and examples of rings, the Jacobson radical and the structure of semi-simple rings, rings with minimum condition, Wedderburn's theorem, structure of modules.

Basic topics in homological algebra, including homology of complexes, extensions, tensor and torsion products and homological dimension, with application to rings and algebras.

Topics in Algebra

This course is a prerequisite for MATH 915.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>918</td>
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<tr>
<td></td>
<td></td>
<td>Credit Hours: 6</td>
<td>Max credits per degree: 18</td>
<td>Course Format: Lecture</td>
<td>Campus:</td>
<td>Course Delivery: Classroom</td>
</tr>
</tbody>
</table>

### Real Analysis I

**Course Code:** MATH 921  
**Prereqs:** MATH 818, 826, and 871  
**Course Description:** Semicontinuity, equicontinuity, absolute continuity, metric spaces, compact spaces, Ascoli's theorem, Stone-Weierstrass theorem, Borel and Lebesgue measures, measurable functions, Lebesgue integration, convergence theorems, $L_p$ spaces, general measure and integration theory, Radon-Nikodym theorem, Fubini theorem, Lebesgue-Stieltjes integration.

### Real Analysis II

**Course Code:** MATH 922  
**Prereqs:** MATH 818, 826, and 871  
**Course Description:** Semicontinuity, equicontinuity, absolute continuity, metric spaces, compact spaces, Ascoli's theorem, Stone-Weierstrass theorem, Borel and Lebesgue measures, measurable functions, Lebesgue integration, convergence theorems, $L_p$ spaces, general measure and integration theory, Radon-Nikodym theorem, Fubini theorem, Lebesgue-Stieltjes integration.

### Topics in Analysis

**Course Code:** MATH 923  
**Course Description:** Complex number field, elementary functions, analytic functions, conformal mapping, integration and calculus of residues, entire and meromorphic functions, higher transcendental functions, Riemann surfaces.

### Theory of Analytic Functions I

**Course Code:** MATH 924  
**Prereqs:** MATH 826  
**Course Description:** Complex number field, elementary functions, analytic functions, conformal mapping, integration and calculus of residues, entire and meromorphic functions, higher transcendental functions, Riemann surfaces.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 925</td>
<td>Theory of Analytic Functions II</td>
<td>MATH 826 (or permission)</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Complex number field, elementary functions, analytic functions, conformal mapping, integration and calculus of residues, entire and meromorphic functions, higher transcendental functions, Riemann surfaces.</td>
<td></td>
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</tr>
<tr>
<td>MATH 927</td>
<td>Asymptotic Methods in Applied Mathematics</td>
<td>Methods for approximating the solutions of differential equations, including local analysis near singular points, singular perturbation methods, boundary layer theory, WKB Theory, and multiple-scale methods. Asymptotic expansion of Laplace and Fourier integrals. Illustration of the use of asymptotics from journals in mathematics, science, and engineering.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>MATH 928</td>
<td>Functional Analysis I</td>
<td>MATH 818 and 921 (or permission)</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Banach and Hilbert Spaces, linear operators and functionals, completely continuous operators, spectral theory, integral equations.</td>
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<tr>
<td>MATH 929</td>
<td>Functional Analysis II</td>
<td>MATH 818 and 921 (or permission)</td>
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<tr>
<td></td>
<td></td>
<td>Banach and Hilbert Spaces, linear operators and functionals, completely continuous operators, spectral theory, integral equations.</td>
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<tr>
<td>MATH 932</td>
<td>Advanced Ordinary Differential Equations I</td>
<td>MATH 826 (or permission)</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Cauchy–Peano existence theorems, continuity and differentiability of solutions with respect to initial conditions, differential inequalities, uniqueness theorem, oscillation theory, Poincare–Bendixson theory, stability theory, almost periodic solutions.</td>
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<tr>
<td>MATH 933</td>
<td>Advanced Ordinary Differential Equations II</td>
<td>MATH 826 (or permission)</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Cauchy–Peano existence theorems, continuity and differentiability of solutions with respect to initial conditions, differential inequalities,</td>
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</table>
uniqueness theorem, oscillation theory, Poincare-Bendixson theory, stability theory, almost periodic solutions.

**Topics in Differential Equations**

<table>
<thead>
<tr>
<th>MATH 934</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/MATH/934">http://bulletin.unl.edu/courses/MATH/934</a>)</th>
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<tbody>
<tr>
<td>Credit Hours:</td>
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<tr>
<td>Max credits per degree:</td>
<td>18</td>
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<tr>
<td>Course Format:</td>
<td>Lecture</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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</table>

**Advanced Methods in Applied Mathematics I**

<table>
<thead>
<tr>
<th>MATH 935</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/MATH/935">http://bulletin.unl.edu/courses/MATH/935</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prereqs:</td>
<td>MATH 821 (<a href="http://bulletin.unl.edu/courses/MATH/821">http://bulletin.unl.edu/courses/MATH/821</a>) and 826 (<a href="http://bulletin.unl.edu/courses/MATH/826">http://bulletin.unl.edu/courses/MATH/826</a>)</td>
</tr>
<tr>
<td>This course is a prerequisite for:</td>
<td>MATH 936 (<a href="http://bulletin.unl.edu/courses/MATH/936">http://bulletin.unl.edu/courses/MATH/936</a>)</td>
</tr>
<tr>
<td>Credit Hours:</td>
<td>3</td>
</tr>
<tr>
<td>Campus:</td>
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</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Banach and Hilbert spaces, operator theory with application to differential and integral equations; spectral theory for compact, self-adjoint operators.

**Advanced Methods in Applied Mathematics II**

<table>
<thead>
<tr>
<th>MATH 936</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/MATH/936">http://bulletin.unl.edu/courses/MATH/936</a>)</th>
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<tbody>
<tr>
<td>Prereqs:</td>
<td>MATH 935 (<a href="http://bulletin.unl.edu/courses/MATH/935">http://bulletin.unl.edu/courses/MATH/935</a>) or permission</td>
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<tr>
<td>Credit Hours:</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

Distributions, Green’s functions and boundary value problems; integral transforms and spectral representations.

**Nonlinear Partial Differential Equations**

<table>
<thead>
<tr>
<th>MATH 937</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/MATH/937">http://bulletin.unl.edu/courses/MATH/937</a>)</th>
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<tbody>
<tr>
<td>Prereqs:</td>
<td>MATH 843 (<a href="http://bulletin.unl.edu/courses/MATH/843">http://bulletin.unl.edu/courses/MATH/843</a>) or 941 (<a href="http://bulletin.unl.edu/courses/MATH/941">http://bulletin.unl.edu/courses/MATH/941</a>) or permission</td>
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<td>Credit Hours:</td>
<td>3</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

Nonlinear wave propagation and shock structure with applications, dispersive waves, hyperbolic systems, group velocity and the method of stationary phase. WKB approximation and perturbation methods.

**Mathematical Modeling**

<table>
<thead>
<tr>
<th>MATH 938</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/MATH/938">http://bulletin.unl.edu/courses/MATH/938</a>)</th>
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<tbody>
<tr>
<td>Prereqs:</td>
<td>MATH 842 (<a href="http://bulletin.unl.edu/courses/MATH/842">http://bulletin.unl.edu/courses/MATH/842</a>), 843 (<a href="http://bulletin.unl.edu/courses/MATH/843">http://bulletin.unl.edu/courses/MATH/843</a>) and permission</td>
</tr>
<tr>
<td>Credit Hours:</td>
<td>3</td>
</tr>
<tr>
<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</tbody>
</table>

Advanced course in mathematical modeling for students who desire experience in formulating and analyzing open-ended, real-world problems in the natural and applied sciences. Participation in a few group projects that require conceptualization and analytical, numerical, and graphical analysis with formal oral and written presentation of the results.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>MATH 939</td>
<td>Topics in Applied Mathematics</td>
<td>6</td>
<td>18</td>
<td>Lecture</td>
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<tr>
<td>MATH 941</td>
<td>Partial Differential Equations</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>Prereqs:</td>
<td>MATH 826</td>
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<tr>
<td></td>
<td>Theory of hyperbolic, elliptic, and parabolic equations. Classification, existence and uniqueness result, solution representations.</td>
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<tr>
<td>MATH 953</td>
<td>Algebraic Geometry</td>
<td>3</td>
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<tr>
<td>Prereqs:</td>
<td>MATH 901-902</td>
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<tr>
<td></td>
<td>Affine geometry, coordinate rings, the Zariski topology, function fields and birational geometry, the Nullstellensatz, Krull dimension and transcendence degree, smoothness, projective geometry, divisors, curves.</td>
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<tr>
<td>MATH 958</td>
<td>Topics in Discrete Mathematics</td>
<td>6</td>
<td>18</td>
<td>Lecture</td>
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<tr>
<td>MATH 990</td>
<td>Topics in Topology</td>
<td>6</td>
<td>18</td>
<td>Lecture</td>
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<td>Classroom</td>
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<tr>
<td>MATH 995</td>
<td>Research Seminar</td>
<td>1-3</td>
<td>6</td>
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</tr>
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</table>
For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Judy Walker, Ph.D.

Interim Graduate Committee Chair: Richard Rebarber, Ph.D.

Graduate work is offered leading to the degrees of doctor of philosophy (PhD), master of arts (MA), master of science (MS), master of arts for teachers (MAT), and master of science for teachers (MScT).

Master of Arts (MA) or Master of Science (MS) Degree.

The program of study for the masters degree may be under any of the Options I, II, III. Under Option II, a candidate for the MA or MS degree may select a minor consisting of courses taken in another department approved to offer a masters degree.

For admission to full graduate standing a student should have the substantial equivalent of an undergraduate major in mathematics and possess an academic record that would indicate definite potential for graduate-level work.

Master of Arts or Master of Science for Teachers (MAT–MScT).

The MAT/MScT degree is designed for teachers who want to obtain graduate education in mathematics that is especially appropriate to their needs as mathematics teachers. Special courses or sections of courses bearing a "T" designation are offered specifically for persons in the program. The Department admits students to two programs leading to the MAT/MScT degree. One is for high school teachers. For that program, a completed calculus sequence, a course in modern algebra, and two other courses beyond calculus are required for admission. The other program is for middle–level mathematics teachers and leads to a masters degree with a Specialization in the Teaching of Middle-Level Mathematics. For both programs, the possession of a valid teaching certificate is a prerequisite to the award of the degree.

Doctor of Philosophy Degree.

Doctoral candidates will find departmental strengths in many areas of mathematics. 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 written qualifying examinations and a comprehensive examination that is determined by the student's supervisory committee. There is also a foreign language requirement but the supervisory
committee can request a waiver in many situations. The degree is awarded as recognition of high attainment in scholarship and for demonstrated power of independent research. An interdisciplinary PhD program in Mathematics and Computer Science is also offered.

Specific details on any of the advanced degree programs can be obtained from the Chair of the Graduate Committee.

Faculty
For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from “http://bulletin.unl.edu/graduate/Mathematics”

Mechanized Systems Management

Courses for MSYM (MSYM)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Capstone course.</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 475/875</td>
<td>Water Quality Strategy</td>
<td></td>
<td>Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>FDST 465/865</td>
<td>Food Engineering Unit Operations</td>
<td>Prereqs: FDST/MSYM 363</td>
<td>Unit operations and their applications to food processing.</td>
<td>3</td>
<td>Lecture 2, Lab 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>MSYM 433/833</td>
<td>Equipment and Tractor Testing</td>
<td>Prereqs: MSYM 312 and STAT 218</td>
<td>Offered fall semester of even-numbered calendar years. Principles and procedures involved in testing agricultural equipment and tractors. Actual test planned, scheduled, conducted and reported. Test may be based upon procedures used at the Nebraska Tractor Testing Laboratory or involve other equipment being used for research in the department.</td>
<td>3</td>
<td>Lecture 2, Lab 2</td>
<td>Classroom</td>
</tr>
<tr>
<td>MSYM 452/852</td>
<td>Irrigation Systems Management</td>
<td>Prereqs: MSYM 109 or general physics; AGRO/SOIL 153 recommended.</td>
<td>Crosslisted as HORT 452/852, WATS 452</td>
<td>3</td>
<td>Lecture 2, Lab 2</td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Irrigation management and the selection, evaluation, and improvement of irrigation systems. Includes soil-water measurement, crop water use, irrigation scheduling, irrigation efficiency, measurement of water flow, irrigation systems, groundwater and wells, pumping systems, applying chemicals with irrigation systems, and environmental and water resource considerations. Two laboratory sections are available; one which emphasizes agricultural applications and one which emphasizes horticultural applications.

### Equipment Systems

**MSYM 462/862**

#### Prereqs:
Senior standing in MYSM or permission.

#### Capstone course.

Team-based activities to evaluate equipment systems, make technical and economic recommendations, develop professional written and oral reports. Topics include equipment system performance and management, project scheduling and planning, cost estimation, reliability analysis, and risk assessment.

### Principles and Problems in Mechanized Agriculture

**MSYM 496/896**

#### Prereqs:
15 hours in MSYM or closely related area.

Individual or group projects in research, literature review, or extension of course work under the supervision and evaluation of a departmental faculty member.

### Hydraulic Power Systems

**MSYM 812**

#### Prereqs:
[MSYM 245](http://bulletin.unl.edu/courses/MSYM/245) and [312](http://bulletin.unl.edu/courses/MSYM/312)

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.

### Sensors and Control Systems for Agri-Industries

**MSYM 816**

#### Prereqs:
[MSYM 245](http://bulletin.unl.edu/courses/MSYM/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 and/or hydraulically powered systems.

### Mechanized Agricultural Systems

**MSYM 832**

#### Prereqs:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td><strong>Equipment Systems</strong></td>
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<td>Lecture 2, Recitation 2</td>
<td>Classroom</td>
<td>ACE Outcomes: 10°</td>
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<tr>
<td><strong>Principles and Problems in Mechanized Agriculture</strong></td>
<td>1–5</td>
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<td>Classroom</td>
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<td><strong>Hydraulic Power Systems</strong></td>
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<td>Lab 2, Lecture 2</td>
<td>Classroom</td>
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<td><strong>Sensors and Control Systems for Agri-Industries</strong></td>
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<td>Lab 2, Lecture 2</td>
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<td></td>
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<tr>
<td><strong>Mechanized Agricultural Systems</strong></td>
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</tbody>
</table>
For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/AgAndBioSystemsEngr).

Department Head: Ronald Yoder, Ph.D.

Graduate Committee: Professors Eisenhauer (Chair), Hanna, Associate Professors Bashford, Irmak, Woldt; Assistant Professor Keshwani
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, course work at the graduate level from other areas of agriculture may be used as part 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 course work 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

For faculty list, research interests and department/college contact information, view the graduate program summary. Retrieved from "http://bulletin.unl.edu/graduate/Mechanized_Systems_Management"
### Topics in French Civilization

**Course Code:** FREN 422/822  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** FREN 303 (http://bulletin.unl.edu/courses/FREN/303) and 304 (http://bulletin.unl.edu/courses/FREN/304).  


### French Literary Treasures of the Middle Ages

**Course Code:** FREN 441/841  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** FREN 301 (http://bulletin.unl.edu/courses/FREN/301) and 302 (http://bulletin.unl.edu/courses/FREN/302), or permission.  

French medieval short story, epic, novel, farce, satire, read in modern French. May include the Song of Roland, Lais, of Marie de France, Tristan, a romance by ChrÃ£Œ®Â†Ã©®Â™Ã©®®tien de Troyes such as Ecre et Enide, the satire of Aucassin et Nicolette, the farce of Pathelin, Villon's Testament.

### Seventeenth Century

**Course Code:** FREN 445/845  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10  
**Prereqs:** FREN 301 (http://bulletin.unl.edu/courses/FREN/301) and 302 (http://bulletin.unl.edu/courses/FREN/302) or permission.  

The plays of Corneille, Moliere, Racine.

### Seventeenth Century

**Course Code:** FREN 446/846  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10  
**Prereqs:** FREN 301 (http://bulletin.unl.edu/courses/FREN/301) and 302 (http://bulletin.unl.edu/courses/FREN/302) or permission.  

Prose and poetry.

### Eighteenth Century I

**Course Code:** FREN 449/849  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10  
**Prereqs:** FREN 301 (http://bulletin.unl.edu/courses/FREN/301) and 302 (http://bulletin.unl.edu/courses/FREN/302) or equivalent.  

Philosophical writings and the theatre of eighteenth–century France.

### Eighteenth Century II

**Course Code:** FREN 450/850  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**ACE Outcomes:** 10  
**Prereqs:** FREN 301 (http://bulletin.unl.edu/courses/FREN/301) and 302 (http://bulletin.unl.edu/courses/FREN/302) or equivalent.
Credit Hours: 3
Course Delivery: Classroom

Prereqs:
FREN 301 and 302, or equivalent.

Works of Voltaire, Rousseau, Montesquieu, Diderot. Lectures, discussion, and reports.

French Literature Nineteenth Century I
LINK
Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs:
FREN 301 and 302, or permission.

Readings in the major developments in narrative, drama, poetry and the essay from 1800 to 1860. Authors include Balzac, Hugo, Stendhal, Nerval and Gauthier.

French Literature Nineteenth Century II
LINK
Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs:
FREN 301 and 302, or permission.

Readings in the major developments in prose and verse from 1850 to 1900. Authors include Baudelaire, Mallarme, Rimbaud and Verlaine.

Twentieth-Century French Literature I
LINK
Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs:
FREN 301 and 302, or equivalent.

Main trends in the French novel from 1900 to the present.

Twentieth-Century French Literature II
LINK
Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs:
FREN 301 and 302, or equivalent.

Main trends in French poetry and theater from 1900 to the present.

Literature of French Canada
LINK
Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs:
FREN 301 and 302, or permission.

Survey of literature of French Canada in its cultural context.
Francophone Literature

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs: FREN 301 and 302.
Survey of literature and film from French speaking African and Caribbean cultures.

Studies in Francophone Literature and Cultures

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom
ACE Outcomes: 10

Prereqs: FREN 301 and 302.
A topic, genre, author, and geographical area of the African Diaspora.

Independent Study in French

Credit Hours: 1-24
Course Delivery: Classroom

Prereqs: Permission.
Special research project or reading program under the direction of a staff member in the department.

Special Topics in French

Credit Hours: 1-24
Course Delivery: Classroom

Prereqs: Permission.
Specific topic to be covered in any given semester and credit to be awarded to be determined by the instructor at that time.
Language, literature, and civilization.

Masters Thesis

Credit Hours: 6-10
Campus: 899
Course Delivery: Classroom

Prereqs: Admission to masters degree program and permission of major adviser

Old French Language

Credit Hours: 3
Campus: 901
Course Delivery: Classroom

Prereqs: 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tr>
<td>FREN 902</td>
<td>Old French Literature</td>
<td>Permission</td>
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<td>Classroom</td>
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<td></td>
<td>Readings from Medieval epics, saints' lives, Arthurian romances, prose chronicles, and drama. Introduction to the modern critical principles of editing Medieval manuscript.</td>
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<tr>
<td>FREN 919</td>
<td>Sixteenth Century I</td>
<td>Permission</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Masterpieces of Renaissance literature. Works of Rabelais, the Pleiade, Montaigne, etc.</td>
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<tr>
<td>FREN 920</td>
<td>Sixteenth Century II</td>
<td>Permission</td>
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<td></td>
<td>FREN 919 continued. Seminars in French (3 cr per sem) Under the headings listed below, the works of one author, or groups of works centering in a period, or those illustrating the development of a literary age are studied with respect to content, sources, style, and influence.</td>
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<tr>
<td>FREN 925</td>
<td>Drama</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td>FREN 927</td>
<td>Novel</td>
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<td>Classroom</td>
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<tr>
<td>FREN 928</td>
<td>Poetry</td>
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<td>Classroom</td>
</tr>
<tr>
<td>FREN 929</td>
<td>Special Topics</td>
<td></td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
Research Problems in French

Prereqs: Permission

Individual research on a literary or linguistic problem involving original investigation in areas not covered by seminars or thesis.

Directed Readings in French

Prereqs: Permission

Topic varies.

Doctoral Dissertation

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

Courses for GERM (GERM)

Advanced Syntax and Stylistics in German I

Prereqs:
GERM 303 and 304, or equivalent.

Recommended for all German majors.

Advanced Syntax and Stylistics in German II

Prereqs:
GERM 303 and 304, or equivalent.

Recommended for all German majors.

Linguistics in German

Prereqs:
GERM 303, 304, or equivalent.
Phonetics, phonemics, morphology, and transformational grammar as applied to standard German.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Course Delivery</th>
<th>Prereqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>GERM 407</td>
<td>History of the German Language</td>
<td>Classroom</td>
<td>GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or permission.</td>
</tr>
<tr>
<td>GERM 442</td>
<td>Survey of Medieval German Literature in Translation</td>
<td>Classroom</td>
<td>Permission or GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) for German majors.</td>
</tr>
<tr>
<td></td>
<td>Crosslisted as MODL 442/842</td>
<td></td>
<td>German majors expected to read the works in German translation.</td>
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<td></td>
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<td></td>
<td>Development of German vernacular literature during the Middle Ages.</td>
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<td></td>
<td>Include works that represent the philosophical/religious literature,</td>
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<td></td>
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<td>the heroic epic, and the romance.</td>
</tr>
<tr>
<td>GERM 443</td>
<td>Middle High German Language</td>
<td>Classroom</td>
<td>GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or permission.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>This course is a prerequisite for: GERM 444 (<a href="http://bulletin.unl.edu/courses/GERM/444">http://bulletin.unl.edu/courses/GERM/444</a>)</td>
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<tr>
<td></td>
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<td>Grammar to attain reading knowledge of Middle High German/translation of excerpts from a variety of Middle High German texts.</td>
</tr>
<tr>
<td>GERM 444</td>
<td>Middle High German Literature</td>
<td>Classroom</td>
<td>GERM 443 (<a href="http://bulletin.unl.edu/courses/GERM/443">http://bulletin.unl.edu/courses/GERM/443</a>) or 843 (<a href="http://bulletin.unl.edu/courses/GERM/843">http://bulletin.unl.edu/courses/GERM/843</a>) or reading knowledge of Middle High German.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Reading of masterworks of Middle High German literature in the original language.</td>
</tr>
<tr>
<td>GERM 445</td>
<td>Sixteenth- and Seventeenth-Century German Literature</td>
<td>Classroom</td>
<td>GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or equivalent.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Humanism, Reformation, and Baroque.</td>
</tr>
<tr>
<td>GERM 447</td>
<td>Eighteenth-Century Literature</td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td>Course Title</td>
<td>Code</td>
<td>Prereqs</td>
<td>Credit Hours</td>
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<tr>
<td>Romanticism</td>
<td>448/848</td>
<td>GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or equivalent.</td>
<td>3</td>
</tr>
<tr>
<td>Survey of Nineteenth-Century German Literature I, 1820–1848</td>
<td>449/849</td>
<td>GERM 301 (<a href="http://bulletin.unl.edu/courses/GERM/301">http://bulletin.unl.edu/courses/GERM/301</a>) and 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or permission.</td>
<td>3</td>
</tr>
<tr>
<td>Survey of Nineteenth-Century German Literature II, 1848–1900</td>
<td>450/850</td>
<td>GERM 301 (<a href="http://bulletin.unl.edu/courses/GERM/301">http://bulletin.unl.edu/courses/GERM/301</a>) or 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) and permission.</td>
<td>3</td>
</tr>
<tr>
<td>From the Weimar Republic into Exile</td>
<td>452/852</td>
<td>GERM 302 (<a href="http://bulletin.unl.edu/courses/GERM/302">http://bulletin.unl.edu/courses/GERM/302</a>) or equivalent.</td>
<td>3</td>
</tr>
</tbody>
</table>
History of German Poetry

Prereqs: GERM 302 or equivalent.

Critical survey of the development of epic and lyric poetry from the beginning to the present time.

Credit Hours: 2–3
Course Delivery: Classroom

German Literature and Philosophy

Prereqs: GERM 302 or equivalent.

Relationship between literature and contemporary thought from the eighteenth century to the present.

Credit Hours: 2–3
Course Delivery: Classroom
ACE Outcomes: 10?

Postwar German Literature: The Literature of West Germany, Austria, and Switzerland

Prereqs: GERM 302 or equivalent.

Critical survey of major literary currents in the West since 1945.

Credit Hours: 3
Course Delivery: Classroom

Works of Goethe and Schiller

Prereqs: GERM 302 or equivalent.

Representative works.

Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10?

Goethe's Faust

Prereqs: GERM 302 or equivalent.

Critical study. Lectures, assigned readings, and reports.

Credit Hours: 3
Course Delivery: Classroom
ACE Outcomes: 10?

Special Topics in German

Prereqs: Permission.

Specific topic to be covered in any given semester and credit to be awarded to be determined by the instructor at that time.

Credit Hours: 1–24
Course Delivery: Classroom

Consideration of topics in the area of language, literature, and civilization.
**Morphemics in German**

- **Prereqs:** Permission
- **Credit Hours:** 3
- **Campus:** Classroom
- Morphemic theory and its application to modern German.

**Applied Linguistics in German**

- **Prereqs:** Permission
- **Credit Hours:** 3
- **Campus:** Classroom
- Recommended for graduate students in German. Application of linguistic theory to teaching or learning German as a second language.

**Masters Thesis**

- **Prereqs:** Admission to masters degree program and permission of major adviser
- **Braun: Althochdeutsche Grammatik and Lesebuch.**
- **Credit Hours:** 6–10
- **Campus:** Classroom

**Problems in Advanced Linguistics**

- **Prereqs:** Permission
- **Credit Hours:** 1–3
- **Campus:** Classroom
- Training in descriptive, comparative, and historical linguistics.

**Seminar in German Linguistics**

- **Prereqs:** Permission
- **Credit Hours:** 3
- **Campus:** Classroom

**Seminar in German Literature I**

- **Prereqs:** Permission
- **Credit Hours:** 1–24
- **Campus:** Classroom
- The classical period, Klopstock, Wieland, Lessing, Herder, Schiller, Goethe. Subject to be selected.

**Seminar in German Literature II**

- **Prereqs:** Permission
- **Credit Hours:** 1–24
- **Campus:**
### Research Problems in German

**Course Information:**
- **Course Code:** GERM 996
- **Course Delivery:** Classroom
- **Prereqs:** Permission
- **Credit Hours:** 1–8
- **Campus:**
- **Course Delivery:** Classroom

**Description:**
Individual research projects on a literary or philological problem in areas not covered by seminars or thesis.

### Directed Readings in German

**Course Information:**
- **Course Code:** GERM 997
- **Course Delivery:** Classroom
- **Prereqs:** Permission
- **Credit Hours:** 1–24
- **Campus:**
- **Course Delivery:** Classroom

### Doctoral Dissertation

**Course Information:**
- **Course Code:** GERM 999
- **Course Delivery:** Classroom
- **Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair
- **Credit Hours:** 1–24
- **Max credits per degree:** 55
- **Campus:**
- **Course Delivery:** Classroom

### Courses for MODL (MODL)

#### Introduction to the Interdisciplinary Study of the Middle Ages

**Course Information:**
- **Course Code:** AHIS 988
- **Course Delivery:** Classroom
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Description:**
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.

**Crosslisted Courses:**
- ENGL 988
- HIST 988
- MODL 988
- MUSC 988

#### Introduction to the Interdisciplinary Study of the Renaissance

**Course Information:**
- **Course Code:** AHIS 989
- **Course Delivery:** Classroom
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Description:**
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.

**Crosslisted Courses:**
- ENGL 989
- HIST 989
- MODL 989
- MUSC 989

#### Pro-seminar in Latin American Studies

**Course Information:**
- **Course Code:** ANTH 478/878
- **Course Delivery:** Classroom
- **Credit Hours:** 3
- **Max credits per degree:** 6

**Prereqs:**
Junior standing and permission.

**Crosslisted Courses:**
- HIST 478/878
- POLS 478/878
- SOCI 478/878
- MODL 478/878
- LAMS 478
- GEOG 478/878
- EDPS 478/878
**Course Delivery:** Classroom  
**Groups:** Integrative Courses, Research and Reading

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 918</td>
<td><strong>Interdisciplinary Seminar in Nineteenth-Century Studies</strong></td>
<td>Invention of the nineteenth century, gender, colonialism, class, realism science and technology.</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/918">Link</a></td>
</tr>
<tr>
<td>ENGL 919</td>
<td><strong>Interdisciplinary Approaches to the Nineteenth Century</strong></td>
<td>Introduction to the nineteenth century in North America (focusing on the US), 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.</td>
<td><a href="http://bulletin.unl.edu/courses/ENGL/919">Link</a></td>
</tr>
<tr>
<td>GERM 442/842</td>
<td><strong>Survey of Medieval German Literature in Translation</strong></td>
<td>Development of German vernacular literature during the Middle Ages. Include works that represent the philosophical/religious literature, the heroic epic, and the romance.</td>
<td><a href="http://bulletin.unl.edu/courses/GERM/442">Link</a></td>
</tr>
<tr>
<td>HIST 895</td>
<td><strong>Internship in Digital Humanities</strong></td>
<td>Active participation in an ongoing digital humanities project in the Center for Digital Research in the Humanities, including weekly meetings designed to build technical and project management skills.</td>
<td><a href="http://bulletin.unl.edu/courses/HIST/895">Link</a></td>
</tr>
<tr>
<td>MODL 443/843</td>
<td><strong>Dante and His Times</strong></td>
<td>The Divina Commeddia and some minor works; extensive readings in the social background of the thirteenth and fourteenth centuries.</td>
<td><a href="http://bulletin.unl.edu/courses/MODL/443">Link</a></td>
</tr>
<tr>
<td>MODL 454</td>
<td><strong>Russian Intellectual Tradition</strong></td>
<td></td>
<td><a href="http://bulletin.unl.edu/courses/MODL/454">Link</a></td>
</tr>
</tbody>
</table>
**454/854 Russian Intellectual Tradition**

**Prereqs:**
Junior standing.

Major Russian thinkers from 1700 to the present. Focus on the evolution of ideas in the Russian context and the relationship between Russian and European thought.

**Credit Hours:** 3
**Course Delivery:** Classroom

**MODL 498/898 Special Topics**

**Prereqs:**
Permission.

Special topic to be covered in any given semester and credit to be awarded are determined by the instructor.

Consideration of topics in the area of language, literature, and civilization.

**Credit Hours:** 1-24
**Course Delivery:** Classroom

**MODL 870 Introduction to Literary Criticism**

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.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

**MODL 880 Seminar in Applied Linguistics and Methodology**

MODL *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.

**Credit Hours:** 3
**Course Delivery:** Classroom

**MODL 946 Interdisciplinary Readings in Digital Humanities**

Methods, theories, and practices of digital humanities scholarship.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom

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**Courses for RUSS (RUSS)**

**MODL 454/854 Russian Intellectual Tradition**

Crosslisted as RUSS 454/854

**Prereqs:**
Junior standing.

**Credit Hours:** 3
**Course Delivery:** Classroom
Major Russian thinkers from 1700 to the present. Focus on the evolution of ideas in the Russian context and the relationship between Russian and European thought.

### Russian Grammar and Stylistics

**Course Code:** RUSS 403/803  
**Link:** [http://bulletin.unl.edu/courses/RUSS/403](http://bulletin.unl.edu/courses/RUSS/403)

**Credit Hours:** 3  
**Course Delivery:** Classroom

**Prereqs:** RUSS 302 or equivalent.

Detailed analysis of Russian morphology and syntax to achieve greater sophistication in self-expression.

### Advanced Literary Analysis

**Course Code:** RUSS 441/841  
**Link:** [http://bulletin.unl.edu/courses/RUSS/441](http://bulletin.unl.edu/courses/RUSS/441)

**Credit Hours:** 3  
**Course Delivery:** Classroom

**Prereqs:** RUSS 302 or equivalent.

All the readings, discussions, and assignments are in Russian.

In-depth study of a work, period, or genre with emphasis on textual analysis.

### Russian Poetry

**Course Code:** RUSS 442/842  
**Link:** [http://bulletin.unl.edu/courses/RUSS/442](http://bulletin.unl.edu/courses/RUSS/442)

**Credit Hours:** 3  
**Course Delivery:** Classroom

**Prereqs:** RUSS 301 and 302 or equivalent.

Russian poetry of the nineteenth and twentieth centuries. Teaches poetry appreciation and acquaints them with the culture, history and philosophy of the country through poetry.

### Russian Literature in Translation II

**Course Code:** RUSS 483/883  
**Link:** [http://bulletin.unl.edu/courses/RUSS/483](http://bulletin.unl.edu/courses/RUSS/483)

**Credit Hours:** 3  
**Course Delivery:** Classroom

**ACE Outcomes:** 5

**Prereqs:** Junior standing or permission.

Survey of twentieth-century Russian literature, to include works by Babel, Blok, Bely, Zamyatin, Bulgakov, Zoschenko, Gorky, Sholokhov, Pasternak, Solzhenitsyn, and Rasputin. Prepares students to appreciate literature and acquaint them with Russian literature, culture and philosophy.

### Special Topics in Russian

**Course Code:** RUSS 498/898  
**Link:** [http://bulletin.unl.edu/courses/RUSS/498](http://bulletin.unl.edu/courses/RUSS/498)

**Credit Hours:** 1-24  
**Course Delivery:** Classroom

**Prereqs:** RUSS 301 and 302 or permission.

Specific topic to be covered in any given semester and credit to be awarded to be determined by the instructor at that time.

Language, literature, and civilization.
### Courses for SPAN (SPAN)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Delivery</th>
<th>ACE Outcomes</th>
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</thead>
<tbody>
<tr>
<td>SPAN 403/803</td>
<td><strong>Spanish Stylistics</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPAN/305">SPAN 305</a> and <a href="http://bulletin.unl.edu/courses/SPAN/319">SPAN 319</a> or equivalent.</td>
<td>3</td>
<td>Classroom</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Trade for advanced students, particularly prospective teachers, who wish to improve their ability to write idiomatic Spanish.</td>
<td>Translations and composition in Spanish.</td>
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<tr>
<td>SPAN 405/805</td>
<td><strong>Advanced Grammar</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPAN/300">SPAN 300</a> and <a href="http://bulletin.unl.edu/courses/SPAN/317">SPAN 317</a> or <a href="http://bulletin.unl.edu/courses/SPAN/319">SPAN 319</a> or equivalent.</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Theoretical and practical aspects of Spanish grammar.</td>
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<tr>
<td>SPAN 407/807</td>
<td><strong>History of the Spanish Language</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPAN/317">SPAN 317</a> and <a href="http://bulletin.unl.edu/courses/SPAN/319">SPAN 319</a>, or equivalent.</td>
<td>3</td>
<td>Lecture 3</td>
<td>10</td>
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<td></td>
<td>Changes in the sound system, evolution of morphological paradigms and general patterns of semantic change.</td>
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<tr>
<td>SPAN 421/821</td>
<td><strong>Medieval Literature</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPAN/305">SPAN 305</a>, and either <a href="http://bulletin.unl.edu/courses/SPAN/311">SPAN 311</a> and <a href="http://bulletin.unl.edu/courses/SPAN/312">SPAN 312</a>, or <a href="http://bulletin.unl.edu/courses/SPAN/314">SPAN 314</a> and <a href="http://bulletin.unl.edu/courses/SPAN/315">SPAN 315</a>; or graduate standing.</td>
<td>3</td>
<td>Classroom</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Spanish Medieval literature of the tenth to the fifteenth centuries. Reading and analysis of such authors as Berceo, Alfonso X, Juan Manuel, Juan Ruiz, Fernando Rojas, Jorge Manrique, and Juan de Mena.</td>
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<tr>
<td>SPAN 432/832</td>
<td><strong>Spanish Speaking Proficiency</strong></td>
<td><a href="http://bulletin.unl.edu/courses/SPAN/300">SPAN 300</a> or permission.</td>
<td>3</td>
<td>Classroom</td>
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</tr>
</tbody>
</table>
Representative works of the sixteenth and seventeenth centuries: Garcilaso de la Vega, Fray Luis de León, San Juan de la Cruz; Lope de Vega, Góngora, Quevedo.

Representative works of the sixteenth and seventeenth centuries, exclusive of Cervantes: La Celestina, El Lazarillo de Tormes, El Buscón; selections from Santa Teresa de Jesus, La Diana, Quevedo's Sueños, and Gracian's El criticón.

Reading and study of the classics of Lope de Vega, Tirso de Molina, Ruiz de Alarcón, Calderón and others. Lectures, class discussions, and reports.

Reading and study of nineteenth-century Spanish literature: drama, essay, novel, poetry, and short story. Such authors as Larra, Zorrilla, Duque de Rivas, Espronceda, Tamayo y Baus, Echegaray, Bécquer, Pérez Galdós, Clarín, and Valera.

Prereqs: 6 hrs from SPAN 311, 312, 314, 315.
Reading and analysis of Latin American poetry dealing with human rights issues, concentrating on poems produced from 1900 to the present. Topics selected from the Universal Declaration of Human Rights.

### Twentieth and Twenty-first Century Spanish Poetry

**Course Code:** SPAN 456/856  
**Course Title:** Twentieth and Twenty-first Century Spanish Poetry  
**Prereqs:** 6 hrs from SPAN 311, 312, 314, and/or 315.  
**Description:** Reading and analysis of Spanish poetry, with emphasis on A. Machado, Unamuno, Salinas, J. Guillén, García Lorca, and M. Hernández.  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
[Link](http://bulletin.unl.edu/courses/SPAN/456)

### Twentieth and Twenty-first Century Spanish Narrative

**Course Code:** SPAN 457/857  
**Course Title:** Twentieth and Twenty-first Century Spanish Narrative  
**Prereqs:** 6 hrs from SPAN 311, 312, 314, and/or 315.  
**Description:** Reading and analysis of significant Spanish narrative.  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
[Link](http://bulletin.unl.edu/courses/SPAN/457)

### Twentieth and Twenty-first Century Spanish Drama

**Course Code:** SPAN 458/858  
**Course Title:** Twentieth and Twenty-first Century Spanish Drama  
**Prereqs:** 6 hrs from SPAN 311, 312, 314, and/or 315.  
**Description:** Reading and analysis of dramas written by such playwrights as Benavente, Valle-Inclán, García, Lorca, Buero Vallejo, Sastre, and Arrabal.  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
[Link](http://bulletin.unl.edu/courses/SPAN/458)

### Spanish-American Poetry

**Course Code:** SPAN 459/859  
**Course Title:** Spanish-American Poetry  
**Crosslisted as:** LAMS 459  
**Prereqs:** 6 hrs from SPAN/LAMS 311, 312, 314, and/or 315.  
**Description:** Spanish-American poetry.  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
[Link](http://bulletin.unl.edu/courses/SPAN/459)

### Spanish-American Novel

**Course Code:** SPAN 460/860  
**Course Title:** Spanish-American Novel  
**Crosslisted as:** LAMS 460  
**Prereqs:** 6 hrs from SPAN/LAMS 311, 312, 314  
**Description:** Spanish-American novel.  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Delivery:** Classroom  
[Link](http://bulletin.unl.edu/courses/SPAN/460)
Spanish-American novels.

**SPAN 462/862**

**Spanish-American Short Story**

Crosslisted as LAMS 462

**Prereqs:**
6 hrs from SPAN/LAMS 311, SPAN/LAMS 312, SPAN 314, SPAN 315, SPAN 314, SPAN 315

Masterpieces of the Spanish–American short story from its origins. Works of the twentieth century by authors such as Horacio Quiroga, Jorge Luis Borges, Maria Luisa Bombal, Juan Rulfo, Julio Cortazar, Rosario Castellanos, and Luisa Valenzuela.

**SPAN 463/863**

**Twentieth and Twenty-first Century Spanish and Spanish–American Essay**

**Prereqs:**
6 hrs from SPAN 311, 312, 314, and/or 315

Reading and analysis of Spanish and Spanish–American essays, with emphasis on Unamuno, Maeztu, Ortega y Gasset, Marañón, Marias, Picon Salas, Arciniegas, Malach, Reyes, and Paz.

**SPAN 470/870**

**Women Writers of Spanish America**

Crosslisted as LAMS 470

**Prereqs:**
6 hrs from SPAN/LAMS 311, SPAN/LAMS 312, SPAN 314, SPAN 315

Masterpieces by women writers of Spanish America such as Sor Juana Ines de la Cruz, Gertrudis Gomez de Avellaneda, Gabriela Mistral, Maria Luisa Bombal, and Victoria Ocampo.

**SPAN 473/873**

**Cervantes**

**Prereqs:**
6 hrs from SPAN 311, 312, 314, 315

Don Quijote, the Entremeses, and selected Novelas ejemplares.

**SPAN**

**Independent Study in Spanish**
<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Prereqs</th>
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<tbody>
<tr>
<td>496/896</td>
<td>Special Topics in Spanish</td>
<td>1-24</td>
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<td>SPAN 898</td>
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<td>SPAN 899</td>
<td>Masters Thesis</td>
<td>6-10</td>
<td>Admission to masters degree program and permission of major adviser</td>
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<tr>
<td>SPAN 925</td>
<td>Generation of 1898</td>
<td>3</td>
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<td>SPAN 942</td>
<td>Golden Age</td>
<td>1-3</td>
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<td>SPAN 943</td>
<td>Colonial Spanish America</td>
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<tr>
<td>SPAN 952</td>
<td>Spanish Medieval Literature</td>
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<td>Permission.</td>
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</table>

Specific topic to be covered in any given semester and credit to be awarded to be determined by the instructor at that time. Topics in the area of language, literature, and civilization.
those illustrating the development of a literary age are studied with respect
to content, sources, style, and influence.

<table>
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<tr>
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<td>SPAN 993</td>
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<td>SPAN 996</td>
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</table>

**Prereqs:**
Permission and successful completion of a graduate seminar
Individual research on a literary or linguistic problem involving original
investigation in areas not covered by seminars or thesis.

**Prereqs:**
Permission
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/ModernLanguagesAndLit)

Department Chair: Evelyn Jacobson, Ph.D.

Graduate Committee: Professors Carr (chair), Gonzalez-Allende, Guevara, Shirer

A bachelors degree and
- 24 undergraduate hours in French;
- 24 undergraduate hours in Spanish; and
- 20 undergraduate hours in German; on the junior/senior level, or the equivalent, constitute the prerequisite for registration in graduate courses. An examination may be required of students to determine undergraduate courses needed to remove deficiencies.

Applicants for admission to the M.A. program should present the equivalent of an undergraduate major in their language including courses in literature. They also should show strong language skills and familiarity with the target culture. This often includes study or experience abroad. Ph.D. applicants must have an M.A. or equivalent with strong preparation in the target literature, excellent language skills, and demonstrate potential to complete a doctoral dissertation by submitting a sample paper that shows critical thinking and writing ability.

Master of Arts Degree.

While the general requirements for the masters degree apply (see the Masters Degree Requirements in the Graduate Studies Bulletin, a minor under Option I and II may also be selected from a second language (French, German, or Spanish) upon the approval of the major adviser.

Doctor of Philosophy Degree.

In addition to the general requirements of the Graduate College for the degree of doctor of philosophy, the department requires a reading knowledge of French, German, Italian, Latin, Portuguese, Russian, or Spanish, in addition to the target language and English, and the equivalent of two years of college-level work (101 through 202) of a second of the above languages.

In consultation with the supervisory committee and in accordance with the general provisions of the Graduate College, (see the Doctoral Degree Requirements in the Graduate Studies Bulletin) the candidate may select a minor from a second language (French, German or Spanish).

Specializations available at the masters level:
French, German and Spanish

Specializations available at the doctoral level:
French and Spanish

Please see the departmental website (http://www.unl.edu/modlang/content/grads/index.shtml) for specific information regarding our Spanish, French and German programs.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/ModernLanguagesAndLit)

Retrieved from "http://bulletin.unl.edu/graduate/Modern_Languages_and_Literatures" (http://bulletin.unl.edu/graduate/Modern_Languages_and_Literatures) Back to Top (#maincontent)
## Subject Areas
- Applied Music (MUAP) (#MUAP)
- Composition (MUCP) (#MUCP)
- Ensembles (MUEN) (#MUEN)
- Ensembles for Degree Credit (MUDC) (#MUDC)
- Ensembles for Elective Credit Only (MUED) (#MUED)
- Music (MUSC) (#MUSC)
- Music Education (MUED) (#MUED)
- Music–Student Recitals (MUSR) (#MUSR)
- Opera (MUOP) (#MUOP)

### Courses for MUAP (MUAP)

<table>
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<tr>
<th>Subject</th>
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<td>Must be taken during second year of applied voice.</td>
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<td>Harpsichord</td>
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<td>Violin</td>
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<td>Viola</td>
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</table>
Campus:
Course Delivery: Classroom

**Cello**

807

 LINK (http://bulletin.unl.edu/courses/MUAP/807)

Credit Hours: 1–2

**Double Bass**

808

 LINK (http://bulletin.unl.edu/courses/MUAP/808)

Credit Hours: 1–2

**Harp**

809

 LINK (http://bulletin.unl.edu/courses/MUAP/809)

Credit Hours: 1–2

**Trumpet**

810

 LINK (http://bulletin.unl.edu/courses/MUAP/810)

Credit Hours: 1–2

**French Horn**

811

 LINK (http://bulletin.unl.edu/courses/MUAP/811)

Credit Hours: 1–2

**Trombone**

812

 LINK (http://bulletin.unl.edu/courses/MUAP/812)

Credit Hours: 1–2

**Euphonium**

813

 LINK (http://bulletin.unl.edu/courses/MUAP/813)

Credit Hours: 1–2
<table>
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<th>Course</th>
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<td>Clarinet</td>
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<td>Bassoon</td>
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**Double Bass**  
**MUAP 908**  
[LINK](http://bulletin.unl.edu/courses/MUAP/908)

**Harp**  
**MUAP 909**  
[LINK](http://bulletin.unl.edu/courses/MUAP/909)

**Trumpet**  
**MUAP 910**  
[LINK](http://bulletin.unl.edu/courses/MUAP/910)

**French Horn**  
**MUAP 911**  
[LINK](http://bulletin.unl.edu/courses/MUAP/911)

**Trombone**  
**MUAP 912**  
[LINK](http://bulletin.unl.edu/courses/MUAP/912)

**Euphonium**  
**MUAP 913**  
[LINK](http://bulletin.unl.edu/courses/MUAP/913)

**Tuba**  
**MUAP 914**  
[LINK](http://bulletin.unl.edu/courses/MUAP/914)
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<td>Clarinet</td>
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<td>Bassoon</td>
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Orchestral Conducting

MUAP 922

Credit Hours: 1-4
Max credits per degree: 12
Campus: Course Delivery: Classroom

Wind Band Conducting

MUAP 923

Credit Hours: 1-4
Max credits per degree: 12
Campus: Course Delivery: Classroom

Keyboard Skills I

MUAP 422/822

Crosslisted as MUAP 422/822

Practicum in sight-reading, improvisation, harmonization, and playing by ear.

MUAP 433/833

Crosslisted as MUAP 433/833

Continuation of MUAP/MUSC 422/MUSC 822.

Keyboard Skills II

MUAP 422/822

Prereqs: Permission.

Courses for MUCP (MUCP)

Orchestration

MUCP 485/885

Link: http://bulletin.unl.edu/courses/MUCP/485
Seminar in Music Composition

This course is a prerequisite for MUCP 485.
MUCP 485 (http://bulletin.unl.edu/courses/MUCP/485) is "Letter Grade only."

The development of basic technical competency in the following areas of music preparation and scoring: score and part formatting and/or preparation; and orchestration.

Courses for MUEN (MUEN)

Small Ensembles

Requirements off-campus performances as approved.

- String Ensemble (1 cr, max 4)
- Brass Ensemble (1 cr, max 4)
- Clarinet Choir (1 cr, max 4)
- Flute Ensemble (1 cr, max 4)
- Trombone Ensemble (1 cr, max 4)
- Horn Ensemble (1 cr, max 4)
- Percussion Ensemble (1 cr, max 4)
- Saxophone Ensemble (1 cr, max 4)
- New Music Consort (1 cr, max 4)
- Small Vocal Ensemble (1 cr, max 4)
- Tuba/Euphonium Ensemble (1 cr, max 4)
- Pep Band (1 cr, max 4) Prereq: Must meet and maintain full-time enrollment status at UNL. May require off-campus travel.
- Jazz Small Group (1 cr, max 12)

Large Ensembles

- Symphony Orchestra (1 cr, max 4)
- University Singers (1 cr, max 4)
- Wind Ensemble (1 cr, max 4)
- Symphonic Band (1 cr, max 4)
- UNL Jazz Orchestra (1 cr, max 4)
- UNL Big Band (1 cr, max 4)
- All-Collegiate Choir (1 cr, max 4)
- University Chorale (1 cr, max 4)
- Varsity Chorus (1 cr, max 4)
- Chamber Singers (1 cr, max 4)

Graduate Chamber Music

- Symphony Orchestra (1 cr, max 4)
- University Singers (1 cr, max 4)
- Wind Ensemble (1 cr, max 4)
- Symphonic Band (1 cr, max 4)
- UNL Jazz Orchestra (1 cr, max 4)
- UNL Big Band (1 cr, max 4)
- All-Collegiate Choir (1 cr, max 4)
- University Chorale (1 cr, max 4)
- Varsity Chorus (1 cr, max 4)
- Chamber Singers (1 cr, max 4)
Stu. Off-campus performances as approved. Quartets, trios, duos, and miscellaneous chamber groups organized for supervised and scheduled rehearsals of music appropriate for the ensemble.

Courses for MUDC (MUDC)

**Accompanying Vocal**
MUCO 440A/840A

Crosslisted as MUDC 440A/840A

- **Credit Hours:** 1
- **Max credits per degree:** 5
- **Course Format:** Studio
- **Course Delivery:** Classroom
- **Groups:** Music Ensembles for Elective Credit Only (MUCO)

**Accompanying Instrumental**
MUCO 440B/840B

Crosslisted as MUDC 440B/840B

- **Credit Hours:** 1
- **Max credits per degree:** 5
- **Course Format:** Studio
- **Course Delivery:** Classroom
- **Groups:** Music Ensembles for Elective Credit Only (MUCO)

**Big Red Singers**
MUDC 251/451

Crosslisted as MUCO 51/251/451, MUNM 251/451

- **Prereqs:** 2.0 GPA.
  
  Audition required. Must meet and maintain full-time enrollment status at UNL.
  
  Performance of Broadway and other contemporary repertoire.

**Jazz Ensemble**
MUDC 253

Crosslisted as MUCO 51/251/451, MUNM 251/451

- **Credit Hours:** 1
- **Max credits per degree:** 12
- **Course Format:** Studio
- **Course Delivery:** Classroom
- **Groups:** Music Ensembles for Degree Credit (MUDC)
Open by audition or permission of the Director of Jazz Activities. Auditions are held the weekend before each term. Performances are held on- and off-campus as approved by the Director of Jazz Activities and the Director of the School of Music.

Jazz instrumental and/or vocal ensembles of standard instrumentation and/or voicing. A. UNL Jazz Orchestra (1 cr, max 12) B. UNL Big Band (1 cr, max 12) E. UNL Jazz Vocal Ensemble (1 cr, max 12)

**Chamber Music**

Crosslisted as MUCO 52/352, MUNM 352

Off-campus performances as approved. Open only to students whose applied related instrument is piano, organ, or guitar.

Quartets, trios, duos, and miscellaneous chamber groups organized for supervised and scheduled rehearsals of music appropriate for the ensemble.

![Courses for MUCO (MUCO)](http://bulletin.unl.edu/courses/MUCO/440A)

**Accompanying Vocal**

Crosslisted as MUCO 440A/840A

Credit Hours: 1
Max credits per degree: 5
Course Format: Studio
Course Delivery: Classroom
Groups: Elective Credit Only (MUCO)

![Courses for MUCO (MUCO)](http://bulletin.unl.edu/courses/MUCO/440B)

**Accompanying Instrumental**

Crosslisted as MUCO 440B/840B

Credit Hours: 1
Max credits per degree: 5
Course Format: Studio
Course Delivery: Classroom
Groups: Elective Credit Only
Big Red Singers

Crosslisted as MUCO 51/251/451, MUNM 251/451

Prereqs:
2.0 GPA.

Audition required. Must meet and maintain full-time enrollment status at UNL.

Performance of Broadway and other contemporary repertoire.

Jazz Ensemble

Crosslisted as MUCO 53/253/453, MUNM 253/453

Open by audition or permission of the Director of Jazz Activities. Auditions are held the weekend before each term. Performances are held on- and off-campus as approved by the Director of Jazz Activities and the Director of the School of Music.

Jazz instrumental and/or vocal ensembles of standard instrumentation and/or voicing. A. UNL Jazz Orchestra (1 cr, max 12) B. UNL Big Band (1 cr, max 12) E. UNL Jazz Vocal Ensemble (1 cr, max 12)

Chamber Music

Crosslisted as MUCO 52/352, MUNM 352

Off-campus performances as approved. Open only to students whose applied related instrument is piano, organ, or guitar.

Quartets, trios, duos, and miscellaneous chamber groups organized for supervised and scheduled rehearsals of music appropriate for the ensemble.

Introduction to the Interdisciplinary Study of the Middle Ages

Crosslisted as ENGL 988, HIST 988, MODL 988, MUSC 988

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.

Introduction to the Interdisciplinary Study of the Renaissance
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.

**Music and Text in the English Renaissance**

Crosslisted as **MUSC 830J**

**Prereqs:**
[**MUSC 366**](http://bulletin.unl.edu/courses/MUSC/366)

Interconnections between musical and literary composition at a time when practitioners in both areas were profoundly influenced by developments in each others' fields.

**Keyboard Skills I**

Crosslisted as **MUAP 422/822**

**Practicum in sight-reading, improvisation, harmonization, and playing by ear.**

**Piano Pedagogy I: Foundations, Philosophies, and Theories**

Crosslisted as **MUSC 424/824**

**Prereqs:**
10 hrs applied piano.

This course is a prerequisite for: [**MUSC 425**](http://bulletin.unl.edu/courses/MUSC/425)

The history, materials, and methodologies of piano pedagogy from a perspective of wellness promotion. Special issues pertaining to teaching beginning, intermediate, and advanced students. Observation experience and a supervised teaching practicum.

**Piano Pedagogy II: Approaches to Studio Teaching**

Crosslisted as **MUSC 425/825**

**Prereqs:**
[**MUSC 424**](http://bulletin.unl.edu/courses/MUSC/424) / [**824**](http://bulletin.unl.edu/courses/MUSC/824)

Issues pertinent to studio piano teaching, including business issues, developing effective strategies for teaching selected musical and technical skills. Observation experience and a supervised teaching practicum.
Keyboard Skills II
Crosslisted as MUAP 433/833

Prereqs:
Permission.

Continuation of MUAP/MUSC 422
(http://bulletin.unl.edu/courses/MUSC/422)/822
(http://bulletin.unl.edu/courses/MUSC/822).

Music and Film: History and Analysis

Prereqs:
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366) or THEA 489
(http://bulletin.unl.edu/courses/THEA/489)/889
(http://bulletin.unl.edu/courses/THEA/889).

MUSC 435 (http://bulletin.unl.edu/courses/MUSC/435)/835
(http://bulletin.unl.edu/courses/MUSC/835) may only be taken once in a lifetime.

Selected films, composers, scores, and the historical contexts. Historical trends in film and film scoring as well as how those trends are being interpreted by contemporary filmmakers.

History of Jazz: Origins to Bop

Prereqs:
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366).

MUSC 437 (http://bulletin.unl.edu/courses/MUSC/437)/837
(http://bulletin.unl.edu/courses/MUSC/837) may only be taken once in a lifetime.

The history of jazz from its musical antecedents in the Nineteenth Century to the birth of modern jazz via Bebop in the 1940s. Important musical artists and trends within the larger context of American history in the Twentieth Century.

History of Jazz: Post Bop

Prereqs:
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366).

MUSC 438 (http://bulletin.unl.edu/courses/MUSC/438)/838
(http://bulletin.unl.edu/courses/MUSC/838) may only be taken once in a lifetime.

The development of modern jazz from the late 1940s to the present. Important artists and trends within the larger context of American history in the Twentieth Century.

Skills for the Church Musician

Prereqs:
MUSC 274 (http://bulletin.unl.edu/courses/MUSC/274) and MUAP 232
(http://bulletin.unl.edu/courses/MUAP/232). Keyboard facility
<table>
<thead>
<tr>
<th>Course Title</th>
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<th>Groups</th>
<th>Prereqs</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Great Composers &amp; Performers in Music</td>
<td>Classroom</td>
<td>Music Literature and Pedagogy</td>
<td>MUSC 366 (<a href="http://bulletin.unl.edu/courses/MUSC/366">http://bulletin.unl.edu/courses/MUSC/366</a>) or equivalent.</td>
<td>Prereqs: MUSC 366 (<a href="http://bulletin.unl.edu/courses/MUSC/366">http://bulletin.unl.edu/courses/MUSC/366</a>) or equivalent. Recommended for those providing and organizing music for sacred institutions.</td>
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<tr>
<td>Medieval Music</td>
<td>Classroom</td>
<td>Music History</td>
<td>MUSC 366 (<a href="http://bulletin.unl.edu/courses/MUSC/366">http://bulletin.unl.edu/courses/MUSC/366</a>)</td>
<td>Prereqs: MUSC 366 (<a href="http://bulletin.unl.edu/courses/MUSC/366">http://bulletin.unl.edu/courses/MUSC/366</a>). Historical and stylistic study of the life and music of one or more important composers and/or performers in the European–American or non–Western musical traditions.</td>
</tr>
<tr>
<td>Music and the Church</td>
<td>Classroom</td>
<td>Music Literature and Pedagogy</td>
<td>MUSC 365 (<a href="http://bulletin.unl.edu/courses/MUSC/365">http://bulletin.unl.edu/courses/MUSC/365</a>) or RELG 150 (<a href="http://bulletin.unl.edu/courses/RELG/150">http://bulletin.unl.edu/courses/RELG/150</a>) or JUDS/RELG 205 (<a href="http://bulletin.unl.edu/courses/RELG/205">http://bulletin.unl.edu/courses/RELG/205</a>) or CLAS/HIST/RELG 307 (<a href="http://bulletin.unl.edu/courses/RELG/307">http://bulletin.unl.edu/courses/RELG/307</a>), or permission.</td>
<td>Prereqs: MUSC 365 (<a href="http://bulletin.unl.edu/courses/MUSC/365">http://bulletin.unl.edu/courses/MUSC/365</a>) or RELG 150 (<a href="http://bulletin.unl.edu/courses/RELG/150">http://bulletin.unl.edu/courses/RELG/150</a>) or JUDS/RELG 205 (<a href="http://bulletin.unl.edu/courses/RELG/205">http://bulletin.unl.edu/courses/RELG/205</a>) or CLAS/HIST/RELG 307 (<a href="http://bulletin.unl.edu/courses/RELG/307">http://bulletin.unl.edu/courses/RELG/307</a>), or permission. Historical relationship of music and the church: a survey of the major developments in the history of church music in light of theological presuppositions.</td>
</tr>
<tr>
<td>Hymnology</td>
<td>Classroom</td>
<td>Music Literature</td>
<td>Junior standing.</td>
<td>Prereqs: Junior standing.</td>
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<td>Course Title</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Course Format</td>
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<tr>
<td>MUSC 455/855</td>
<td>Techniques of Counterpoint</td>
<td>MUSC 266</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>MUSC 457/857</td>
<td>Post-Tonal Theory</td>
<td>MUSC 266</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>MUSC 458/858</td>
<td>History of the Opera</td>
<td>Senior standing or MUSC 366</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>MUSC 459/859</td>
<td>Symphonic Literature</td>
<td>Senior or graduate standing or MUSC 366</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>MUSC 460/860</td>
<td>Musical Form</td>
<td>MUSC 266</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>MUSC 461/861</td>
<td>Comprehensive Analysis</td>
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</table>
**Credit Hours:** 3
**Course Format:** Lecture 3
**Course Delivery:** Classroom
**Groups:** Music Theory (MUSC)

### Music Theory

**Prereqs:** 
[MUSC 266](http://bulletin.unl.edu/courses/MUSC/266).

Analysis of music within historical and stylistic contexts with the goal of informing score study and preparation for performers, conductors, and music educators. Analysis of music from the Renaissance, Baroque, Classical, Romantic, and contemporary eras.

### Instrumental Literature and Pedagogy (MUSC 462/862)

**Prereqs:** MUSC 266.

Survey of the pedagogy and the solo, chamber and pedagogical literature of instruments from elementary to advanced levels, for class as well as private instruction. A. Brass/Percussion Instruments (2–3 cr, max 3) D. String Instruments (2–3 cr, max 3) E. Woodwind Instruments (2–3 cr, max 3) I. Violin (2–3 cr, max 3) J. Viola (2–3 cr, max 3) K. Cello (2–3 cr, max 3) L. Double Bass (2–3 cr, max 3) M. Trumpet (2–3 cr, max 3) N. French Horn (2–3 cr, max 3) P. Trombone (2–3 cr, max 3) Q. Euphonium, Tuba (2–3 cr, max 3) R. Trumpet (2–3 cr, max 3) T. Oboe (2–3 cr, max 3) U. Clarinet (2–3 cr, max 3) V. Bassoon (2–3 cr, max 3) W. Saxophone (2–3 cr, max 3) Y. Percussion (2–3 cr, max 3) Z. Guitar (2–3 cr, max 3)

**Max 3 is per each subgroup.**

### Jazz Theory (MUSC 465/865)

**Prereqs:** MUSC 266.

This course is a prerequisite for: [MUSC 467](http://bulletin.unl.edu/courses/MUSC/467).

Theoretical foundation of jazz composition and performance. Ear training and keyboard skills.

### Jazz Styles (MUSC 466)

**Prereqs:** 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 aurally identify improvisors, composer/arrangers and stylistic characteristics within the jazz idiom.

### Jazz Improvisation (MUSC 467/867)

**Prereqs:** MUSC 465/865.

Exploration of the uses of the elements of music (melody, harmony, rhythm, articulation, dynamics, form, etc.) in consonant and dissonant ways to create expressive, emotional and substantive improvisations. Topics include the role of the ear; free playing; intervalic and melodic construction; tone and chord character; and transcription.
MUSC 468/868 Jazz Pedagogy

Acquaints student with 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 teacher.

Credit Hours: 3
Max credits per degree: 3
Course Delivery: Classroom
Groups: Music Literature and Pedagogy (MUSC)

MUSC 469/869 Organ Design and Construction

Prereqs: 10 hours of applied organ.

Comparison of the most important methods of designing and constructing organs in Europe and America from 1500 to the present.

Credit Hours: 2-3
Max credits per degree: 3
Course Delivery: Classroom
Groups: Music Literature and Pedagogy (MUSC)

MUSC 470/870 Introduction to Vocal Pedagogy

Prereqs: Junior standing.

This course is a prerequisite for MUSC 971.

The processes of teaching singing, basic physiology, and scientific and acoustical terms. Developing processes to teach breathing, phonation, registration, resonance strategies, and sound concept through discussion and evaluation of practice teaching, and on how to manage a private studio.

Credit Hours: 3
Course Format: Lecture 3
Course Delivery: Classroom
Groups: Music Literature and Pedagogy (MUSC)

MUSC 471/871 Art Song I

Prereqs: Junior standing or above or permission.

Development of the art song, emphasizing the European and New World traditions from the eighteenth century to the present.

Credit Hours: 3
Max credits per degree: 3
Course Delivery: Classroom
Groups: Music Literature and Pedagogy (MUSC)

MUSC 472/872 Art Song II

Prereqs: Junior standing.

Intensive study of the German, French and American art song literature from
the eighteenth century to the present.

**Organ Literature and Pedagogy**

**MUSC 474/874**

**Prereqs:**
10 hrs organ or equivalent.

Survey of the most important trends in organ literature and pedagogy from medieval times to the present day. The interrelationships between the music and organ design.

**Organ Literature Seminar**

**MUSC 475/875**

**Prereqs:**
10 hrs organ or equivalent.

Topics will rotate.

Seminar in specific focus areas of organ literature.
A. German Organ Music to 1800 (3 cr)
B. Organ Music of France (3 cr)
E. Organ Music of America (3 cr)
J. Organ Music Since 1950 (3 cr)
K. Historic Organ Technique (3 cr)

**Piano Literature**

**MUSC 476/876**

**Prereqs:**
12 hrs undergraduate piano.

Literature for solo piano from the early Baroque through the Twentieth Century, with emphasis on musical styles.

**Piano Literature Seminar**

**MUSC 477/877**

**Prereqs:**
12 hrs undergraduate piano.

Literature for solo piano. Specific style periods rotate. A. Baroque/Classical (3 cr, max 3) B. Romantic (3 cr, max 3) D. Twentieth Century Repertoire (3 cr, max 3)

**Music of the Twentieth Century I**

**MUSC 478/878**

[More information]
**Advanced Tonal Theory**

**MUSC 480/880**

**Prereqs:**
MUSC 266 (http://bulletin.unl.edu/courses/MUSC/266).


**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Groups:** Music Theory (MUSC)

**Music of the Twentieth Century II**

**MUSC 482/882**

**Prereqs:**
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366) or equivalent.

Historical and stylistic study of the music composed since World War II.

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Delivery:** Classroom

**Groups:** Music History (MUSC)

**Music Technology: Advanced Techniques and Applications**

**MUSC 483/883**

**Prereqs:**
MUSC 383 (http://bulletin.unl.edu/courses/MUSC/383).

MUSC 483 (http://bulletin.unl.edu/courses/MUSC/483) is presented in a seminar format.

Advanced music technology focusing on particular areas of interest such as: MIDI/audio music production; advanced music notation; and software development for audio, multi-media, and/or mobile applications.

**Credit Hours:** 1–3

**Max credits per degree:** 6

**Course Format:** Lecture

**Course Delivery:** Classroom

**Music of the Classic Period**

**MUSC 485/885**

**Prereqs:**
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366) or permission.

Forms, styles, composers, and aesthetics of the classic period.

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Delivery:** Classroom

**Groups:** Music History (MUSC)

**Music of the Baroque Era**

**MUSC 487/887**

**Prereqs:**
MUSC 366 (http://bulletin.unl.edu/courses/MUSC/366) or permission.

Historical and stylistic study of the music composed from the last decade of the nineteenth century through World War II.

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Delivery:** Classroom

**Groups:** Music History (MUSC)
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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tr>
<td>MUSC 489</td>
<td>American Music</td>
<td>MUSC 366 or equivalent</td>
<td>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.</td>
</tr>
<tr>
<td>MUSC 498</td>
<td>Special Topics in Music</td>
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</tr>
<tr>
<td>MUSC 64</td>
<td>Senior Assessment in Music</td>
<td>MUSC 366 or equivalent</td>
<td>Demonstration of knowledge in music theory and history through completion of the Major Field Test in Music.</td>
</tr>
<tr>
<td>MUSC 826</td>
<td>Piano Pedagogy III: Pedagogical Methods and Literature</td>
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</tbody>
</table>


MUSC 827 requires observation experience and a supervised teaching practicum. Teaching piano in group settings. Relational dynamics and curricular issues. Individual research and writing on selected topic of interest serves as a culminating experience for the piano pedagogy course sequence.

MUSC 836 Music as a field of scholarly inquiry, incorporating basic research tools and techniques.

MUSC 839 Roles and functions of music among various groups of people. Importance of music in the development of children and young people, specialized meanings of music that distinguish musicians from non-musicians, and a survey of musical cultures from around the world.


MUSC 847 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: Medieval, Renaissance, Baroque, Classical, Romantic, and Contemporary.

MUSC 848 Review of Music Theory
Enrollment in one or more MUSC 848 courses will be required as determined by the results of the Graduate Diagnostic Survey in Music Theory.

Review of music theory. Fundamentals, diatonic and/or chromatic harmony, form, and analysis.
A. Review of Theory Diatonicism (1 cr) Introduction to part writing and voice leading.
B. Review of Theory: Chromaticism (1 cr) Chromatic theory.
E. Review of Theory: Form (1 cr) Sonata and fugue.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>MUSC 856</td>
<td>Schenkerian Analysis</td>
<td>Application of the theories of Heinrich Schenker to the analysis of tonal (common practice period) music.</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>MUSC 881</td>
<td>Music Bibliography</td>
<td>Basic procedures and tools for music scholarship.</td>
<td>1</td>
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<td>Classroom</td>
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<tr>
<td>MUSC 884</td>
<td>Music in 20th–Century American Society</td>
<td>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.</td>
<td>3</td>
<td></td>
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<td>Classroom</td>
</tr>
<tr>
<td>MUSC 886</td>
<td>Music of the Renaissance</td>
<td>Forms, styles, composers, and aesthetics of music of the Renaissance.</td>
<td>3</td>
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<tr>
<td>MUSC 899</td>
<td>Masters Thesis or Original Composition</td>
<td></td>
<td>6–10</td>
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<tr>
<td>MUSC 94</td>
<td>Music Internship</td>
<td></td>
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<td>Classroom</td>
</tr>
</tbody>
</table>
Supervised practicum and/or field work in an area related to music under the direction of a university staff/faculty member and a cooperating professional in the particular area(s) of interest.

### Theory Pedagogy

**MUSC 941**

**Prereqs:** Permission

Current materials and approaches for the teaching of music fundamentals, harmony counterpoint, ear training, sight singing, form and analysis. Activities.

### Pedagogy of Music History

**MUSC 942**

**Prereqs:** Permission

*MUSC 942* is oriented to students in music including performance, composition, music education, music theory, and music history.

Current materials and approaches for the teaching of music history in the post-secondary academic environment.

### Twentieth-Century Church Music

**MUSC 952**

**Prereqs:** MUSC 366 or equivalent


### Diction for Graduate Students

**MUSC 969**

Lyric diction in English, Italian, ecclesiastical Latin, French, and German.

### The Science of Singing

**MUSC 971**

**Prereqs:** MUSC 470 and/or 870

The science of singing. The physiology, functioning, and acoustics of the singing voice. Research in singing and the various applications of scientific concepts. Research in the art of teaching singing.

**Seminar: Choral Literature**

**972**

**Prereqs:** Permission

Designed for the serious conductor. Analytical and stylistic study of choral literature from the beginning of the respective genre. Major works of the ensemble’s history and important contemporary works.

A. Choral Literature to 1600 (1-4 cr)
B. Choral Literature from 1600 to 1750 (1-4 cr)
C. Choral Literature from 1750 to 1900 (1-4 cr)
D. Choral Literature from 1900 to the present (1-4 cr)

**Seminar: Orchestral Literature**

**973**

**Prereqs:** Permission

Designed for the serious conductor. Analytical and stylistic study of orchestral literature from the beginning of the respective genre. Major works of four distinct historical periods.

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)

**Seminar: Wind Band Literature**

**974**

**Prereqs:** Permission

Major works and compositional trends of wind band literature. Insights into historical and cultural influences, composers’ biographies, analysis of form and style, and correlation with other media (orchestra, choral, etc.).

A. 1892–1952 (1-4 cr)
B. 1952–Present (1-4 cr)
C. The Symphony (1-4 cr)
D. Evolution of Wind Ensemble Instrumentation (1-4 cr)

**Topics in Performance Practice**

**977**

Problems of interpretation and execution in music literature with emphasis on examination of literary and musical sources bearing on performance.

**Seminar in Music Theory**

**979**

Problems of interpretation and execution in music literature with emphasis on examination of literary and musical sources bearing on performance.
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<thead>
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>MUSC 986</td>
<td>Seminar in the History and Literature of Music</td>
<td>1-24</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>History of music theory, in the works of major theorists, or in special problems in music theory.</td>
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<tr>
<td>MUSC 99</td>
<td>Doctoral Colloquium</td>
<td>1-24</td>
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<td>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.</td>
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<td>MUSC 995</td>
<td>Graduate Conducting Project</td>
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<td></td>
<td>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.</td>
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<tr>
<td>MUSC 996</td>
<td>Special Problems</td>
<td>1-6</td>
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<td>Prereqs: Permission; obtain adviser's permission to repeat for credit</td>
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<td></td>
<td>Individual research projects in musicology, music theory, or music education.</td>
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<tr>
<td>MUSC 997</td>
<td>Doctoral Seminar</td>
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<td></td>
<td>May be repeated for credit.</td>
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<td>MUSC 999</td>
<td>Doctoral Document</td>
<td>1-24</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: Admission to doctoral degree program and permission of supervisory committee chair</td>
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<td></td>
<td>Max credits per degree: 55</td>
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</tbody>
</table>
## Courses for MUED (MUED)

### MUED 450/850 American Cultural Perspectives through Popular Music and Guitar
Exploration of the historical, social and cultural context of late 19th and 20th century America through learning to play jazz and popular music on the guitar to provide an authentic, performance-based encounter in music.

| Credit Hours: | 3 |
| Max credits per degree: | 3 |
| Course Delivery: | Classroom |
| ACE Outcomes: | 5, 7 |
| Groups: | Music Education (MUED) |

### MUED 473/873 Approaches to Middle School General Music
For prospective new and experienced general music/middle school teachers. Characteristics of middle school students, materials, methodology, guitar and recorder techniques, and curriculum development.

| Credit Hours: | 3 |
| Max credits per degree: | 3 |
| Course Delivery: | Classroom |
| Groups: | Music Education (MUED) |

### MUED 496/896 Independent Study in Music Education
Individual, scholarly study designed to enable a student to pursue a selected topic in music education with the direction and guidance of a faculty member.

| Credit Hours: | 1–6 |
| Max credits per degree: | 9 |
| Course Delivery: | Classroom |
| Groups: | Music Education (MUED) |

### MUED 497/897 Student Teaching

| Credit Hours: | 1–12 |
| Max credits per degree: | 12 |
| Course Format: | Lecture |
| Course Delivery: | Classroom |
| Groups: | Music Education (MUED) |

### MUED 497D/897D Student Teaching – Elementary Music

| Credit Hours: | 1–12 |
| Max credits per degree: | 12 |
| Course Format: | Lecture |
responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communicating with parents and community members, and current issues which impact education.

Student Teaching – Secondary Music

**MUED 497T/897T**

**MUED 897** does not apply towards the master of music degree.

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 communicating with parents and community members, and current issues which impact education.

Advanced Instrumental Conducting

**MUED 834**

**Prereqs:**
[MUSC 376](http://bulletin.unl.edu/courses/MUSC/376) or permission

Extension of basic conducting skills as related to orchestral and band literature; score analysis, keyboard and pitch imagery skills, advanced baton technique, interpretation and expressive conducting. Addresses the art of conducting from the experienced educator’s perspective.

Psychology and Sociology of Music

**MUED 836**


Inclusive Music Education

**MUED 838**

Function and contribution of music in the education of the handicapped. Methodology and materials to implement an effective music program. Development of musical experiences for exceptional students of all ages. Public Laws 94-142 and 95-561, music Individualized Education Programs, assessments, adaptations of curriculum materials, current methodologies and research.

Introduction to Research in Music Education

**MUED 843**

**Prereqs:** Undergraduate degree in music education or permission

This course is a prerequisite for: **MUED 898**

Interpretation and application of research results. Enables student to design, implement, and report research in the classroom.
### Historical and Philosophical Foundations of American Music Education

**Prereqs:**
Undergraduate degree in MUED.

*MUED 845* ([link](http://bulletin.unl.edu/courses/MUED/845)) is required for a graduate degree in music education.

Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylton, Richmond and others are considered.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>2–3</th>
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<tr>
<td>Max credits per degree:</td>
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<tr>
<td>Course Format:</td>
<td>Lecture</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Choral Literature and Conducting for School Ensembles

**Prereqs:**
*MUSC 374* ([link](http://bulletin.unl.edu/courses/MUSC/374))

Selection and evaluation of choral music for the school ensemble. Curricular concerns, rehearsal and conducting techniques.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>2–3</th>
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</thead>
<tbody>
<tr>
<td>Campus:</td>
<td></td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Instrumental Literature and Conducting for School Ensembles

**Prereqs:**
*MUSC 374* ([link](http://bulletin.unl.edu/courses/MUSC/374))

Selection and evaluation of instrumental music for the school ensemble. Curricular concerns, rehearsal and conducting techniques.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>2–3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
<td></td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Music Technology: Advanced Techniques and Applications

**Prereqs:**
*MUSC 383* ([link](http://bulletin.unl.edu/courses/MUSC/383))

*MUSC 883* ([link](http://bulletin.unl.edu/courses/MUSC/883)) is presented in a seminar format.

Advanced music technology focusing on particular areas of interest such as: MIDI/audio music production, advanced music notation, and software development for audio, multi-media, and/or mobile applications.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Max credits per degree:</td>
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<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Advanced Choral Conducting

**Prereqs:**
Permission

Designed for the practicing choral directors. Conducting techniques for, and score preparation of, Renaissance, Baroque and twentieth-century choral literature.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>2–3</th>
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</thead>
<tbody>
<tr>
<td>Campus:</td>
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</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### Workshop Seminar

**Prereqs:**

*MUED 890* ([link](http://bulletin.unl.edu/courses/MUED/890))
### Workshop Seminar

**Course Code:** MUED 893  
**Course Format:** Classroom  
**Prereqs:** Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

### Masters Research Project

**Course Code:** MUED 898  
**Credit Hours:** 1–6  
**Campus:** Classroom  
**Prereqs:** MUED 843 or permission  
Opportunities to design and implement a major research project with the direction and guidance of a faculty member.

### Masters Thesis

**Course Code:** MUED 899  
**Credit Hours:** 6–10  
**Max credits per degree:** 12  
**Campus:** Classroom  
**Prereqs:** Admission to Master of Music Option I program and permission of major adviser

### Seminar in the Curriculum and Teaching of Music

**Course Code:** MUED 928  
**Credit Hours:** 2–3  
**Max credits per degree:** 3  
**Campus:** Classroom  
**Prereqs:** 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.

### College Teaching in Music

**Course Code:** MUED 982  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:** Classroom  
**Prereqs:** MUED 982 is for graduate students in music who are preparing to teach at the college level. Competencies and understandings in music curriculum design and development, instructional strategies, and assessment techniques that contribute to being an effective college music instructor.

### Seminar in Music Education

**Course Code:** MUED 987  
**Credit Hours:** 1–6  
**Campus:** Classroom  
Intensive study of topics in music education.
Workshop Seminar

**MUED 990**

Refer to s in Education under the “Education” section of this bulletin.

**MUED 993**

Refer to s in Education under the “Education” section of this bulletin.

Music in Early Childhood Education

**TEAC 881**

Crosslisted as **MUED 881**

**Prereqs:**

- [MUED 344](http://bulletin.unl.edu/courses/MUED/344) or 370
- [MUED 370](http://bulletin.unl.edu/courses/MUED/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.

Current Approaches to Elementary Music Education

**TEAC 961**

Crosslisted as **MUED 961**

**Prereqs:**

Teaching experience

Implementation of current programs, materials, and techniques for the improvement of music instruction in the elementary school.

Courses for MUSR (MUSR)

Recital Attendance

**MUSR 68**

Pass/No Pass only.

Opportunity for multiple student performances. Appearances by guest artists. Forum to consider administrative matters in the School of Music.

Sophomore or Junior Recital in Applied Music

**MUSR 90**

Credit Hours: 0

Course Delivery: Classroom

Groups: Recitals (MUSR)
### Senior Recital in Applied Music

2 cr of 400-level applied music.

### Graduate Recital in Applied Music

### Graduate Recital in Applied Music I

### Graduate Recital in Applied Music II

### Graduate Recital in Applied Music

Credit Hours: 1–3  
Max credits per degree: 12  
Campus:  
Course Delivery: Classroom  
Groups: Opera/Music Theatre Performance (MUOP)

### Courses for MUOP (MUOP)

**Music Theatre Performance**

<table>
<thead>
<tr>
<th>Credit Hours:</th>
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<tbody>
<tr>
<td>Max credits per degree:</td>
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</tr>
<tr>
<td>Groups:</td>
<td>Opera/Music Theatre Performance (MUOP)</td>
</tr>
</tbody>
</table>

**Philharmonia: Opera and Chamber Orchestra**
Contents

- **Description (#Description)**
  - 1.1 Master of Music Option I. (#Master of Music Option I.)
  - 1.2 Master of Music Option II. (#Master of Music Option II.)
  - 1.3 Master of Music Option III. (#Master of Music Option III.)
  - 1.4 Doctor of Musical Arts Degree. (#Doctor of Musical Arts Degree.)
  - 1.5 Doctor of Philosophy Degree. (#Doctor of Philosophy Degree.)

- **Faculty (#Faculty)**

### Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Music).

**Director of School of Music:** John W. Richmond, Ph.D.

**Associate Director:** Glenn E. Nierman, D.M.E.

**Graduate Committee:** Professors Nierman (chair), Anderson, Eklund; Associate Professors Buhard, Wristen, Fuelberth, Haar; Assistant Professor of Research/Creative Activity Fischer

The School of Music offers graduate work leading to the master of music, the doctor of musical arts, and the doctor of philosophy degrees. A specialization in music education is available at the master’s level. Once admitted, graduate students will select a Chair of their Supervisory Committee, who must be a member of
the Graduate Faculty of the UNL School of Music; and they are required to take a diagnostic survey in music theory/aural skills and history. Applicants should contact the chairperson of the School of Music Graduate Committee 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.

- **Plan A: Music History**
- **Plan B: Music Theory**
- **Plan C: Composition**
- **Plan D: Music Education**

Specific degree requirements are available at: [http://music.unl.edu](http://music.unl.edu).

**Master of Music Option II.**
This option is a “summers-only” program (meaning all of the courses in the major are offered only in Summer Sessions) designed for the practicing K-12 music educators who wish to continue teaching K-12 or who wish to pursue further study in preparation for teaching at the college level. A total of 36 credits are required for degree completion of which 12 credits must be earned in courses open exclusively to graduate students. Specific requirements include:

- **Major: Music (Music Education), 18 credits**
  - Music Education Core (836, 838, 843, 845, 928), 15 credits
  - Music Education Elective (862, 863, or 893 Orff workshop), 3 credits

- **Minor: Music, 9 credits**
  - MUSC 840
  - MUSC 861
  - Plus 3 credits of applied music or pedagogy or MUSC 839

- **Second Minor or Supporting Courses, 9 credits**

**Master of Music Option III.**
This option offers six areas of emphasis to students in music performance. In addition to other entrance requirements, a successful audition must precede entry into this option. Total credits 36, of which 18 credits must be earned in courses open exclusively to graduate students.

*Note – the emphasis in piano pedagogy requires 39 credits.*

- **Choral Conducting:**
  - music core courses 23 credits
  - other music courses 4–6 credits (includes ensemble)
  - applied music 4–6 credits
  - conducting project 3 credits

- **Jazz Studies:**
  - Major Area (Jazz Improvisation, Pedagogy, Theory, History, Ensembles) 19 credits
  - other music courses (includes Applied/Composition & Theory Pedagogy) 17 credits

- **Orchestral Conducting:**
  - music core courses 17 credits
  - applied music 4 credits (minimum 4 credits piano)
  - other music courses 12 credits (includes ensemble), conducting project 3 credits

- **Piano Pedagogy:**
  - applied music 9 credits
  - pedagogy 15 credits
  - music core courses 11 credits
  - other music courses 4 credits (includes ensemble) (1 recital)

- **Solo performance:**
  - applied music 12 credits
  - music core classes 11 credits
  - pedagogy/literature 2–9 credits
  - other music courses 4–11 credits (1 recital)

- **Wind Band Conducting:**
  - music core courses 17 credits
  - applied music 6 credits
  - other music 10 credits (includes ensemble)
  - conducting project 3 credits

- **Woodwind Specialties:**
  - applied music 14 credits
  - music core courses 15 credits
  - other music courses 7 credits (3 recitals)

**Doctor of Musical Arts Degree.**
Students may select from among four areas of emphasis when pursuing the Doctor of Musical Arts degree: Composition, Conducting, Jazz Studies, or Performance.
A prerequisite to admission is a master's degree in music. The criteria for admission include:

1. MM GPA – 3.25/4.00 scale,
2. Successful audition or accepted portfolio (composition only),
3. Evidence of scholarly writing ability (and for international students, an Internet TOEFL score of 79), and
4. Evidence of fit between the applicant's goals/interests and the School's ability to address those goals/interests

Details regarding materials required for the admissions portfolio are available at: [http://music.unl.edu](http://music.unl.edu).

The student will ordinarily be required to complete from 54–60 hours of coursework beyond the master's degree. Of these hours a minimum of 45 credit hours must be completed at UNL after the filing of the Program of Studies.

When a substantial amount of course work has been completed, the student will take comprehensive examinations, the successful completion of which will lead to admission to candidacy. Presentation of the final recital or composition and the doctoral document—including successful oral defense of the latter—will complete requirements. A detailed description of the DMA degree program is available on the School of Music Website at [http://music.unl.edu](http://music.unl.edu).

**Doctor of Philosophy Degree.**

The Doctor of Philosophy Degree offered in the School of Music is a Ph.D. degree with a major in Music. Currently, the Ph.D. degree in Music is offered with an area of emphasis in Music Education. Criteria for admission are:

1. Graduate GPA of at least 3.5 on a 4.0 scale,
2. GRE scores (verbal reasoning, quantitative reasoning, critical thinking, and analytical writing, (not more than 5 years old) and for international students an Internet TOEFL score of 100,
3. Professional Experience – evidence of 3 years of full-time K–12 teaching experience is preferred,
4. "Goodness of Fit" between the applicant's goals/interests and the department's ability to address those goals/interests,
5. Evidence of writing ability, and
6. Evidence of teaching skills

Specifically, the curricular framework for this degree includes four major areas:

1. Core music courses common to all Ph.D. in Music degrees,
2. Research tools courses and dissertation,
3. Courses/seminars in the major area, and
4. Minor or related (cognate) courses. Sample courses/credit hours in each area in a 90-hour Ph.D. in Music (area of emphasis: music education) are structured as follows:

- **Area One: Core Music Courses, 12 Credits**
  - College Teaching of Music (3)
  - Music History (3)
  - Music Theory (3)
  - Music Technology/Composition (3)

- **Area Two: Research Tools Courses and Dissertation 27 Credits**
  - Research Design Statistics Courses (9)
  - Dissertation (18)

- **Area Three: Major Area Courses/Seminars, 30–42 Credits**

- **Area Four: Minor or Related (Cognate) Courses, 9–21 Credits**

- **Total, 90 Credits**

The student will ordinarily be required to complete from 54–60 hours of coursework beyond the master's degree. Of these hours a minimum of 45 credit hours must be completed at UNL after approval of the Program of Studies. A detailed description of the Ph.D. program with a music education emphasis is available on the School of Music Website at [http://music.unl.edu](http://music.unl.edu).

When a substantial amount of coursework and the language requirement has been completed, the student will take comprehensive examinations, the successful completion of which will lead to admission to candidacy. The degree requirements will be completed after a successful public defense of the dissertation.

**NOTES:**

1. This bulletin may not reflect some subsequent revisions in the School of Music programs. Students should check with the School of Music Graduate Office for up-to-date changes that have been approved by the Graduate Committee of the School of Music.
2. The 900–level applied music series is intended for performance majors studying in their major applied area. 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 and non–music majors.
3. To enroll in applied lessons, the student must audition or have permission of the instructor.

**Faculty**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Music).

Retrieved from "[http://bulletin.unl.edu/graduate/Music](http://bulletin.unl.edu/graduate/Music)"

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**Natural Resources**

**Subject Areas**
Courses for NRES (NRES)

AECN 883  **Ecological Economics**  Crosslisted as NRES 883

Prereqs: AECN 141 or ECON 212 or equivalent

A synthesis across the notion of "utility" as represented in traditional environmental and natural resource economics, "ecology" in ecological economics, and "community" in behavioral economics. Ideas from thermodynamics with a focus on renewable resources. Development, organization, and enhancement of eco-business, eco-industry, eco-government and eco-communities.

AGRO 426/826  **Invasive Plants**  Crosslisted as HORT 426/826, NRES 426/826

Prereqs: AGRO/HORT/SOIL 153; BIOS 109


AGRO 435/835  **Agroecology**  Crosslisted as HORT 435/835, NRES 435/835

For AGRO/HORT/NRES 435: Senior standing or permission. For AGRO/NRES 835: 12 hrs biological or agricultural sciences or permission.

Capstone course. Team projects for developing communication skills and leadership skills.

Integration of principles of ecology, plant and animal sciences, crop protection, and rural landscape planning and management for sustainable agriculture. Includes natural and cultivated ecosystems, population and community ecology, nutrient cycling, pest management, hydrologic cycles, cropping and grazing systems, landscape ecology, biodiversity, and socioeconomic evaluation of systems.

AGRO 440/840  **Great Plains Ecosystem**  Crosslisted as RNGE 440, NRES 440/840

Junior standing; BIOS 101 and 101L, or equivalent, recommended.

Characteristics of Great Plains ecosystems, interrelationships of ecological factors and processes, and their application in the management of grasslands. Interactions of fire, vegetation, grazing animals and wildlife.
Wildland Plants

Prereqs: Junior standing, BIOS 101 and 101L, or equivalent, recommended.

Wildland plants that are important to grassland and shrubland ecosystem management and production. Distribution, utilization, classification, identification (including identification by vegetative parts), uses by Native Americans, and recognition of grasses, forbs, shrubs, exotic and wetland plants.

Vegetation Analysis

Prereqs: Junior standing, BIOS 101 and 101L, or equivalent, recommended.

Criteria by which grassland are analyzed. Vegetation sampling techniques, measurement and evaluation of grasslands, and measurement of important environmental factors. Evaluations of habitat improvement practices, wildlife value, recreational value, and watershed value.

Soil Chemistry and Mineralogy

Prereqs: AGRO/HORT/SOIL 153, GEOL 101, CHEM 109, GEOL 109, CHEM 110, CHEM 221, CHEM 251, or equivalent.

Chemical and mineralogical properties of soil components. Inorganic colloidal fraction. Structures of soil minerals as a means of understanding properties, such as ion exchange and equilibria; release and supply of nutrient and toxic materials; and soil acidity and alkalinity.

Soil Chemical Measurements

Prereqs: AGRO/SOIL 153, CHEM 116, or equivalent or permission.

Permission required to register for 2 cr. Students registered for 3 cr will design, carry out, and report on an independent study project conducted during the term. Offered even-numbered calendar years. Lab 4–6.

Theory and practice of soil chemical analyses commonly encountered in research and industrial settings. Wet analyses of inorganic fraction of soil and operation of instrumentation necessary to quantify results of those analyses.
460/860 Crosslisted as BIOS 447/847, SOIL 460, NRES 460/860

**Prereqs:**
One semester microbiology; one semester biochemistry or organic chemistry.

Soil from a microbe's perspective—growth, activity and survival strategies; principles governing methods to study microorganisms and biochemical processes in soil; mechanisms controlling organic matter cycling and stabilization with reference to C, N, S, and P; microbial interactions with plants and animals; and agronomic and environmental applications of soil microorganisms.

**Course Format:** Lecture 3
**Course Delivery:** Classroom

**Credit Hours:** 3

**Water Quality Strategy**
Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875

**Prereqs:**
Senior standing or permission.

Capstone course.

Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.

**ACE Outcomes:** 10

**Course Format:** Lecture 3
**Course Delivery:** Classroom

**Credit Hours:** 3

**Plant–Water Relations**
Crosslisted as BIOS 817, NRES 807

**Prereqs:**
AGRO 325 or equivalent; MATH 106 recommended

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 of the plant. Stomata 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 several plant–environment systems.

**Course Delivery:** Classroom

**Credit Hours:** 3

**Crop Growth and Yield Modeling**
Crosslisted as NRES 906

**Prereqs:**
NRES 808 or equivalent or permission

Experience in programming in a high–level computer language. Offered spring semester of even–numbered calendar years. Descriptive and explanatory 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 explanatory models.

**Course Delivery:** Classroom

**Credit Hours:** 3

**Agricultural Climatology**
Crosslisted as METR 907, HORT 907, NRES 907

**Prereqs:**
NRES 808; STAT 801 or equivalent

Experience in programming in a high–level computer language. Offered spring semester of even–numbered calendar years. Descriptive and explanatory 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 explanatory models.

**Course Delivery:** Lab 2, Lecture 2

**Credit Hours:** 3
Campus: Classroom
Course Delivery:

**Solar Radiation Interactions at the Earth's Surface**
Crosslisted as METR 908, HORT 908, NRES 908

Offered spring semester of odd-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.

**Prereqs:**
- MATH 208
- NRES 808

Offered spring semester of even-numbered calendar years. Quantitative study of radiative transfer to the earth’s surface and subsequent interactions of radiation with vegetative components and underlying surfaces. Applications of canopy radiative modeling and remote sensing techniques, particularly in understanding land-surface processes, are discussed.

**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Classroom

**Crop Responses to Environment**
Crosslisted as HORT 909, NRES 909

Offered odd-numbered calendar years. Physiological and developmental aspects of hardiness and growth of crop plants as affected by light, temperature, wind, and water. Design, function, and limitations of controlled environment facilities in plant research.

**Prereqs:**
- MATH 208
- NRES 808

**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Classroom

**Advanced Soil Physics**
Crosslisted as NRES 961

Offered odd-numbered calendar years. Physics of soils and porous media, with emphasis on the physics and mathematics of the movement of water, air, and heat through soils.

**Prereqs:**
- MATH 208
- PHYS 212

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:** Classroom
**Course Delivery:** Classroom

**Soil Fertility**
Crosslisted as NRES 966

Conditions and transformations involved in the transfer of a mineral nutrient ion from the soil into the plant. Evaluation of nutrient supply to plants.

**Prereqs:**
- MATH 106
- AGRO 855
- AGRO 857
- STAT 801

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:** Classroom
**Course Delivery:** Classroom

**Soil Genesis and Classification**
Crosslisted as GEOG 967, NRES 977

**Prereqs:**
- AGRO 153
- AGRO 877
- GEOG 867

**Credit Hours:** 3
**Course Format:** Lecture 2, Recitation 1
**Campus:** Classroom
**Course Delivery:** Classroom
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<th>Course Title</th>
<th>Prereqs</th>
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<th>Credit Hours</th>
<th>Max credits per degree</th>
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<tbody>
<tr>
<td>AGRO 992</td>
<td>General Seminar</td>
<td>Expected of all horticulture graduate students and all agronomy PhD students; optional for agronomy MS students. Presentation of thesis or non-thesis topics in agronomy, horticulture or related subjects. For course description, see AGRO 992.</td>
<td>Classroom</td>
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<tr>
<td>AGRO 996A</td>
<td>Research in Soils</td>
<td>12 hrs AGRO or closely related sciences, and permission</td>
<td>Classroom</td>
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<tr>
<td>ALEC 410/810</td>
<td>Environmental Leadership</td>
<td>Junior standing</td>
<td>Classroom, Web</td>
<td></td>
<td>3</td>
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<tr>
<td>ANTH 429A/829A</td>
<td>Food Security: A Global Perspective</td>
<td>Junior standing</td>
<td>Classroom</td>
<td></td>
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<tr>
<td>ANTH 473/873</td>
<td>Ecological Anthropology</td>
<td></td>
<td>Classroom</td>
<td></td>
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</tbody>
</table>
**Ecological Interactions**
Crosslisted as NRES 454/854

Prereqs:
- BIOS 102 (http://bulletin.unl.edu/courses/BIOS/102), 103 (http://bulletin.unl.edu/courses/BIOS/103), and either BIOS 207 (http://bulletin.unl.edu/courses/BIOS/207) or BIOS 220 (http://bulletin.unl.edu/courses/BIOS/220), or equivalent courses.

Nature and characteristics of populations and communities. Interactions within and between populations in community structure and dynamics. Direct and indirect interactions and ecological processes, competition, predation, parasitism, herbivory, and pollination. Structure, functioning and persistence of natural communities, foodweb dynamics, succession, and biodiversity.

**Mathematical Models in Biology**
Crosslisted as NRES 456/856

Prereqs:
- Junior standing; major in the biological sciences; MATH 106 (http://bulletin.unl.edu/courses/MATH/106) or 107 (http://bulletin.unl.edu/courses/MATH/107).

Biological systems, from molecules to ecosystems, are analyzed using mathematical techniques. Strengths and weaknesses of mathematical approaches to biological questions. Brief review of college level math; introduction to modeling; oscillating systems in biology; randomness in biology; review of historically important and currently popular models in biology.

**Ichthyology**
Crosslisted as NRES 489/889

Prereqs:
- 12 hrs biological sciences.

May also be offered at Cedar Point Biological Station.

Fishes, their taxonomy, physiology, behavior, and ecology. Dynamics of fish stocks and factors regulating their production.

**Plant Tissue Culture**
Crosslisted as HORT 811, NRES 811

Prereqs:
- BIOS 109 (http://bulletin.unl.edu/courses/BIOS/109); AGRO 325 (http://bulletin.unl.edu/courses/AGRO/325) which includes CHEM 109 (http://bulletin.unl.edu/courses/CHEM/109), 110 (http://bulletin.unl.edu/courses/CHEM/110); or equivalent

Survey of techniques used in plant cell, tissue and organ culture, including current research. Laboratory emphasizes practical manipulation of plant cells, tissues, and organs, including examples from woody and herbaceous plant species.

**Woody Plant Growth and Development**
Crosslisted as HORT 849, NRES 849
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
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<tbody>
<tr>
<td>849</td>
<td>849</td>
<td><a href="http://bulletin.unl.edu/courses/CHEM/251">CHEM 251</a> and <a href="http://bulletin.unl.edu/courses/AGRO/325">AGRO 325</a></td>
<td>3</td>
<td>Lecture 2</td>
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<tr>
<td>BIOS 860</td>
<td>Advanced Limnology</td>
<td><a href="http://bulletin.unl.edu/courses/NRES/859">NRES 859</a> or equivalent</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>BSEN 954</td>
<td>Turbulent Transfer in the Atmospheric Surface Layer</td>
<td><a href="http://bulletin.unl.edu/courses/MATH/821">MATH 821</a>; <a href="http://bulletin.unl.edu/courses/MECH/310">MECH 310</a> or <a href="http://bulletin.unl.edu/courses/NRES/808">NRES 808</a> or <a href="http://bulletin.unl.edu/courses/BIOS/857">BIOS 857</a>; or equivalent or permission</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>CIVE 353/853</td>
<td>Hydrology</td>
<td><a href="http://bulletin.unl.edu/courses/MATH/106">MATH 106</a>, not available for credit for engineering students.</td>
<td>3</td>
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<tr>
<td>CIVE 916</td>
<td>Environmental Law and Water Resource Management Seminar</td>
<td><a href="http://bulletin.unl.edu/courses/CIVE/916">NRES 916, LAW 774G</a></td>
<td>1-4</td>
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<td>Classroom</td>
</tr>
<tr>
<td>ENTO 402/802</td>
<td>Aquatic Insects</td>
<td></td>
<td>2</td>
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<td>Classroom</td>
</tr>
</tbody>
</table>
Identification of Aquatic Insects

Crosslisted as BIOS 485L/885L, NRES 402L/802L

**Prereqs:** Parallel ENTO 802 (http://bulletin.unl.edu/courses/ENTO/802), NRES 402 (http://bulletin.unl.edu/courses/NRES/402), BIOS 485 (http://bulletin.unl.edu/courses/BIOS/485) / 885 (http://bulletin.unl.edu/courses/BIOS/885).

ENTO 402L (http://bulletin.unl.edu/courses/ENTO/402L) is offered fall semester of odd-numbered calendar years. BIOS 485L (http://bulletin.unl.edu/courses/BIOS/485L) / 885L (http://bulletin.unl.edu/courses/BIOS/885L) and NRES 402L (http://bulletin.unl.edu/courses/NRES/402L) / 802L (http://bulletin.unl.edu/courses/NRES/802L) may be offered in the spring semester.

Identification of aquatic insects to the family level.

Introduction to Geographic Information Systems

Crosslisted as NRES 412/812

This course is a prerequisite for GEOG 422 (http://bulletin.unl.edu/courses/GEOG/422).

Lab exercises provide experience with GIS

Introduction to conceptual foundations and applications of computer-based geographic information systems (GIS). GIS database development, spatial data analysis, spatial modeling, GIS implementation and administration.

Introduction to Remote Sensing

Crosslisted as NRES 418/818

**Prereqs:** 9 hrs earth science or natural resource sciences including GEOG 150 (http://bulletin.unl.edu/courses/GEOG/150) and 152 (http://bulletin.unl.edu/courses/GEOG/152), or 155 (http://bulletin.unl.edu/courses/GEOG/155).

This course is a prerequisite for GEOG 420 (http://bulletin.unl.edu/courses/GEOG/420).

Introduction to remote sensing of the earth from aerial 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. Applications in geographic, agricultural, environmental and natural resources analyses.

Applications of Remote Sensing in Agriculture and Natural Resources

Crosslisted as GEOL 419/819, AGRO 419/819, NRES 420/820
### GEOG 427/827 Introduction to the Global Positioning System (GPS)

**Crosslisted as NRES 427/827**

**Credit Hours:** 2

**Course Format:** Lab 1, Lecture 1.5

**Course Delivery:** Classroom

**Groups:** Techniques

**Prereqs:**
- Junior standing and a basic familiarity with mapping and GIS, or permission.

Integrated lectures, lab exercises and field experience provide an understanding of GPS technology and applications. Students will learn to collect, correct and use GPS data in a geographic information system (GIS) environment.

### GEOG 491/891 Geography Field Tour

**Crosslisted as NRES 491**

**Credit Hours:** 2-3

**Max credits per semester:** 3

**Max credits per degree:** 6

**Course Format:** Field 40

**Course Delivery:** Classroom

**Groups:** Physical Geography

**Off-campus travel required.**

Group educational tours to specific sites that illustrate aspects of physical and cultural geography.

### GEOL 418/818 Chemistry of Natural Waters

**Crosslisted as NRES 419/819, WATS 418**

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Prereqs:**
- 2 semesters of college chemistry, or CHEM 109 [link](http://bulletin.unl.edu/courses/CHEM/109) and 110 [link](http://bulletin.unl.edu/courses/CHEM/110), 113 [link](http://bulletin.unl.edu/courses/CHEM/113) and 114 [link](http://bulletin.unl.edu/courses/CHEM/114), or CHEM 111 [link](http://bulletin.unl.edu/courses/CHEM/111); or permission.

Principles of water chemistry and their use in precipitation, surface water, and groundwater studies. Groundwater applications used to determine the time and source of groundwater recharge, estimate groundwater residence time, identify aquifer mineralogy, examine the degree of mixing between waters of various sources and evaluate what types of biological and chemical processes have occurred during the water's journey through the aquifer system.

### GEOL 418L/818L Chemistry of Natural Waters Laboratory

**Crosslisted as NRES 419L/819L, WATS 418L**

**Credit Hours:** 1

**Course Format:** Lab 1

**Course Delivery:** Classroom

**Prereqs:**
- Two semesters college chemistry or permission.

Parallel: GEOL 418 [link](http://bulletin.unl.edu/courses/GEOL/418)/818 [link](http://bulletin.unl.edu/courses/GEOL/818), NRES 419 [link](http://bulletin.unl.edu/courses/NRES/419)/819 [link](http://bulletin.unl.edu/courses/NRES/819), WATS 418 [link](http://bulletin.unl.edu/courses/WATS/418) Offered even numbered
Basic laboratory techniques used to perform water analysis including various wet chemical techniques, instrument use (AA, IC, UV-Visible) and computer modeling. Techniques for sample collection and preservation, parameter estimation and chemical analysis.

### Evolution of Cenozoic Mammals

**Course Code:** GEOL 436/836

Crosslisted as NRES 436/836

**Prereqs:**
- GEOL 103

Survey of mammalian evolution with emphasis on the origin, radiation, and phylogenetic relationships of Cenozoic fossil mammals. Overview of climatic and ecological changes affecting mammalian adaptations and hands on experience with specimens.

### Soil Geomorphology and Paleopedology

**Course Code:** GEOL 465/865

Crosslisted as NRES 465/865

**Prereqs:**
- GEOL 450
- NRES 477

Soils and paleosols as evidence in reconstruction landscape evolution and paleoenvironments. Role of paleosols in stratigraphy.

### Geostatistics

**Course Code:** GEOL 825

Crosslisted as NRES 825

**Prereqs:**
- MATH 106
- STAT 218

Offered fall semester of odd-numbered calendar years. Practical methods for solving spatial interpolation and related estimation problems with emphasis on geostatistical methods. Introduction to applied statistical simulation and prediction in geology, hydrogeology and environmental studies.

### Hydrogeology

**Course Code:** GEOL 889

Crosslisted as NRES 887

**Prereqs:**
- GEOL 888
- MATH 208

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.
NRES 819 (http://bulletin.unl.edu/courses/NRES/819) or equivalent or permission

Theory and use of stable, radiogenic and radioactive isotopes in hydrologic studies. Abundance and variation of the stable isotopes of oxygen, hydrogen, carbon, sulphur, chlorine, nitrogen, and strontium. Application of the isotopes to determine water origin, movement, geochemical history, recharge age and residence time, and to delineate contaminant sources and solute migration.

HORT 812 Landscape Ecology
Crosslisted as NRES 810

Prereqs:
12 hrs biological sciences or related fields including BIOS 320 (http://bulletin.unl.edu/courses/BIOS/320) or permission

Spatial arrangements of ecosystems, the interaction among component ecosystems through the flow of energy, materials and organisms, and alteration of this structure through natural or anthropogenic forces.

HORT 897 Master of Applied Science Project
Crosslisted as AGRI 897, ACRO 897, NRES 897

Prereqs:
Admission to Master of Applied Science degree program

Project activity for the Master of Applied Science degree.

Design, develop and complete a project that requires synthesis of the course topics covered in the primary area of emphasis.

METR 483/883 Global Climate Change
Crosslisted as NRES 467/867

Prereqs:
Junior standing; MATH 106 (http://bulletin.unl.edu/courses/MATH/106) / 106B (http://bulletin.unl.edu/courses/MATH/106B) / 106H (http://bulletin.unl.edu/courses/MATH/106H); 5 hrs PHYS; METR 475 (http://bulletin.unl.edu/courses/METR/475) / 875 (http://bulletin.unl.edu/courses/METR/875).

METR 483 (http://bulletin.unl.edu/courses/METR/483) / 883 (http://bulletin.unl.edu/courses/METR/883) / NRES 467 (http://bulletin.unl.edu/courses/NRES/467) / 867 (http://bulletin.unl.edu/courses/NRES/867) is offered fall semester of even-numbered calendar years.

Elements of climate systems, El Nino/LaNina cycle and monsoons, natural variability of climate on interannual and interdecadal scales. Paleoclimate, and future climate, developed climate change scenarios and climate change impacts on natural resources and the environment.

NRES 406/806 Plant Ecophysiology: Theory and Practice
Crosslisted as HORT 406/806, AGRO 406/806

Prereqs:
Junior standing; 4 hrs ecology; and 4 hrs botany or plant physiology.

Offered fall semester of even-numbered calendar years.

Principles of plant physiology which underlie the relationship between plants and their physical, chemical and biotic environments. An introduction to the
ecological niche, limiting factors and adaptation. An overview of the seed germination and ecology, plant and soil water relations, nutrients, plant energy budgets, photosynthesis, carbon balance and plant-animal interactions. An introduction to various field equipment used in ecophysiological studies.

**Microclimate: The Biological Environment**
Crosslisted as GEOG 408/808, METR 408/808, HORT 408/808, ACRO 408/808, WATS 408

**Prereqs:**
Junior standing, MATH 106 or equivalent, 5 hrs physics, major in any of the physical or biological sciences or engineering; 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. Control 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.

**Agroforestry Systems in Sustainable Agriculture**
Crosslisted as HORT 418/818

**Prereqs:**
12 hours biological or agricultural sciences.

At least one course in production agriculture and one course in natural resources is strongly suggested. Offered odd-numbered calendar years.

The roles of woody plants in sustainable agricultural systems of temperate regions. Emphasis on the ecological and economic benefits of trees and shrubs in the agricultural landscape. Topics include: habitat diversity and biological control; shelterbelts structure, function, benefits and design; intercropping systems; silvopastoral systems; riparian systems; and production of timber and specialty crops. Comparison of temperate agroforestry systems to those of tropical areas.

**Field Techniques in Remote Sensing**
Crosslisted as GEOG 421/821

**Prereqs:**
NRES 418 / 818

Field techniques as they relate to remote-sensing campaigns. Research methods, systematic approaches to data collection, field spectroscopy, collecting ancillary information linked with spectroscopic data sets as well as aircraft or satellite missions and subsequent analyses of acquired data.

**Laboratory Earth: Earth's Changing Systems**

Fundamental concepts related to understanding Earth's changing natural systems in the past, present, and the future. The cycling of matter and energy; the relationship between human activity and environmental change; and the consequence of these relationships.

**Forest Ecology**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRES 220</td>
<td>Leadership in Public Organizations</td>
<td>NRES/BIOS 220</td>
<td>4</td>
<td>Lab 3, Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Requires a weekend field trip to forested sites in Nebraska.</td>
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<tr>
<td>NRES 428/828</td>
<td>Leadership in Public Organizations</td>
<td></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as ALEC 428</td>
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<td>Prereqs:</td>
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<tr>
<td></td>
<td>Junior standing.</td>
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<tr>
<td></td>
<td>Leadership in theories, research, and practices in public organizations and natural resource agencies.</td>
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<tr>
<td>NRES 433/833</td>
<td>Wildlife Management Techniques</td>
<td>NRES 311</td>
<td>4</td>
<td>Lecture 3, Lab 3</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as ENVR 434</td>
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<td>Prereqs:</td>
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<td></td>
<td>NRES 311</td>
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<td></td>
<td>Offered in fall of even-numbered years. Offered in summer of odd-numbered years at Cedar Point Biological Station.</td>
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<td></td>
<td>Survey of quantitative techniques used in wildlife management. Scientific method of wildlife science; surveys; habitat use and classification; forensic methods; and population inventories. Introduction to the use of computer-based geographic information systems (GIS) in a natural resource context.</td>
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<tr>
<td>NRES 434/834</td>
<td>Environmental Education and Interpretation</td>
<td></td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<td>Crosslisted as ENVR 434</td>
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<td>Prereqs:</td>
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<td></td>
<td>Examination of formal and informal environmental education and interpretation. Knowledge, application and practice relevant to science teachers and park, extension, museums, and zoo educators.</td>
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<tr>
<td>NRES 445/845</td>
<td>Human Remains in Forensic Science</td>
<td>FORS 120</td>
<td>4</td>
<td>Lab 2, Lecture 2</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as FORS 445/845</td>
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<td>Prereqs:</td>
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<td>FORS 120</td>
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<td></td>
<td>Forensic anthropology within the broader context of forensic sciences and physical anthropology. Decomposition and bone modification through artificial means. Determination of individual identity, diet, chronic pathology and cause of death from human remains.</td>
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<tr>
<td>NRES 446/846</td>
<td>Pollen Analysis for Behavioral, Biological, and Forensic Science</td>
<td>BIOS 109 and FORS 120</td>
<td>4</td>
<td>Lab 2, Lecture 2</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as FORS 446/846</td>
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<td>Prereqs:</td>
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<td></td>
<td>BIOS 109</td>
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<td>FORS 120</td>
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<td></td>
<td>Collection, processing, identification of common North American pollen types. Pollination ecology relating to scene reconstruction. Fundamental</td>
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<tr>
<td>NRES</td>
<td>Biology of Wildlife Populations</td>
<td>Crosslisted as BIOS 450/850</td>
<td>Link <a href="http://bulletin.unl.edu/courses/NRES/450">Here</a></td>
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<td><strong>Prereqs:</strong> BIOS 220</td>
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<td></td>
<td>Principles of population dynamics. Management strategies (for consumptive and nonconsumptive fish and wildlife species) presented utilizing principles developed.</td>
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<tr>
<td>NRES</td>
<td>Soil Environmental Chemistry</td>
<td>Crosslisted as ENVE 851</td>
<td>Link <a href="http://bulletin.unl.edu/courses/NRES/451">Here</a></td>
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<td></td>
<td><strong>Prereqs:</strong> CHEM 252</td>
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<td></td>
<td>Offered in spring semester of even-numbered calendar years</td>
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<td></td>
<td>Theory, mechanisms and processes related to chemical behavior in soil-water environments. Application of computer simulation models for predicting contaminant fate in soil. Basic chemical and biological principles of remediating contaminated soil and water.</td>
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<tr>
<td>NRES</td>
<td>Climate and Society</td>
<td>Crosslisted as GEOG 450/850, METR 450/850, AGRO 450/850</td>
<td>Link <a href="http://bulletin.unl.edu/courses/NRES/452">Here</a></td>
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<td><strong>Prereqs:</strong> METR 200 or 351</td>
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<td>Offered spring semester of even-numbered calendar years</td>
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<td>Impact of climate and extreme climatic events on society and societal responses to those events. Global in scope and interdisciplinary.</td>
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<tr>
<td>NRES</td>
<td>Soil Physical Determinations</td>
<td>Crosslisted as AGRO 458/858, SOIL 458</td>
<td>Link <a href="http://bulletin.unl.edu/courses/NRES/458">Here</a></td>
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<td></td>
<td><strong>Prereqs:</strong> SOIL/AGRO/GEOL/WATS 361, PHYS 141, MATH 102</td>
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<td>Capstone course. Lab 3, plus 3 hrs arr. Grad students in NRES/AGRO 458 are expected to carry out an independent project and give an oral report.</td>
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<td>Survey of measurement techniques and principles used in characterizing the physical properties of soils. Includes analysis of experimental design and sources of experimental error. Techniques include: particle size analysis, soil water content, pore size analysis, field sampling techniques, soil strength, and saturated hydraulic conductivity.</td>
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<tr>
<td>NRES</td>
<td>Limnology</td>
<td>Crosslisted as BIOS 459/859, WATS 459</td>
<td>Link <a href="http://bulletin.unl.edu/courses/NRES/459">Here</a></td>
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</tbody>
</table>
Physical, chemical, and biological processes that occur in fresh water. Organisms occurring in fresh water and their ecology; biological productivity of water and its causative factors; eutrophication and its effects.

May also be offered at Cedar Point Biological Station.

**Soil Physics**

Crosslisted as GEOL 461/861, AGRO 461/861, SOIL 461, WATS 461

**Prereqs:**
AGRO/SOIL 153 (http://bulletin.unl.edu/courses/SOIL/153); PHYS 141 (http://bulletin.unl.edu/courses/PHYS/141) or equivalent, one semester of calculus.

Recommended: Parallel AGRO/NRES/SOIL 458 (http://bulletin.unl.edu/courses/SOIL/458).


**Fisheries Science**

This course is a prerequisite for: NRES 871 (http://bulletin.unl.edu/courses/NRES/871), NRES 965 (http://bulletin.unl.edu/courses/NRES/965).

May also be offered at Cedar Point Biological Station.

Fisheries biology emphasizing the determination and evaluation of vital statistics for the management of fish populations. Basis of specific management techniques.

**Fisheries Biology**

Crosslisted as BIOS 464/864

**Prereqs:**
BIOS/NRES 489 (http://bulletin.unl.edu/courses/NRES/489)/889 (http://bulletin.unl.edu/courses/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.

**Wetlands**

Crosslisted as BIOS 458, WATS 468

**Prereqs:**
12 hrs biological sciences; BIOS 220 (http://bulletin.unl.edu/courses/BIOS/220); CHEM 109 (http://bulletin.unl.edu/courses/CHEM/109) and 110 (http://bulletin.unl.edu/courses/CHEM/110).

Offered even-numbered calendar years.

Physical, chemical and biological processes that occur in wetlands; the hydrology and soils of wetland systems; organisms occurring in wetlands and their ecology wetland creation, delineation, management and ecotoxicology.
Bio-Atmospheric Instrumentation

Crosslisted as GEOG 469/869, METR 469/869, HORT 407/807, AGRO 469/869, MSYM 469/869

Credit Hours: 3
Course Format: Lecture 2, Lab 1
Course Delivery: Classroom

Prereqs:
Junior standing; MATH 106 (http://bulletin.unl.edu/courses/MATH/106); 4 hrs physics; physical or biological science major.

Offered fall semester of odd-numbered calendar years.

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 are discussed and evaluated.

Herpetology

Crosslisted as BIOS 474/874

Credit Hours: 4
Course Format: Lecture 4
Course Delivery: Classroom

Prereqs:
BIOS/NRES 386 (http://bulletin.unl.edu/courses/NRES/386) and permission, BIOS 388 (http://bulletin.unl.edu/courses/BIOS/388) recommended.

May also be offered at Cedar Point Biological Station.

Fossil and living amphibians and reptiles. Anatomy, classification, ecology and evolution.

Mammalogy

Crosslisted as BIOS 476/876

Credit Hours: 4
Course Format: Lecture 3
Course Delivery: Classroom

Prereqs:
8 hrs BIOS; BIOS/NRES 386 (http://bulletin.unl.edu/courses/NRES/386) or NRES 311 (http://bulletin.unl.edu/courses/NRES/311).

May also be offered at Cedar Point Biological Station. Field trips are required and may occur outside of scheduled class time. Lab and field time emphasize diversity of mammalian families and species identification of Nebraska mammals.

Evolution, natural history, ecology, and functional morphology of planetary mammals and mammals of the Northern Great Plains.

Great Plains Field Pedology

Crosslisted as GEOG 467/867, AGRO 477, SOIL 477

Credit Hours: 4
Course Format: Lab, Lecture 3
Course Delivery: Classroom

Prereqs:
AGRO/SOIL 153 (http://bulletin.unl.edu/courses/SOIL/153).

This course is a prerequisite for GEOL 465 (http://bulletin.unl.edu/courses/GEOL/465).

Spatial relationship of soil properties on various parts of landscape typical of the Plains, causal factors, and predictions of such relationships on other landscapes. Grouping these properties into classes, naming the classes, and the taxonomy that results from this grouping. Application of a taxonomy to a real situation through making a field soil survey in a region representative of the Plains border, predicting land use response of various mapped units as it affects the ecosystem, and evaluating the effectiveness of the taxonomic system used in the region surveyed.

Regional Climatology

Crosslisted as METR 478/878

Credit Hours: 4
Course Format: Lab, Lecture 3
Course Delivery: Classroom
Regional differentiation of the climates of the earth on both a descriptive and dynamic basis. The chief systems of climatic classification.

**Hydroclimatology**

Crosslisted as METR 479/879, WATS 479

**Prereqs:**
NRES/METR 370 or METR 200 or METR/NRES 370

Offered fall semester of even-numbered calendar years.


**Water Resources Seminar**

Crosslisted as GEOG 484/884, GEOL 484/884, AGRO 484/884, WATS 484

**Prereqs:**
Junior or above standing, or permission.

Seminar on current water resources research and issues in Nebraska and the region.

**Groundwater Geology**

Crosslisted as GEOL 488/888

**Prereqs:**
GEOL 100-level course; MATH 106 or equivalent.

This course is a prerequisite for: GEOL 889, NRES 918

Occurrence, movement, and development of water in the geologic environment.

**Study Tours in Natural Resource Management**

**Prereqs:**
Permission.

Off-campus travel may be required. Choice of subject matter and coordination of on- and off-campus study is at the discretion of the instructor.

Group educational tours to specific sites that illustrate aspects of natural resources management.

**Special Topics in Natural Resources**

**Prereqs:**
NRES 208 or METR 200 or METR/NRES 370

Seminar on current water resources research and issues in Nebraska and the region.
### Ecological Statistics

**Course Format:** Lecture

**Course Delivery:** Classroom

**Prereqs:** 6 hrs NRES or equivalent.

Current issues in natural resource sciences.

**Crosslisted as:** STAT 803

**Credit Hours:** 1-6

**Max credits per degree:** 12

**Course Format:** Lecture

**Course Delivery:** Classroom

**Prereqs:** STAT *801 or equivalent.

Model-based inference for ecological data, generalized linear and additive models, mixed models, survival analysis, multi–model inference and information theoretic model selection, and study design.

[Link](http://bulletin.unl.edu/courses/NRES/803)

### Laboratory Earth: Earth and Its Systems

**Course Format:** Lab 1, Lecture 3

**Course Delivery:** Classroom

**Prereqs:** 6 hrs NRES or equivalent.

The earth as a system and the "real world" applications of fundamental physical science processes in this system. Interaction of energy and matter in the geosphere, in the hydrosphere, and in the atmosphere. The earth’s relationships to the sun, moon, and other astronomical objects in the solar system.

[Link](http://bulletin.unl.edu/courses/NRES/809)

### Laboratory Earth: Earth's Natural Resource Systems

**Course Format:** Lab, Lecture

**Course Delivery:** Classroom

**Prereqs:** Natural resource science or related major; permission

Fundamental concepts in the Earth and physical sciences in the understanding of Earth’s natural resource systems. Rock and mineral, water, soil, and energy resources. Social factors, human dependence, and the impact of these on natural resource systems.

[Link](http://bulletin.unl.edu/courses/NRES/814)

### Integrated Resources Management

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Prereqs:** Natural resource science or related major; permission

Integrated and multiple–use management. Economic, political, social, and physical impacts on natural resources management priorities.

[Link](http://bulletin.unl.edu/courses/NRES/823)

### Laboratory Earth: Climate Research Applications

**Course Format:** Lab, Lecture

**Course Delivery:** Web

**Prereqs:** NRES 830

*Designed for science educators.* NRES 830 is offered fall semesters.

Climate–change issues serve as a context to develop research questions and design a discrete, locally oriented research project through which they define a problem, analyze data, and develop conclusions to potentially impact decision–making in their community.

[Link](http://bulletin.unl.edu/courses/NRES/830)

### Laboratory Earth: Human Dimensions of Climate Change

**Course Delivery:** Classroom

**Prereqs:** NRES 830

Climate–change issues serve as a context to develop research questions and design a discrete, locally oriented research project through which they define a problem, analyze data, and develop conclusions to potentially impact decision–making in their community.
**NRES 832**

*Designed for science educators.* [NRES 832](http://bulletin.unl.edu/courses/NRES/832) is offered spring semesters.

Examine science behind global climate change. Use primary data sets to understand the implications for climate change at global and regional/local scales. Focus on potential impacts on human systems including drought, sea level rise, severe weather and populations most likely to be impacted by climate change.

**Course Format:** Lab, Lecture  
**Course Delivery:** Web

**Credit Hours:** 3

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**NRES 848**

**Advanced Topics in Wildlife Damage Management**  
**LINK** [http://bulletin.unl.edu/courses/NRES/848](http://bulletin.unl.edu/courses/NRES/848)

**Prereqs:**  
[NRES 348](http://bulletin.unl.edu/courses/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, toxicology, behavioral modification and biological management.

**Course Format:** Lecture 2  
**Campus:**  
**Course Delivery:** Classroom

**Credit Hours:** 2

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**NRES 862**

**Conservation Biology**  
**LINK** [http://bulletin.unl.edu/courses/NRES/862](http://bulletin.unl.edu/courses/NRES/862)

**Prereqs:**  
12 hours of biological sciences, including [BIOS 320](http://bulletin.unl.edu/courses/BIOS/320) or [AGRO 315](http://bulletin.unl.edu/courses/AGRO/315) or equivalent

Typically offered second semester. Current issues in conservation biology. Theoretical principles from the areas of ecology and genetics to effectively preserve and manage biological diversity and small populations.

**Course Format:** Classroom

**Credit Hours:** 3

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**NRES 870**

**Lake and Reservoir Restoration**  
**LINK** [http://bulletin.unl.edu/courses/NRES/870](http://bulletin.unl.edu/courses/NRES/870)

**Prereqs:**  
12 hrs NRES or related fields  
[NRES 470](http://bulletin.unl.edu/courses/NRES/470) is offered even-numbered calendar years.

Theory, processes, and mechanisms underlying lake and reservoir water quality degradation and/or pollution. Remediation of eutrophication and its effects. Current techniques used to restore and protect degraded lakes.

**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**Credit Hours:** 3

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**NRES 871**

**Quantitative Fishery Assessment**  
**LINK** [http://bulletin.unl.edu/courses/NRES/871](http://bulletin.unl.edu/courses/NRES/871)

**Prereqs:**  
[STAT 218](http://bulletin.unl.edu/courses/STAT/218) or equivalent;  
[NRES 463](http://bulletin.unl.edu/courses/NRES/463) or equivalent;  
[BIOIS/NRES 489](http://bulletin.unl.edu/courses/NRES/489) or equivalent.

Offered spring semester of even-numbered calendar years.
Advanced quantitative techniques of fishery science required to support management practices targeted at populations (recruitment, growth and mortality), communities (e.g., predator–prey interactions) and ecosystems (e.g., bio-stressors).

### Vertebrate Population Analysis (NRES 880)

**Prereqs:**
- 12 hrs. of biological sciences, MATH 104 (http://bulletin.unl.edu/courses/MATH/104) or 106 (http://bulletin.unl.edu/courses/MATH/106).

NRES 880 (http://bulletin.unl.edu/courses/NRES/880) is offered spring semester of even years.

Introduction to the estimation of demographic parameters from surveys and mark–recapture data. Emphasizes analytical skills used to estimate population vital rates, such as abundance, density, population size, survival rates, home range size, and movement rates. Reinforces use of multiple hypotheses in scientific investigations, as well as model selection processes.

### Seminar in Natural Resource Sciences (NRES 891)

Presentations of special non-thesis topics, and/or research plans, and/or thesis research results.

### Independent Study (NRES 896)

**Prereqs:**
- 12 hrs natural resource sciences or closely-related fields; permission

Individual or group projects in research, literature review or extension of course work under supervision and evaluation of a departmental faculty member.

### Masters Thesis (NRES 899)

**Prereqs:**
- Admission to masters degree program and permission of major adviser

### Applied Groundwater Modeling (NRES 918)

**Prereqs:**
- GEOL/NRES 488 (http://bulletin.unl.edu/courses/NRES/488)/888 (http://bulletin.unl.edu/courses/NRES/888) or "889, MATH 208 (http://bulletin.unl.edu/courses/MATH/208)/208H (http://bulletin.unl.edu/courses/MATH/208H), or equivalent

Offered fall semester of odd–numbered calendar years. Forward and backward numerical analysis of groundwater flow systems and their...
interactions with other hydrologic components. Groundwater model development and parameter estimation using MODFLOW, PEST, and other widely used modeling packages.

**Xenobiotics in the Environment**

Crosslisted as ENTO 920, HORT 920, AGRO 920

Prereqs:
Recommend one course each in organic chemistry, soil science, biochemistry, plant physiology, microbiology and ecology

ENTO 920 (http://bulletin.unl.edu/courses/ENTO/920) is offered in odd-numbered calendar years.

Fate and ecotoxicological impacts of biologically foreign compounds in soil-water-plant environments; uptake, mechanisms of toxicity and metabolism in plants and other biota. Herbicides and other pesticides.

**Seminar in Geographic Information Systems (GIS)**

Crosslisted as GEOG 922

Prereqs:
GEOG/NRES 812 (http://bulletin.unl.edu/courses/NRES/812) and 822 (http://bulletin.unl.edu/courses/NRES/822); or equivalent

Study of current research and trends in geographic information systems (GIS), GIScience, and GeoComputation. Advanced spatial analytical techniques and geospatial modeling emphasizing GIS applications in natural resources assessment, environmental analyses, agriculture, and land management.

**Managed Aquatic Systems**

Prereqs:
NRES 463 (http://bulletin.unl.edu/courses/NRES/463)/863 (http://bulletin.unl.edu/courses/NRES/863) or equivalent; BIOS/NRES 489 (http://bulletin.unl.edu/courses/NRES/489)/889 (http://bulletin.unl.edu/courses/NRES/889) or equivalent; and permission.

Offered spring semester of odd-numbered calendar years.

Theoretical aspects of structure and function in aquatic systems managed for human needs, ecological processes, river–reservoir interface, energy flow (including fate and transport), population dynamics, and multiple-use systems.

**Research Other Than Thesis**

Prereqs:
Permission

**Doctoral Dissertation**

Prereqs:
Admission to doctoral degree program and permission of supervisory
For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/NaturalResources).

**Director of the School of Natural Resources:** Tala Awada, Ph.D.

**Graduate Committee:** Professor Walter-Shea (chair); Associate Professor Pope; Associate Geoscientist Burbach; Assistant Professors Guan, Shulski

The School of Natural Resources (SNR) offers graduate programs leading to a master of science or doctor of philosophy degree in a rich spectrum of areas in natural resources. The broad diversity of climate, hydrology, soils, surface and subsurface geology, habitats, and flora and fauna across Nebraska provides many opportunities for field studies. Faculty are not limited to research within Nebraska and have projects in other states and countries as well. Excellent laboratory and
computer facilities, and museum collections are available for performing up-to-date analyses. Water chemistry, GIS, computer modeling, and remote sensing and image analysis are state-of-the-art facilities. Unique opportunities for cooperative research are also available through many state, federal, and private organizations. Courses are offered within the various areas of emphasis within SNR: Biological Resources, Climate and Bio-Atmospheric Systems, Earth Resources, Ecosystem Science, Geospatial Information, Human Dimensions and Water Science.

Master of Science Degree

The master of science degree provides students with an interdisciplinary education in natural resource sciences, encompassing the biological, atmospheric, water, earth and geospatial information resources, as well as in the related human and community elements.

Applicants for admission to the program are required to have maintained an undergraduate grade point average of at least 3.0 (on a 4.0 system), submit scores for the general Graduate Record Examination (verbal–500, quantitative–620 and analytical writing–4.0), three letters of recommendation, a statement of purpose, and satisfy the general admission requirements of the Graduate College. Admission to full graduate standing in the MS program requires an earned baccalaureate and demonstrated proficiency in mathematics, physics, chemistry, life sciences, and earth sciences. Contact the SNR Graduate Secretary for specific course requirements. A TOEFL score of at least 600 paper, 300 computer, or 79 Internet is required for students whose native language is not English and who have not earned a baccalaureate in the US. The master of science program may be carried out under Option I or II conforming to the general requirements of the Graduate College.

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 as stipulated by the SNR Graduate Committee and prospective adviser(s). Admission to Candidacy for the PhD degree requires the successful completion of a written, and oral comprehensive examination.

Specialization Areas

Currently thirteen specializations are available at the masters level: Adaptive Management, Agroforestry, Aquatic Ecology, Bio–Atmospheric Interactions, Climate Assessment and Impacts, Environmental Studies, Geographic Information Systems (GIS), Great Plains Studies, Human Dimensions, Hydrologic Sciences, Remote 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 Adaptive Management, Applied Ecology, Bio–Atmospheric Interactions, Climate Assessment and Impacts, Environmental Studies, Human Dimensions, Hydrologic Sciences, and Soil Science 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 Resources (SNR) programs. Students should check with the SNR Graduate Secretary for up-to-date changes which have been approved by the SNR Graduate Committee.

Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/NaturalResources).

Retrieved from "[bulletin.unl.edu/graduate/Natural_Resources](http://bulletin.unl.edu/graduate/Natural_Resources)"

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Nutrition

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Description

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Nutrition).

Area Committee: Professor J. Albrecht (chair); Associate Professors Erickson, Zempleni

Departments Cooperating: Animal Science, Food Science and Technology, Nutrition and Health Sciences

The nutrition area offers programs of study leading to master of science and doctor of philosophy degrees. The Area Committee will evaluate the qualifications for the admission of students leading to masters and doctoral degrees in this area. Students applying for study in the nutrition area must present a bachelors degree preferably in agriculture, biological sciences, biochemistry, chemistry, or food and nutrition and indicate a departmental preference based on research interest. Identification of a departmental affiliation or preference is especially important for students seeking an assistantship. Applicants must submit GRE scores (verbal, quantitative, and analytical). Desirable undergraduate background includes courses in biology, zoology, physiology, mathematics, organic chemistry, and biochemistry. In addition, sociology, psychology, and anthropology are desirable background courses for students interested in pursuing a degree in human nutrition. If appropriate background is lacking, undergraduate courses may be required as specified by the Area Committee.

The requirements for admission to candidacy and for courses and thesis or doctoral dissertation are those established and maintained by the Graduate College. Masters degree proposals are approved by the adviser in consultation with the chairperson of the Area Committee and PhD programs by the student’s supervisory committee.

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. MS students are required to enroll and present one seminar; PhD students are required to enroll and present two seminars.
Descriptive information, prerequisites, etc., for each course are given in the appropriate departmental listing. Page numbers for departmental course listings are indicated in parentheses. Masters thesis and doctoral dissertation courses, 899 and 999 respectively, are offered in each cooperating department.

**Offered in the Department of Animal Science**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>821</td>
<td>Advanced Animal Nutrition (3 cr I)</td>
</tr>
<tr>
<td>822</td>
<td>Advanced Feedlot Nutrition &amp; Management (3 cr)</td>
</tr>
<tr>
<td>842</td>
<td>Endocrinology (BIOS, VBMS 842) (3 cr)</td>
</tr>
<tr>
<td>845</td>
<td>Physiology of Domestic Animals I (VBMS *845, BIOS *813) (4 cr)</td>
</tr>
<tr>
<td>846</td>
<td>Physiology of Domestic Animals II (VBMS *846, BIOS *814) (4 cr)</td>
</tr>
<tr>
<td>921</td>
<td>Interdepartmental Nutrition Seminar (NUTR 921) (1 cr per sem, max 4 I, II)</td>
</tr>
<tr>
<td>922</td>
<td>Advanced Animal Nutrition (Ruminant) (3 cr)</td>
</tr>
<tr>
<td>924</td>
<td>Forage Evaluation (AGRO 940) (3 cr II)</td>
</tr>
<tr>
<td>925</td>
<td>Energy Metabolism (NUTR 925) (3 cr I)</td>
</tr>
<tr>
<td>926</td>
<td>Carbohydrate &amp; Lipid Nutrition (NUTR 926) (3 cr II)</td>
</tr>
<tr>
<td>927</td>
<td>Protein Nutrition (NUTR 927) (2 cr II)</td>
</tr>
<tr>
<td>927L</td>
<td>Protein Nutrition Lab (NUTR 927L) (1 cr)</td>
</tr>
<tr>
<td>928</td>
<td>Mineral Nutrition (NUTR 928) (2 cr I)</td>
</tr>
<tr>
<td>928L</td>
<td>Mineral Nutrition Lab (NUTR 928L) (1 cr)</td>
</tr>
<tr>
<td>929</td>
<td>Vitamin Nutrition (NUTR 929) (3 cr II)</td>
</tr>
</tbody>
</table>

**Offered in the Department of Nutrition and Health Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>805</td>
<td>Research Methods (3 cr)</td>
</tr>
<tr>
<td>857</td>
<td>Classroom &amp; Outreach Experiences in Food &amp; Nutrition (1–3 cr, max 3)</td>
</tr>
<tr>
<td>892</td>
<td>Nutrition Problems (1–6 cr)</td>
</tr>
<tr>
<td>896</td>
<td>Independent Study (1–5 cr)</td>
</tr>
<tr>
<td>898</td>
<td>Research Experiences (1–5 cr)</td>
</tr>
<tr>
<td>921</td>
<td>Interdepartmental Nutrition Seminar (ASCI 921) (1 cr per sem, max 4 I, II)</td>
</tr>
<tr>
<td>925</td>
<td>Energy Metabolism (ASCI 925) (3 cr I)</td>
</tr>
<tr>
<td>926</td>
<td>Carbohydrate &amp; Lipid Nutrition (ASCI 926) (3 cr II)</td>
</tr>
<tr>
<td>927</td>
<td>Protein Nutrition (ASCI 927) (2 cr II)</td>
</tr>
<tr>
<td>927L</td>
<td>Protein Nutrition Lab (ASCI 927L) (1 cr)</td>
</tr>
<tr>
<td>928</td>
<td>Mineral Nutrition (ASCI 928) (2 cr I)</td>
</tr>
<tr>
<td>928L</td>
<td>Mineral Nutrition Lab (ASCI 928L) (1 cr)</td>
</tr>
<tr>
<td>929</td>
<td>Vitamin Nutrition (ASCI 929) (3 cr II)</td>
</tr>
<tr>
<td>950</td>
<td>Integrated Principles of Human Nutrition (3 cr)</td>
</tr>
<tr>
<td>952</td>
<td>Advanced Clinical Nutrition Seminar (2 cr)</td>
</tr>
<tr>
<td>954</td>
<td>Fundamentals of Nutrition Counseling (2 cr)</td>
</tr>
<tr>
<td>956</td>
<td>Community Nutrition (3 cr)</td>
</tr>
<tr>
<td>986</td>
<td>Graduate Seminar (1–2 cr per sem, max 4)</td>
</tr>
<tr>
<td>992</td>
<td>Advanced Human Nutrition Problems (1–4 cr per sem, max 4)</td>
</tr>
</tbody>
</table>

**Recommended Courses in Other Units**

**Offered in the Department of Biochemistry**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>831</td>
<td>Biochemistry I (BIOS, CHEM 831) (3 cr I, II, III)</td>
</tr>
<tr>
<td>832</td>
<td>Biochemistry II (BIOS, CHEM 832) (3 cr II)</td>
</tr>
<tr>
<td>833</td>
<td>Biochemistry Laboratory (BIOS, CHEM 833) (2 cr I, II)</td>
</tr>
<tr>
<td>837</td>
<td>Research Techniques in Biochemistry (BIOS 837) (4 cr II)</td>
</tr>
<tr>
<td>949</td>
<td>Biochemistry of Nutrition (BIOS 949) (3 cr I)</td>
</tr>
</tbody>
</table>

**Offered in the Department of Food Science and Technology**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>805</td>
<td>Food Microbiology (BIOS 845) (3 cr I)</td>
</tr>
<tr>
<td>806</td>
<td>Food Microbiology Laboratory (BIOS 846)(2 cr I)</td>
</tr>
<tr>
<td>825</td>
<td>Food Toxicology (2 cr II)</td>
</tr>
<tr>
<td>848</td>
<td>Food Chemistry (3 cr I)</td>
</tr>
<tr>
<td>849</td>
<td>Food Chemistry Laboratory (1 cr I)</td>
</tr>
<tr>
<td>880</td>
<td>Advanced Food Science: Selected Topics (2–6 cr)</td>
</tr>
</tbody>
</table>

**Offered in the Department of Statistics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>801</td>
<td>Statistical Methods in Research (4 cr I, II)</td>
</tr>
<tr>
<td>802</td>
<td>Experimental Design, (3 cr I, II)</td>
</tr>
</tbody>
</table>

**Offered in the Department of Veterinary and Biomedical Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>835</td>
<td>Animal Biochemistry (BIOS *835) (3 cr, II)</td>
</tr>
<tr>
<td>843</td>
<td>Immunology (BIOS 843) (3 cr)</td>
</tr>
</tbody>
</table>

**Offered at the University of Nebraska Medical Center**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 810</td>
<td>Biochemistry I (6 cr)</td>
</tr>
<tr>
<td>BIOC 811</td>
<td>Biochemistry II (2 cr)</td>
</tr>
<tr>
<td></td>
<td>Physiology and Biophysics 810. Physiology (9 cr)</td>
</tr>
</tbody>
</table>
### Courses for HRTM (HRTM)

#### Food and Beverage Management

[474/874](http://bulletin.unl.edu/courses/HRTM/474)

- **HRTM 474** is 'Letter Grade only'.
- Functioning and operation of food-service units. Principles of food and beverage management.

#### Internship in Hospitality Management

[476/876](http://bulletin.unl.edu/courses/HRTM/476)

- **Prereqs:**
  - HRTM 397 and permission of the Hospitality Management Committee.
  - HRTM 476 requires a total of 400 hours of full-time experience.
  - HRTM 476 is 'Letter Grade only'.
- Approved professional experience as an entry-level manager in the declared emphasis area of the hospitality industry.

#### Hospitality Facility Planning and Purchasing

[477/877](http://bulletin.unl.edu/courses/HRTM/477)

- **Prereqs:**
  - Junior standing; FACS or HRTM major.
  - HRTM 477 is 'Letter Grade only'.
- Hospitality facility concept development and planning. Selection and specification of food, equipment and furnishings resulting in effective resource utilization.

#### Tourism Resources and Development

[478/878](http://bulletin.unl.edu/courses/HRTM/478)

- **Prereqs:**
  - Junior standing; HRTM 280 and permission.
  - HRTM 478 is 'Letter Grade only'.

---
Planning theories, procedures and guidelines needed to meet the needs of travelers, destination communities, tourism and hospitality organizations. Sustainable tourism principles, host–guest relationships, impacts of tourism, marketing and visitor satisfaction.

**Legal Environment in Hospitality Management**

**481/881**

**Prereqs:**
Senior standing; HRTM major or minor;

**HRTM 481** is ‘Letter grade only’.

Laws and regulations affecting the hospitality industry. Recognition of potential legal hazards, correcting hazardous situations, and reacting in unforeseen circumstances.

**Hospitality Finance**

**483/883**

**Prereqs:**
Senior standing; Major or minor in HRTM; **HRTM 310**

**HRTM 483** is ‘Letter grade only’.

Introduction to basic skills of financial management in a hospitality industry setting.

**Advanced Lodging Operations**

**485/885**

**Prereqs:**
HRTM 285

**HRTM 485** requires field trips to local lodging facilities. **HRTM 485** is ‘Letter grade only’.

Senior management techniques required to operate a lodging facility applying strategic and critical thinking with case study analysis to solve problems.

**Advanced Event Operations**

**489/889**

**Prereqs:**
HRTM 289

**HRTM 489** requires field trips to local conference and meeting centers. **HRTM 489** is ‘Letter Grade only’.

The management and operation of events. Design, marketing, and promotion efforts. Identifying sponsors. Marketing to attendees, exhibitors, and other participants.
Hospitality Management Study Tour

**Prereqs:**
HRTM or NUTR major.

*Number of credits hours earned in HRTM 495 (http://bulletin.unl.edu/courses/HRTM/495) is determined by tour length, assignments, and sites visited. HRTM 495 (http://bulletin.unl.edu/courses/HRTM/495) requires off-campus travel.*

Broadening perspective and developing an understanding of the hospitality industry through visits. Tours to hospitality facilities, national food and equipment shows; food processors; equipment manufacturers; and trade exchanges.

Independent Study

**Prereqs:**
12 hrs HRTM.

*HRTM 496 (http://bulletin.unl.edu/courses/HRTM/496) requires a contract with an individual HRTM faculty member in HRTM. HRTM 496 (http://bulletin.unl.edu/courses/HRTM/496) is 'Letter grade only'.*

Individual projects in research, literature review, and/or creative activity.

Courses for NUTR (NUTR)

**Multimedia Applications for Education and Training**

Crosslisted as NUTR 812

Practical applications in developing and evaluating multimedia resources for students. Surveys new applications, creates and develops various instructional materials, and reviews current practice against relevant theory. Use current software packages to develop materials for various audiences.

**Nutritional Anthropology**

Crosslisted as NUTR 430/830

Prereqs:
ANTH 242 (http://bulletin.unl.edu/courses/ANTH/242) or equivalent.

Anthropological approaches to the study of nutrition. Background to nutrition science; bio-cultural aspects of obesity, fertility, lactose intolerance, and infant feeding practices; biological differences in nutritional requirements, fertility, and mortality; interpretation of nutritional deficiencies in skeletal remains; reconstructing prehistoric diets from archaeological evidence; and evaluation of relationships between dietary patterns and dental remains in fossil record.

**Interdepartmental Nutrition Seminar**

Crosslisted as NUTR 921
Credit Hours: 1
Max credits per degree: 4
Campus:
Course Delivery: Classroom

**Prereqs:**
Permission

Presentation and discussion of current literature and research in the field of nutrition.

**Energy Metabolism**

Crosslisted as NUTR 925

Link: [http://bulletin.unl.edu/courses/ASCI/925](http://bulletin.unl.edu/courses/ASCI/925)

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

**Prereqs:**
ASCI 821, BIOC 831, or NUTR 455

Offered odd-numbered calendar years. Critically evaluate how research in bioenergetics has contributed to scientific discoveries in the fields of nutrition, biochemistry, and physiology. Methodologies for determination of human and animal energy expenditure and body composition. Specifically, direct calorimetry, indirect calorimetry and comparative slaughter techniques. Emphasis on components of organ and tissue energy expenditures. Background information important in other nutrition courses.

**Carbohydrate and Lipid Nutrition**

Crosslisted as NUTR 926

Link: [http://bulletin.unl.edu/courses/ASCI/926](http://bulletin.unl.edu/courses/ASCI/926)

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

**Prereqs:**
BIOC 831, ASCI 821, or NUTR 455

Offered even-numbered calendar years. Nutrition and metabolism of carbohydrates and lipids by animals and humans. Emphasis on fundamental principles and current concepts.

**Protein and Amino Acid Nutrition**

Crosslisted as NUTR 927

Link: [http://bulletin.unl.edu/courses/ASCI/927](http://bulletin.unl.edu/courses/ASCI/927)

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

**Prereqs:**
ASCI 421, ASCI 821, or NUTR 455

Offered even-numbered calendar years. Nutrition and metabolism of proteins and amino acids by animals and humans. Fundamental principles and current concepts.

**Mineral Nutrition**

Crosslisted as NUTR 928

Link: [http://bulletin.unl.edu/courses/ASCI/928](http://bulletin.unl.edu/courses/ASCI/928)

Credit Hours: 2
Course Format: Lecture 2
Campus:

**Prereqs:**
ASCI 821, or NUTR 455

Offered odd-numbered calendar years. Nutrition and metabolism of minerals by animals and humans. Fundamental principles and current concepts.
Offered even-numbered calendar years. Nutrition and metabolism of mineral elements by animals and humans. Information and current concepts on the metabolism of minerals and requirements for growth, finishing, maintenance, lactation, and reproduction. Interrelationships among minerals and other nutrients discussed and observed in the laboratory.

**Mineral Nutrition Laboratory**  CROSSLISTED AS NUTR 928L

- **Prereqs:**
  - Parallel ASCI/NUTR 928

Laboratory experiments that complement material covered in ASCI 928.

**Vitamin Nutrition**  CROSSLISTED AS NUTR 929

- **Prereqs:**
  - BIOC 831, ASCI 821, NUTR 455, or 950

Offered odd-numbered calendar years. History, chemistry, assay procedures, food content, metabolism, biochemical functions, deficiencies, pharmacological doses, toxicities, and factors influencing vitamin status in animals, including humans.

**Biochemistry of Nutrition**  CROSSLISTED AS BIOS 949, BIOC 949, NUTR 949

- **Prereqs:**
  - BIOC 832 or 839, or permission


**Special Topics in Human Sciences**  CROSSLISTED AS HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891

Aspects of human sciences not covered elsewhere in the curriculum.

**Teaching Practicum**  CROSSLISTED AS NUTR 920, TMFD 920

- **Prereqs:**
  - CYAF 918 or permission of department chair

Credit Hours: 1-3

Max credits per degree: 12
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Crosslisted As</th>
<th>Credit Hours</th>
<th>Max Credits Per Degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Topics in Human Sciences</td>
<td>NUTR 998, TMFD 998</td>
<td>1-3</td>
<td>6</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
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</table>

| Teaching Learners to Learn | EDPS 855, NUTR 855, SPED 855, TEAC 855 | 3 | | Classroom |
| Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency. |

| Field Studies in Education | NUTR 991, TEAC 991 | 1-3 | 6 | | Classroom |
| Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care-based health promotion and education. |

| Foundations of Health Behavior | NUTR 846 | 3 | | | Classroom |
| The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education. |

| Theoretical Models of Health Behavior Change | NUTR 847 | 3 | | | Classroom |
| Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks. |

| Research and Evaluation Literature on Health Promotion | NUTR 905 | 3 | | | Classroom |
| Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care-based health promotion and education. |
Vines, Wines and You
Crosslisted as NUTR 471/871

**Prehrs:**
6 hrs science or equivalent experience; 21 years of age or older.

Origin, botany, historical and cultural significance of the grapevine and related species. Principles and practices of vineyard establishment, management and processing of grape products, importance and/or scope of grape and wine industry, global and local significance. Culinary applications, health, environmental and safety-related issues, business and industry relations and experience.

Functional Properties of Food
Crosslisted as FDST 441/841

**Prehrs:**
- NUTR 224
- 245
- 248
- BIOC 321
- or FDST 448

Relationship of structure and functionality of ingredients in food systems.

Experimental Foods
Crosslisted as FDST 445/845

**Prehrs:**
- NUTR 244
- 245
- BIOC 321

Introduction to food research. Application of research techniques to selected problems.

Clinical Exercise Physiology

**Prehrs:**
- BIOS 214
- NUTR/BIOS 484
- 884
- NUTR 486
- 886

Cardiovascular, pulmonary, metabolic, pharmacologic, endocrinologic, renal, neurologic, inflammatory, and orthopedic aspects of clinical exercise physiology as they relate to exercise testing and programming.

Cost Control for Foodservice

**Prehrs:**
- NUTR 370

Principles of cost control for foodservice. Integration of cost control and
### Organization and Administration of Foodservice

**NUTR 473/873**

**Prereqs:**
NUTR 370 ([http://bulletin.unl.edu/courses/NUTR/370](http://bulletin.unl.edu/courses/NUTR/370)).

Organizational, administrative, and human relations concepts to foodservice. Utilization of computer applications in administration of a foodservice facility.

**Credit Hours:** 3

**Course Delivery:** Classroom

### Physiology of Exercise

**NUTR 484/884**

Crosslisted as BIOS 484/884

**Prereqs:**
12 hrs biological sciences, including BIOS 213 ([http://bulletin.unl.edu/courses/BIOS/213](http://bulletin.unl.edu/courses/BIOS/213)) or equivalent; BIOS 214 ([http://bulletin.unl.edu/courses/BIOS/214](http://bulletin.unl.edu/courses/BIOS/214)) or equivalent.

This course is a prerequisite for: NUTR 858 ([http://bulletin.unl.edu/courses/NUTR/858](http://bulletin.unl.edu/courses/NUTR/858)).

Effects of physical activity on the circulatory, respiratory, and other physiological processes.

**Credit Hours:** 3

**Course Format:** Lab 1, Lecture 2

**Course Delivery:** Classroom

### Exercise Testing and Exercise Programming in Adult Fitness and Cardiac Rehabilitation

**NUTR 486/886**

**Prereqs:**
NUTR/BIOS 484 ([http://bulletin.unl.edu/courses/BIOS/484](http://bulletin.unl.edu/courses/BIOS/484))/884 ([http://bulletin.unl.edu/courses/BIOS/884](http://bulletin.unl.edu/courses/BIOS/884)); EDPS 459 ([http://bulletin.unl.edu/courses/EDPS/459](http://bulletin.unl.edu/courses/EDPS/459))/859 ([http://bulletin.unl.edu/courses/EDPS/859](http://bulletin.unl.edu/courses/EDPS/859)) or NUTR 330 ([http://bulletin.unl.edu/courses/NUTR/330](http://bulletin.unl.edu/courses/NUTR/330)).

This course is a prerequisite for: NUTR 456 ([http://bulletin.unl.edu/courses/NUTR/456](http://bulletin.unl.edu/courses/NUTR/456)); NUTR 880 ([http://bulletin.unl.edu/courses/NUTR/880](http://bulletin.unl.edu/courses/NUTR/880)).

In-depth analysis and development of the techniques and knowledges prerequisite for certification in adult fitness and cardiac rehabilitation as prescribed by the American College of Sports Medicine.

**Credit Hours:** 4

**Course Delivery:** Classroom

### Independent Study

**NUTR 496/896**

**Prereqs:**
12 hrs in major related areas; permission.

Supervised and evaluated by departmental faculty members.

Individual projects in research, literature review, or creative production.

**Credit Hours:** 1–5

**Course Delivery:** Classroom

### Physiological Foundations of Health and Disease

**NUTR 803**

Topical review of current concepts of health and disease including homeostasis, bioenergetics, epidemiology, and the major chronic and infectious diseases.

**Credit Hours:** 3

**Campus:**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>NUTR 805</td>
<td>Research Methods</td>
<td>3</td>
<td>Graduate standing</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Philosophy, goals, and methodologies related to research in nutritional science. Survey and application of basic research tools.</td>
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<tr>
<td>NUTR 810</td>
<td>Transdisciplinary Obesity Prevention</td>
<td>3</td>
<td>NUTR 455 or equivalent; Graduate standing</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Crosslisted as CYAF 810</td>
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<td></td>
<td>Using a transdisciplinary team of faculty and guest lecturers, students will be introduced to the interrelationship of obesity and dietary components, behavior, exercise and sports science, physical activity, health promotion, genetics, nutrigenomics, child development, family dynamics, cultural issues, epidemiology, population disparity, educational leadership, public policy and other related topics.</td>
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<tr>
<td>NUTR 815</td>
<td>Principles and Practice of Stress Management in Education</td>
<td>3</td>
<td>NUTR 820 recommended</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Conceptual understanding of stress in educational settings and stress coping strategies to enhance the learning environment. Identification of physical, emotional, cognitive and behavioral indicators; awareness of perception, appraisal and interpretation of challenges, frustrations, conflicts and competition; and an introduction to social, lifestyle and environmental change strategies together with self-regulation and behavioral management techniques.</td>
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<tr>
<td>NUTR 820</td>
<td>Molecular Nutrition</td>
<td>2</td>
<td>BIOC 831</td>
<td>Lecture 2</td>
<td>Classroom</td>
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<td>Roles for nutrients in signal transduction, gene expression, intracellular trafficking and cell death.</td>
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<tr>
<td>NUTR 821</td>
<td>Molecular Nutrition Techniques</td>
<td>3</td>
<td>BIOC 831</td>
<td>Lab 3, Lecture 2</td>
<td>Classroom</td>
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<td></td>
<td>Prereqs: BIOC 831</td>
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<td></td>
<td>Molecular Nutrition Techniques recommended. Basic techniques for molecular studies in nutritional sciences.</td>
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<tr>
<td>NUTR 857</td>
<td>Classroom and Outreach Experiences in Food and Nutrition</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Prereqs</td>
<td>Credits</td>
<td>Course Format</td>
<td>Campus</td>
<td>Delivery</td>
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<tr>
<td>NUTR 858</td>
<td>Nutrition and Exercise</td>
<td>BIOS/NUTR 484/884</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
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<td>Synergistic effects of proper nutrition and exercise on health and physical performance. Normal nutrition provides the basis for exploring the influence of dietary components and exercise on chronic disease development.</td>
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<tr>
<td>NUTR 859</td>
<td>Nutrition: A Focus on Life Stages</td>
<td>3 hours undergraduate nutrition and 6 hours undergraduate natural sciences</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Nutritional needs throughout the life span including pregnancy, lactation, growth and aging. Approaches to nutrition education for different ages.</td>
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<tr>
<td>NUTR 875</td>
<td>Applied Dietetic Practice and Concepts</td>
<td>Admission to Dietetic Internship</td>
<td>6</td>
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<td>Classroom</td>
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<td>Scientific basis for clinical and community practice and current developments in foodservice systems in professional settings. Documenting professional development.</td>
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<tr>
<td>NUTR 880</td>
<td>Introduction to Functional Electrocardiography</td>
<td>NUTR/BIOS 484 and NUTR 486</td>
<td>3</td>
<td>Lab, Lecture</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Theory and application of electrocardiography in graded exercise testing.</td>
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<tr>
<td>NUTR 887</td>
<td>Theory and Assessment of Exercise and Health Behavior</td>
<td>Reviews the current research in the psychology of exercise and health behavior. Various theoretical models of exercise and health behavior as well as ways to implement effective behavioral change strategies. Students are introduced and gain competence in administering a variety of questionnaire, psychophysiological, and behavioral research techniques.</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td>NUTR</td>
<td>Workshop</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prerequisites</td>
<td>Credit Hours</td>
<td>Course Format</td>
<td>Campus</td>
<td>Course Delivery</td>
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<tr>
<td>NUTR 890</td>
<td>Special topics related to foods, nutrition or food service management in depth. Food preservation, food and nutrition update, use of computer in planning food service operations.</td>
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<tr>
<td>NUTR 899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
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<tr>
<td>NUTR 910</td>
<td>Research Methods in Childhood Obesity</td>
<td>Crosslisted as CYAF 910</td>
<td>4</td>
<td>Lecture 4</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>NUTR 950</td>
<td>Integrated Principles of Human Nutrition</td>
<td>12 hours of biological sciences which includes biochemistry and physiology</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>NUTR 952</td>
<td>Advanced Clinical Nutrition</td>
<td>6 hrs medical nutrition therapy or clinical nutrition</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td>NUTR 954</td>
<td>Fundamentals of Nutrition Counseling</td>
<td>12 hours NUTR and 6 hrs social science</td>
<td>3</td>
<td>Lecture 3</td>
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</tbody>
</table>
Community Nutrition

**Prereqs:**
- NUTR 356 [Link](http://bulletin.unl.edu/courses/NUTR/356) or permission

**Course Delivery:** Classroom

**Credit Hours:** 3

**Campus:**

Exercise and its influence upon human nutrition via biochemical and physiological functions. Interrelationships between exercise and energy, macro- and micro-nutrients will be examined.

Organizational Administration in Food Service and Restaurant Management

**Prereqs:**
- NUTR 873 [Link](http://bulletin.unl.edu/courses/NUTR/873) or permission

**Course Delivery:** Classroom

**Credit Hours:** 3

Investigation of foodservice/restaurant organizations and administration. Critical evaluation of current literature.

Advanced Exercise Physiology

**Prereqs:**
- HHPG 884 [Link](http://bulletin.unl.edu/courses/HHPG/884) or equivalent

**Course Delivery:** Classroom

**Credit Hours:** 3

Theory and laboratory experiences focusing on physiological influences and outcomes relating to exercise performance. Areas for in-depth and critical consideration include cardiovascular and respiratory responses, growth and development effects, environmental, nutritional, and pharmacological influences, evaluative techniques, and special interest topics.

Graduate Seminar

**Prereqs:**
- Permission

**Course Delivery:** Classroom

**Credit Hours:** 1–2

**Max credits per degree:** 4

**Campus:**

Advanced Human Nutrition Topics

**Course Delivery:** Classroom

**Credit Hours:**

**Max credits per degree:**

**Campus:**
992

Prereqs:
Permission

| In-depth evaluation of current human nutrition issues. |

Credit Hours: 1–6
Max credits per degree: 6
Course Format: Independent Study
Campus:
Course Delivery: Classroom

Advanced Food Topics

Prereqs:
Permission

| In-depth evaluation of food studies, culinology, and research issues. |

Credit Hours: 1–6
Max credits per degree: 6
Course Format: Independent Study
Campus:
Course Delivery: Classroom

Doctoral Colloquium

Prereqs:
Permission

| Intended primarily for doctoral students, although non–doctoral students are admitted with permission. Work with a faculty mentor, either on an individualized or on a small group basis. Outcome–based scholarly activities. The interaction between research and practice. |

Credit Hours: 1–6
Max credits per degree: 18
Course Format: Independent Study
Campus:
Course Delivery: Classroom

Research Other Than Thesis

Prereqs:
Permission

Credit Hours: 1–8
Campus:
Course Delivery: Classroom

Doctoral Dissertation

Prereqs:
Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1–24
Max credits per degree: 55
Campus:
Course Delivery: Classroom

Advanced Teaching Strategies

Crosslisted as ALEC 805, NUTR 806

This course is a prerequisite for: ALEC 400

| Contemporary and innovative teaching strategies, emphasizing learner- |

Credit Hours: 3
Course Format: Lecture
centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs public schools, and other settings. Students 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.

**TEAC 930** Sociological/Anthropological Research Methods in Education

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.

A. Ethnographic Methods (1–3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
C. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
D. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
E. Hermeneutic Traditions in Education (1–3 cr, max 3)
F. Quantitative Research Traditions in Education (1–3 cr, max 3)

**Description**

For a brief description of the program, application requirements and contact information, view the graduate program summary.

[graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Nutrition)

**Faculty**

For faculty list, research interests and department contact information, view the graduate program summary.

[graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Nutrition)

Retrieved from "[http://bulletin.unl.edu/graduate/Nutrition and Health Sciences](http://bulletin.unl.edu/graduate/Nutrition and Health Sciences)"

**Philosophy**

**Courses for PHIL (PHIL)**

**PHIL 409/809** Theory of Knowledge

Intensive study of 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 prior knowledge. Readings from recent work.

**PHIL 411/811** Formal Logic

Prereqs: [PHIL 211](http://bulletin.unl.edu/courses/PHIL/211) or equivalent.

PHIL 411 is a second course in symbolic logic.

The main metalogical results of the twentieth century. Completeness, compactness and undecidability of first-order logic; the Löwenheim–Skolem Theorem; axiomatic set theory; the Gödel incompleteness theorems; and non–classical logics.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Format</th>
<th>Credits</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>412/812</td>
<td>Modal Logic</td>
<td></td>
<td>3</td>
<td>Classroom</td>
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<tr>
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<td>Prereqs:</td>
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<tr>
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<td>9 hrs philosophy including PHIL 211 (<a href="http://bulletin.unl.edu/courses/PHIL/211">http://bulletin.unl.edu/courses/PHIL/211</a>) or equivalent or permission.</td>
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<td>Syntax and model theory of quantified modal logic with applications to e.g., deontic logic, epistemic logic, and the philosophy of logic.</td>
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<tr>
<td>414/814</td>
<td>Philosophy of Mind</td>
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<td>Classroom</td>
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<td>Main problems in the philosophy of mind, including dualism and materialism, instrumentalism and eliminativism, wide and narrow content, qualia, and mental causation.</td>
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<tr>
<td>418/818</td>
<td>Metaphysics</td>
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<td>Classroom</td>
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<td>Intensive study of 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 from recent philosophers.</td>
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<tr>
<td>420/820</td>
<td>Philosophy of Social Science</td>
<td>Lecture 3</td>
<td>3</td>
<td>Classroom</td>
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<td>The epistemological character of the social sciences. Character and explanatory role of social scientific generalizations, various explanatory strategies for social matters, the continuity or discontinuity of the social sciences with the special sciences, the importance of interpretation, and the place of rationality.</td>
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<tr>
<td>423/823</td>
<td>Advanced Ethics</td>
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<td>Classroom</td>
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<td>Critical study of leading theories in ethics, with close attention to major works, chiefly modern and contemporary. Includes naturalism, intuitionism, emotivism, utilitarianism, Neo–Kantian ethics, and various current positions.</td>
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<td>425/825</td>
<td>Political and Social Philosophy</td>
<td></td>
<td>3</td>
<td>Classroom</td>
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<td></td>
<td>Critical study of main problems and leading theories in social and political philosophy. Origin and justification of political obligation, with 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.</td>
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<td>Course Code</td>
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<td>PHIL 450/850</td>
<td>Ancient Philosophy</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
<td>Advanced survey of ancient</td>
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<td>philosophy from the pre-Socratics</td>
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<td>through Aristotle, concentrating</td>
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<td>metaphysical issues.</td>
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<td>PHIL 460/860</td>
<td>History of Modern Philosophy</td>
<td>3</td>
<td>Classroom</td>
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<td>Advanced survey of early</td>
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<td>European philosophy from the</td>
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<tr>
<td>PHIL 471/871</td>
<td>Kant</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
<td>Kant’s philosophy and problems</td>
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<td>in the interpretation of his</td>
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<td>writings. Primary text is the</td>
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<td></td>
<td>First Critique.</td>
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<tr>
<td>PHIL 496/889</td>
<td>Philosophical Themes</td>
<td>1-24</td>
<td>Classroom</td>
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<td></td>
<td>Library work and conferences.</td>
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<td>Prereqs:</td>
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<td>Open to graduate students and,</td>
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<td>with the consent of the</td>
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<td>instructor, to seniors and</td>
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<td>especially qualified juniors.</td>
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<td>PHIL 801</td>
<td>Philosophical Analysis</td>
<td>3</td>
<td>Classroom</td>
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<td>Seminar for beginning graduate</td>
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<td>students whose primary goal is</td>
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<td>the development of basic</td>
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<td>philosophical skills such as the</td>
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<td>analysis of primary texts, the</td>
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<td>writing of philosophical papers,</td>
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<td>and sustained oral discussion.</td>
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<td>Readings include a significant</td>
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<td>number of important works drawn</td>
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<td>from diverse areas of</td>
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<td>philosophical inquiry. Class</td>
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<td>meetings devoted primarily to</td>
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<td>student presentations of reading</td>
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<td>materials and their own written</td>
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<td>work. Effective oral discussion</td>
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<td>on the part of the student</td>
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<tr>
<td>PHIL 805</td>
<td>Philosophy of Language</td>
<td>3</td>
<td>Classroom</td>
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<td>Critical examination of some</td>
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<td>concepts and problems involved</td>
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<td>in the philosophical study of</td>
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<td>language, e.g., truth, meaning,</td>
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<td>reference, grammaticality, speech</td>
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<td>acts, language acquisition, the</td>
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<td>relation of language to other</td>
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<td>symbol systems, and the use of</td>
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<td>language in literature.</td>
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<td>Course Code</td>
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<tr>
<td>PHIL 817</td>
<td>Philosophy of Science</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>PHIL 899</td>
<td>Masters Thesis</td>
<td>6-10</td>
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<td>Prereqs: Admission to masters degree program and permission of major adviser</td>
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<tr>
<td>PHIL 903</td>
<td>Philosophy of Mathematics</td>
<td>1-24</td>
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<tr>
<td>PHIL 905</td>
<td>Philosophy of Language</td>
<td>1-24</td>
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<td>PHIL 911</td>
<td>Topics in Logic</td>
<td>1-24</td>
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<td>PHIL 913</td>
<td>Advanced Epistemology</td>
<td>1-4</td>
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<tr>
<td>PHIL 914</td>
<td>Philosophy of Mind</td>
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<td>PHIL 915</td>
<td>Advanced Metaphysics</td>
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<td>PHIL 917</td>
<td>Philosophy of Science</td>
<td>1-24</td>
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<td>PHIL 920</td>
<td>Ethical Theory</td>
<td>1-24</td>
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<td><a href="http://bulletin.unl.edu/courses/PHIL/920">LINK</a></td>
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<td>PHIL 921</td>
<td>Aesthetics</td>
<td>1-4</td>
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<td>PHIL 923</td>
<td>Philosophy of Psychology</td>
<td>1-24</td>
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<td>PHIL 925</td>
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<td>PHIL 952</td>
<td>Greek Philosophy</td>
<td>1-24</td>
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<td></td>
<td><a href="http://bulletin.unl.edu/courses/PHIL/952">LINK</a></td>
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</table>

**Prereqs:**
Graduate standing in the humanities

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.
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<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>Empiricism</td>
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<td>Empiricism LINK (<a href="http://bulletin.unl.edu/courses/PHIL/955">http://bulletin.unl.edu/courses/PHIL/955</a>)</td>
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<td>Quine</td>
<td>1-24</td>
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<td>Quine LINK (<a href="http://bulletin.unl.edu/courses/PHIL/957">http://bulletin.unl.edu/courses/PHIL/957</a>)</td>
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<tr>
<td>Rationalism</td>
<td>1-24</td>
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<td>Rationalism LINK (<a href="http://bulletin.unl.edu/courses/PHIL/960">http://bulletin.unl.edu/courses/PHIL/960</a>)</td>
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<tr>
<td>Kant</td>
<td>1-24</td>
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<td>Classroom</td>
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<tr>
<td>Kant LINK (<a href="http://bulletin.unl.edu/courses/PHIL/971">http://bulletin.unl.edu/courses/PHIL/971</a>)</td>
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<tr>
<td>Special Studies in Philosophy I</td>
<td>1-24</td>
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<tr>
<td>Special Studies in Philosophy I LINK (<a href="http://bulletin.unl.edu/courses/PHIL/991">http://bulletin.unl.edu/courses/PHIL/991</a>)</td>
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<tr>
<td>Special Studies in Philosophy II</td>
<td>1-24</td>
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<td>Special Studies in Philosophy II LINK (<a href="http://bulletin.unl.edu/courses/PHIL/992">http://bulletin.unl.edu/courses/PHIL/992</a>)</td>
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<td>Dissertation Seminar</td>
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<tr>
<td>Dissertation Seminar LINK (<a href="http://bulletin.unl.edu/courses/PHIL/998">http://bulletin.unl.edu/courses/PHIL/998</a>)</td>
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</table>
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.

Faculty
For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Philosophy (http://bulletin.unl.edu/graduate/Philosophy)"

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Physics and Astronomy

Subject Areas
- Astronomy (ASTR) (#ASTR)
- Physics (PHYS) (#PHYS)

Courses for ASTR (ASTR)

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<thead>
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<th>Course Code</th>
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<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>ASTR 403/803</td>
<td>Galactic and Extragalactic Astronomy</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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Preps:
ASTR 204 (http://bulletin.unl.edu/courses/ASTR/204) and PHYS 213 (http://bulletin.unl.edu/courses/PHYS/213), and permission.

Introduction to the techniques for determining 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.
### Stellar Astrophysics

**Prereqs:**
- ASTR 204
- PHYS 213
- and permission.

Stellar atmospheres, interiors, and evolution. Theoretical and observational aspects of stellar astronomy. The relation between observed parameters and theoretical parameters, star formation, stellar energy generation, and degenerate stars.

### Physics of the Solar System

**Prereqs:**
- ASTR 204
- MATH 107
- PHYS 142
- or 212

Celestial mechanics; tidal effects; planetary interiors; atmospheres and surfaces; comets; asteroids; and the origin of the solar system. Applying physics to the solution of solar system problems.

### Physics of the Interstellar Medium

**Prereqs:**
- ASTR 204
- PHYS 213

Gaseous nebulae, interstellar dust, 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.

### Special Topics

**Prereqs:**
- ASTR 204
- and permission.

Special topics not covered in other 400-level ASTR courses.

### Special Topics in Astronomy

**Prereqs:**
- Permission

Offered as the need arises to treat special topics in astronomy not covered in other 900-level courses.
### Courses for PHYS (PHYS)

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>PHYS 401/801</td>
<td>Computational Physics</td>
<td>PHYS 311</td>
<td>Designed to accompany PHYS 311. Re-formulation of physics problems for solution on a computer, control of errors in numerical work, and programming.</td>
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<tr>
<td>PHYS 422/822</td>
<td>Introduction to Physics and Chemistry of Solids</td>
<td>PHYS 213 or CHEM 481</td>
<td>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.</td>
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<tr>
<td>PHYS 431/831</td>
<td>Thermal Physics</td>
<td>PHYS 213</td>
<td>Thermal phenomena from the point of view of thermodynamics, kinetic theory, and statistical mechanics.</td>
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<tr>
<td>PHYS 441/841</td>
<td>Experimental Physics I</td>
<td>PHYS 213, 223, 233</td>
<td>This course is a prerequisite for PHYS 442.</td>
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</tbody>
</table>
Methods and techniques of modern experimental physics.

**Experimental Physics II**

**Prereqs:**
- PHYS 441 [Link](http://bulletin.unl.edu/courses/PHYS/441) or permission.

This course is a prerequisite for PHYS 443 [Link](http://bulletin.unl.edu/courses/PHYS/443).

Lab fee required.

Continuation of PHYS 441 [Link](http://bulletin.unl.edu/courses/PHYS/441)/841.

**Experimental Physics III**

**Prereqs:**
- PHYS 442 [Link](http://bulletin.unl.edu/courses/PHYS/442) or permission.

Lab fee required.

Continuation of PHYS 442 [Link](http://bulletin.unl.edu/courses/PHYS/442)/842.

**Electromagnetic Theory**

**Prereqs:**
- PHYS 213 [Link](http://bulletin.unl.edu/courses/PHYS/213); MATH 220 [Link](http://bulletin.unl.edu/courses/MATH/220) or 221 [Link](http://bulletin.unl.edu/courses/MATH/221).

This course is a prerequisite for PHYS 452 [Link](http://bulletin.unl.edu/courses/PHYS/452).

Theory of electric and magnetic fields and their interaction with charges and currents, Maxwell’s equations, electric and magnetic properties of matter.

**Optics and Electromagnetic Waves**

**Prereqs:**
- PHYS 451 [Link](http://bulletin.unl.edu/courses/PHYS/451)/851.

Production of electromagnetic waves, wave guides and cavities, properties of waves, plane waves, reflection and refraction, interference and coherence phenomena, polarization. Optical properties of matter.

**Quantum Mechanics**

**Prereqs:**
- PHYS 213 [Link](http://bulletin.unl.edu/courses/PHYS/213) and 311.
Basic concepts and formalism of quantum mechanics with applications to simple systems.

**Atoms, Nuclei, and Elementary Particles**

**Prereqs:**
PHYS 461 or permission.

Basic concepts and experimental foundation for an understanding of the physics of atoms, nuclei, and elementary particles.

**Special Topics in Physics**

**Prereqs:**
PHYS 213 and permission.

Offered as need arises to treat special topics not covered in other 400/800-level physics courses.

Topics vary.

**Masters Thesis**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Classical Mechanics**

This course is a prerequisite for PHYS 912, PHYS 928.

Lagrangian and Hamiltonian formulations of the laws of motion; variational principles; dynamics of rigid bodies; other advanced topics.

**Statistical Physics**

**Prereqs:**
or parallel: PHYS 911 and PHYS 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.
This course is a prerequisite for PHYS 914 (http://bulletin.unl.edu/courses/PHYS/914), PHYS 918 (http://bulletin.unl.edu/courses/PHYS/918).

Electrostatics, magnetostatics, and Maxwell’s equations; solutions to boundary value problems and Green’s functions; electromagnetic radiation.

**PHYS 914 Electromagnetic Theory II**

**Prereqs:**
PHYS 913 (http://bulletin.unl.edu/courses/PHYS/913) or permission

Special relativity and covariant formulation of electrodynamics; kinematics and dynamics of charged particles; radiation from moving charges; multipole radiation fields.

**PHYS 916 Quantum Mechanics I**

**Prereqs:**
Permission

This course is a prerequisite for PHYS 917 (http://bulletin.unl.edu/courses/PHYS/917), PHYS 925 (http://bulletin.unl.edu/courses/PHYS/925).

Introduction to the formalism of quantum mechanics; applications to elementary systems; angular momentum; scattering theory.

**PHYS 917 Quantum Mechanics II**

**Prereqs:**
PHYS 916 (http://bulletin.unl.edu/courses/PHYS/916) or permission

This course is a prerequisite for PHYS 926 (http://bulletin.unl.edu/courses/PHYS/926).

Hilbert-space formulation of quantum mechanics; stationary and time-dependent perturbation theory; variational methods; spin; many-particle systems and identical particles.

**PHYS 918 Quantum Mechanics III**

**Prereqs:**
PHYS 913 (http://bulletin.unl.edu/courses/PHYS/913) and 917 (http://bulletin.unl.edu/courses/PHYS/917), or permission

Introduction to relativistic electron theory; formal scattering theory; semiclassical radiation theory; second quantization and application to many-particle systems, elements of quantum electrodynamics.

**PHYS 925 Introduction to Atomic and Molecular Physics**

**Prereqs:**
PHYS 916 (http://bulletin.unl.edu/courses/PHYS/916) or permission
Selected topics in atomic and molecular physics with emphasis on experimentally observed phenomena, including atomic and molecular spectra and scattering phenomena, and molecular structure.

**Introduction to Nuclear and Elementary Particle Physics**

**PHYS 926**

Prereqs: [PHYS 917](http://bulletin.unl.edu/courses/PHYS/917) or permission

Selected topics in nuclear and elementary particle physics with emphasis on experimentally observed phenomena, including nuclear forces, energy levels, nuclear models, decay of unstable nuclei, fundamental interactions and classification schemes.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

**Introduction to Solid State Physics**

**PHYS 927**

Prereqs: [PHYS 912](http://bulletin.unl.edu/courses/PHYS/912) and [916](http://bulletin.unl.edu/courses/PHYS/916), or permission

Selected topics in solid-state physics with emphasis on experimentally observed phenomena, including the structure and thermal, electric, magnetic, and elastic properties of metals, semiconductors, and insulators.

**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

**Introduction to Plasma Physics**

**PHYS 928**

Prereqs: [PHYS 911](http://bulletin.unl.edu/courses/PHYS/911), [913](http://bulletin.unl.edu/courses/PHYS/913), and [914](http://bulletin.unl.edu/courses/PHYS/914)

Fundamentals of plasma physics. Motion of charged particles, basic plasma models, waves in plasmas, laser-plasma interactions. Applications such as magnetic and inertial confinement fusion, astrophysics, plasma-bases accelerators, advanced light sources, and semiconductor materials processing.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:**
**Course Delivery:** Classroom

**Advanced Topics in Solid State Physics**

**PHYS 951**

Prereqs: Advanced graduate standing and permission

**Credit Hours:** 3
**Max credits per degree:** 9
**Campus:**
**Course Delivery:** Classroom

**Advanced Topics in Atomic Physics**

**PHYS 955**

Prereqs: Permission

**Credit Hours:** 3
**Max credits per degree:** 9
**Campus:**
**Course Delivery:** Classroom
Description

For a brief description of the program, application requirements and contact information, view the graduate program summary. [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/PhysicsAndAstronomy)

Department Chair: Daniel R. Claes, Ph.D.

Vice Chair: Stephen Ducharme, Ph.D.

Graduate Committee: Associate Professor Uiterwaal (Chair), Professors Fabrikant, Gay, Liou; Associate Professor Tsymbal

The Department of Physics and Astronomy offers the master of science and doctor of philosophy degrees.

**MS Degree Program**

In addition to the masters degree requirements outlined earlier in this Bulletin, a candidate for the MS 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 I

plus one of the following courses:

- PHYS 912. Statistical Physics
The Graduate Committee will determine the form of the Comprehensive Examination, which is required of all MS 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 Option I (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.

**PhD 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 998. Special Topics in Current Research
- MATH 842. Methods of Applied Mathematics I

plus at least one additional mathematics course, chosen in consultation with an adviser, 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 II
- STAT 880. Intro to Mathematical Statistics
- MATH 935/936. Advanced Methods of Applied Mathematics

plus at least three of the following courses:
- PHYS 925. Intro to Atomic & Molecular Physics
- PHYS 926. Intro to Elementary Particle & Nuclear Physics
- PHYS 927. Intro to Solid State Physics
- PHYS 928. Intro to Plasma Physics

Students with little, or no, laboratory experience as undergraduates are urged to take PHYS 231. Normally 911, 913, 914, 916, and 917 will be offered once each year, and Statistical Physics, Quantum Mechanics III, and the introductory courses will be offered at least once every two years.

Soon after a student has taken the Advanced Qualifying Exam (see below), the entire departmental faculty will meet to decide whether the student is qualified to begin dissertation research. This decision is to be based on all information available, including the student’s performance on the Advanced Qualifying Exam, in courses, in research projects, etc. If the faculty decides that the student is qualified to begin dissertation research, the Graduate Committee will recommend to the Dean of Graduate Studies that a supervisory committee be formed for the student.

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 covers mechanics, thermodynamics, electricity and magnetism, optics, elementary quantum mechanics, and experimental physics. Students who take only the first session of the Exam and who later wish to enter the PhD program must take the entire Advanced Qualifying Exam at one time, including the first session.

The Advanced Qualifying Exam will normally be given at the beginning of each spring semester. At the beginning of the prior fall semester the Graduate Committee will review the academic progress of all students who have not yet formed a supervisory committee and, after consulting with the students, will specify which students must take the exam. Usually, a student will take the Advanced Qualifying Exam after his or her third semester as a graduate student. Students may not withdraw from the examination without the permission of the Graduate 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**

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/PhysicsAndAstronomy).

Retrieved from "[http://bulletin.unl.edu/graduate/Physics_and_Astronomy](http://bulletin.unl.edu/graduate/Physics_and_Astronomy)"

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Plant Pathology

Courses for PLPT (PLPT)

**Biological Control of Pests**

- **Course Code:** PLPT 813
- **Prereqs:** 12 hrs biological sciences and/or agricultural sciences
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom, Web

**Plant Associated Microbes**

- **Course Code:** PLPT 867
- **Prereqs:** A course in general microbiology, bacteriology, or mycology. A course in general plant pathology is highly recommended.
- **Credit Hours:** 4
- **Course Format:** Lab 3, Lecture 3
- **Course Delivery:** Classroom

**Turfgrass Disease Management**

- **Course Code:** TLMT 414/814
- **Prereqs:** BIOS/PLPT 369 or one semester of introductory plant pathology.
- **Credit Hours:** 1
- **Course Format:** Lecture 1
- **Course Delivery:** Classroom

**Description**

For a brief description of the Plant Pathology Specialization, application requirements and contact information, view the Plant Pathology Department's Website ([link](http://plantpathology.unl.edu)).

**Head:** Professor James R. Steadman, Ph.D.

Through the School of Biological Sciences and the Department of Agronomy and Horticulture, the Plant Pathology Department offers graduate programs leading to the master of science and doctor of philosophy degrees with a major in biological sciences or agronomy and a specialization in plant pathology. Located on East Campus, at the Beadle Center, and the Panhandle and West Central Research and Extension Centers, 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, biocontrol, 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 biology, pest management, and international agriculture.

Please refer to "Biological Sciences" and "Agronomy and Horticulture" for degree requirements. Thesis and dissertation research normally is performed under the supervision of plant pathology graduate faculty.

**Faculty**
For faculty list, research interests and department contact information, view the [Plant Pathology Department's Website](http://plantpathology.unl.edu)

Retrieved from "[http://bulletin.unl.edu/graduate/Plant_Pathology](http://bulletin.unl.edu/graduate/Plant_Pathology)"

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## Political Science

### Courses for POLS (POLS)

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<tr>
<th></th>
<th>Course Title</th>
<th>Code</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
<th>Groups</th>
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<tbody>
<tr>
<td>AECN</td>
<td>Taxation–Farm and Ranch</td>
<td>818</td>
<td>Crosslisted as POLS 818&lt;br&gt;&lt;br&gt;Prereqs: <a href="http://bulletin.unl.edu/courses/ACCT/812">ACCT 812</a> or <a href="http://bulletin.unl.edu/courses/LAW/637G">LAW 637G</a>.&lt;br&gt;Selection of substantial income tax problems affecting farms and ranches.</td>
<td>1–4</td>
<td>3</td>
<td>Classroom</td>
<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>AGRO</td>
<td>Water Quality Strategy</td>
<td>475/875</td>
<td>Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875&lt;br&gt;&lt;br&gt;Prereqs: Senior standing or permission.&lt;br&gt;Capstone course.&lt;br&gt;Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.</td>
<td>3</td>
<td>6</td>
<td>Classroom</td>
<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>ANTH</td>
<td>Pro-seminar in Latin American Studies</td>
<td>478/878</td>
<td>Crosslisted as HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878&lt;br&gt;&lt;br&gt;Prereqs: Junior standing and permission.&lt;br&gt;Topical seminar required for all Latin American Studies majors.&lt;br&gt;An interdisciplinary analysis of topical issues in Latin American Studies.</td>
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<td>6</td>
<td>Classroom</td>
<td>Integrative Courses, Research and Reading</td>
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<tr>
<td>POLS</td>
<td>The Administrative Process</td>
<td>410/810</td>
<td>Interdisciplinary examination of the internal dynamics of public and private organizations.</td>
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<td>3</td>
<td>Classroom</td>
<td>Public Administration and Policy</td>
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<tr>
<td>POLS</td>
<td>Intergovernmental Relations</td>
<td>414/814</td>
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</table>
Analysis of the nature and problems of the American federal system, with emphasis on the politics and administration of federal grants; problems in national–state and national–local governmental coordination in administration.

POLS
417/817
Policy and Program Evaluation Research

Credit Hours: 3
Course Delivery: Classroom
Groups: American Government, Politics and Law

Crosslisted as SOCI 468/868

Prereqs:
6 hrs social sciences.

Techniques useful for research aiding in policy making and for assessing the impact of policy. Acquaints student with the role of research in policy formation and evaluation and to give the student experience in conducting such research.

POLS
425/825
Congress and Public Policy

Credit Hours: 3
Course Delivery: Classroom
Groups: American Government, Politics and Law

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.

POLS
426/826
Topics in American Public Policy

Credit Hours: 3
Course Delivery: Classroom
Groups: American Government, Politics and Law

This course may be repeated up to 6 credit hours. Students should check the semester schedule for current offerings.

A significant public policy in American politics. Topics: science, technology, and public policy; or health politics.

POLS
430/830
Political Communication

Credit Hours: 3
Course Delivery: Classroom
Groups: American Government, Politics and Law

Crosslisted as COMM 430/830

Prereqs:
12 hrs communication studies, including COMM 130 (http://bulletin.unl.edu/courses/COMM/130) or permission.

Role of communication in the political process, with emphasis on communication strategies in political campaigns. Includes communication variables important in the political process, an application of communication theory and principles to political rhetoric, and analysis and criticism of selected political communication events.

POLS
441/841
Constitutional Law

Credit Hours: 3
Course Delivery: Classroom
Groups: American Government, Politics and Law

Supreme Court doctrine determining the distribution of powers within the national government and between the national government and the state governments.
### Civil Liberties: Freedom of Expression and Conviction

Supreme Court doctrine interpreting the First Amendment, covering freedom of speech, assembly, and association; freedom of the press; and freedom of religion.

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<th>Credit Hours:</th>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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<tr>
<td>Groups:</td>
<td>American Government, Politics and Law</td>
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</table>

### Civil Liberties: Issues of Fairness and Equality

Supreme Court doctrine covering the rights of the accused, the right to privacy and the right to racial and sexual equality.

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
<td>Classroom</td>
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<td>Groups:</td>
<td>American Government, Politics and Law</td>
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</tbody>
</table>

### International Political Economy

Interface of politics and economics in the international arena. Political dimension of international economic issues emphasized. Includes: liberal, mercantile, and radical approaches; theories of imperialism; dependency and interdependency; distribution of the global product; the global division of labor; the political aspects of markets; the politics of trade, aid, investment, multinational corporations, food, and energy.

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<th>Credit Hours:</th>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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<tr>
<td>Groups:</td>
<td>International Relations</td>
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</table>

### Security in the Post–Cold War Era

Emerging trends in security studies. The claim or hope that military force is no longer important in the post–Cold War era. The continued utility and effectiveness of war as evidenced throughout the world. New threats, environmental problems, population growth, and non–governmental organizations, as threats to the international system.

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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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<td>Groups:</td>
<td>International Relations</td>
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</table>

### American Foreign Policy and the Use of the Military

Military action as an instrument of American foreign policy. Constitutional basis of the president's and Congress's war powers; assessments of the role of the White House, Congress, CIA, senior Pentagon officials, the American public, and military alliances – NATO and coalitions of the willing – in supporting and directing the use of military action abroad; and the political and strategic consequences of various American applications of military force.

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<th>Credit Hours:</th>
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<td>Max credits per degree:</td>
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<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
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<td>Course Delivery:</td>
<td>Classroom, Web</td>
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<tr>
<td>Groups:</td>
<td>Foreign and Comparative Government</td>
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</table>

### Political Economy of the Asia-Pacific
464/864

International relations of the Asia-Pacific. Security, economics, and interaction between China, Japan, the United States, and other regional powers.

Credit Hours: 3
Course Delivery: Classroom
Groups: International Relations

466/866

Pro-seminar in International Relations I
Crosslisted as HIST 479/879, SOCI 466/866, ANTH 479/879, GEOG 448/848, ECON 466/866, AECN 467

Prereqs:
Senior standing and permission.
Open to students with an interest in international relations.

Topics vary.

Credit Hours: 3
Max credits per degree: 3
Course Delivery: Classroom
Groups: International Relations

467/867

Pro-seminar in International Relations II
Crosslisted as ECON 467/867

Prereqs:
Senior standing and permission.
Open to students with an interest in international relations.

Topics vary.

Credit Hours: 3
Max credits per degree: 3
Course Delivery: Classroom
Groups: International Relations

468/868

Organizing World Order

POLS 468 (http://bulletin.unl.edu/courses/POLS/468)/868 may be repeated once for credit if content changes.

Structures and forces relevant to creation of order in world politics. Contents may vary according to semester and instructor. Topics: trends within the United Nations system; transnational economic integration; patterns in arms control and disarmament; prospects for a United States of Europe; human rights and international violence; the United States' response to terrorism and guerrilla warfare; the management of conflict; economic development and world order.

Credit Hours: 3–6
Course Delivery: Classroom
Groups: International Relations

469/869

International Law

Rules and principles accepted by the members of the community of nations as defining their rights and duties, and the procedure employed in protecting their rights and performing their duties.

Credit Hours: 3
Course Format: Lecture
Course Delivery: Classroom
Groups: International Relations

470/870

International Human Rights

Development of international norms on human rights and attempts to
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Delivery</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 471/871</td>
<td>Comparative Public Policy: A Cross-National Approach</td>
<td></td>
<td>3</td>
<td>Classroom</td>
<td>International Relations</td>
</tr>
<tr>
<td></td>
<td>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.</td>
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<tr>
<td>POLS 472/872</td>
<td>State Terror</td>
<td>Permission.</td>
<td>3</td>
<td>Classroom</td>
<td>Foreign and Comparative Government</td>
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<tr>
<td></td>
<td>Use of terror as an instrument of state policy. A series of case studies of large scale politically based killings. Why and which states use terror and politicide against their own citizens.</td>
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<tr>
<td>POLS 473/873</td>
<td>Problems in International Law and Organization</td>
<td>POLS 361 or 469 highly recommended.</td>
<td>3</td>
<td>Classroom</td>
<td>International Relations</td>
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<td></td>
<td>Selected issues in international law and organization. Content varies. Includes: US Senate's treatment of treaties, use of customary law by US courts, current cases before the World Court, leading legal issues handled by the UN Security Council and General Assembly, etc.</td>
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<tr>
<td>POLS 474/874</td>
<td>Comparative Institutions</td>
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<td>3</td>
<td>Classroom</td>
<td>Foreign and Comparative Government</td>
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<td></td>
<td>Formal and informal institutions such as constitutions, electoral rules, property rights, and civil rights. How and why people in different groups, countries, and cultures 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.</td>
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<tr>
<td>POLS 476/876</td>
<td>Ethnic Conflict and Identity</td>
<td>Crosslisted as JUDS 476</td>
<td>3</td>
<td>Classroom</td>
<td>Foreign and Comparative Government</td>
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<td></td>
<td>Theories of nationalism and ethnic conflict. Case studies of Europe, the Middle East, and Africa. The post–Cold War era as multi-polar and multi-ethnic. The states and different cultures that compete for influence and authority to dominate the “New World order.” The division of the world along ethnic, religious, and class lines rather than by ideology. The future of international politics and the reassessment of the causes of “conflicts of culture” and their containment.</td>
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<td>Course Code</td>
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<td>Credit Hours</td>
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<td>POLS 477/877</td>
<td>Israel and the Middle East</td>
<td>3</td>
<td>Classroom</td>
<td>Foreign and Comparative Government</td>
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<td>Crosslisted as JUDS 477</td>
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<td>Israeli politics, society, and</td>
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<td>relations with its neighbors,</td>
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<td>particularly the Palestinians.</td>
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<td>Rise of Zionism and the</td>
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<td>Palestinian response to it; wars</td>
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<td></td>
<td>between Israel and Arab neighbors,</td>
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<td>and the eventual peace agreements</td>
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<td>between the two; the internal</td>
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<td>dynamics of Israeli political</td>
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<td>life; and state of Zionism today.</td>
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<tr>
<td>POLS 481/881</td>
<td>Political Behavior</td>
<td>3</td>
<td>Classroom</td>
<td>American Government, Politics and Law</td>
<td>LINK</td>
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<td></td>
<td>Various theories of political</td>
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<td>behavior at the individual level.</td>
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<td>The usefulness of these theories</td>
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<td>in explaining individual political</td>
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Core Seminar in American Government

Credit Hours: 3
Campus:
Course Delivery: Classroom

Literature in American governmental 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.

Core Seminar in Public Policy and Process

Credit Hours: 3
Campus:
Course Delivery: Classroom

Intended for graduate students interested in a review of the field.

Public Policy Analysis: Methods and Models

Credit Hours: 3
Campus:
Course Delivery: Classroom

Qualitative and quantitative approaches to public policy analysis. Nature of politics and policy, formation of public policy, analysis of 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.

Core Seminar in Biology and Politics

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

Introduction to the relationship between the fields of biology and politics. The political implication of genetics, physiology, neuro-imaging, and evolutionary psychology.

Core Seminar in International Politics

Credit Hours: 3
Campus:
Course Delivery: Classroom

Extensive reading required. Rigorous survey of the literature in international relations, including international law and international organization. Intended to introduce the beginning graduate student to the field of international relations.

Core Seminar in Comparative Politics

Credit Hours: 3
Campus:
Course Delivery: Classroom

POLS 879 (http://bulletin.unl.edu/courses/POLS/879) 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 and socialization; and the special problems confronting the area specialist.

Core Seminar in Political Theory

Credit Hours: 3
Campus:
Course Delivery: Classroom

POLS 880 (http://bulletin.unl.edu/courses/POLS/880)
Students required to read extensively and to take a final examination. Rigorous survey of some of the major areas of concern in empirical and normative political theory.

**Individual Readings**

**POLS 891**

Prereqs: Permission

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Internship**

**POLS 895**

Student is assigned and supervised by designated faculty member. Pass/No Pass only.

Internship in government agencies, quasi public agencies, private firms (profit and nonprofit), and other organizations.

**Credit Hours:** 3

**Course Format:** Field

**Campus:**

**Course Delivery:** Classroom

**Masters Thesis**

**POLS 899**

Prereqs: Permission

Prereq: Admission to masters degree program and permission of major adviser.

**Credit Hours:** 6-10

**Campus:**

**Course Delivery:** Classroom

**Dissertation Prospectus**

**POLS 901**

Prereqs: Permission

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Seminar in American Government**

**POLS 920**

Prereqs: Permission

**Credit Hours:** 3

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

**Seminar in Public Policy**

**POLS 931**

Prereqs: Permission

**Credit Hours:** 3

**Max credits per degree:** 12

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<td>POLS 965</td>
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For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/PoliticalScience).

Department Chair: Elizabeth Theiss–Morse, Ph.D.

Graduate Chair: Ross Miller, Ph.D.

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 a master of arts in political science and juris doctorate. Graduate work may be pursued in: American government, comparative government, historical and normative theory, international relations, and public policy. 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, and public policy analysis and evaluation.

Requirements for the various degree programs are available on-line at: [polisci.unl.edu](http://polisci.unl.edu).

Courses in public administration are offered through the University of Nebraska at Omaha.

Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/PoliticalScience).

Retrieved from "[http://bulletin.unl.edu/graduate/Political_Science](http://bulletin.unl.edu/graduate/Political_Science)"

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Psychology

Courses for PSYC (PSYC)

Psychology of Adult Development and Aging

Crosslisted as PSYC 446

Prereqs:

PSYC 181 [here](http://bulletin.unl.edu/courses/PSYC/181) or GERO 200 [here](http://bulletin.unl.edu/courses/GERO/200).

Major social and psychological changes that occur as a function of aging. Both normal and abnormal patterns of developmental change including their implications for behavior.

Psychological Research Other than Thesis I

Crosslisted as PSYC 995

Research is supervised and approved by a faculty member in the Law/Psychology program. Absent the prior approval of the Dean, only those students enrolled in the Law/Psychology Joint Degree Program may register for this course. Absent the prior approval of the Dean, no student may take more than 6 hours of research in a selected and/or psycholegal research. A substantial research and writing project on a psychological topic.
Research is supervised and approved by a faculty member in the Law/Psychology program. Absent the prior approval of the Dean, only those students enrolled in the Law/Psychology Joint Degree Program may register for this course. Absent the prior approval of the Dean, no student may take more than 6 hours of research in a selected and/or psycholegal research. For course description, see LAW 757G.

**Law and Behavioral Science**

General issues in the interaction between law and the behavioral sciences; discussion of the use/misuse/nonuse 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.

**Mental Health Law**

Credit may only be earned in either LAW 763G or LAW 772G.

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.

**Topics in Law and Psychology I**

May be repeated once. Analysis of specific psycholegal topics. Previous course titles include Privacy, Mental Health Policy, Legal Decision Making, Institutional Reform and Deinstitutionalization, Legal Policy and Child Development, and Domestic Violence.

**Topics in Law and Psychology II**

May be repeated once. For course description, see LAW 764G.

**Psychology of Gender**

Prereqs: 12 hrs PSYC.

Theory and research on the role of gender in human behavior and attitudes. Diverse theoretical positions on the development of gender and the biological, social, and cultural bases that influence the relationship between gender and a variety of areas of human experience (e.g., intelligence and...
achieved, emotion, relationships, sexuality, physical fitness, stress, and coping).

### Psychology of Racism

**Course Code:** PSYC 425/825  
**Crosslisted as:** ETHN 425  
**Level:** Undergraduate  
**Credit Hours:** 3  
**Course Delivery:** Classroom  

**Prereqs:**  
- For psychology majors: PSYC 350  
- For non-psychology majors: any research methods course.

Major terms and issues in psychology that pertain to race and racism in the United States. General principles of the psychology of racism that are universal. Psychology of the major racial minority groups in the United States examined through their unique cultures, histories, traditions, and collective identities. Research methods for the psychology of racism reviewed as a basis for interpreting research results.

### Health Psychology

**Course Code:** PSYC 428/828  
**Level:** Undergraduate  
**Credit Hours:** 3  
**Course Delivery:** Classroom  

**Prereqs:**  
- Junior standing.

The relationship between psychological factors and physical health. Health behavior, health decision-making, health promotion and coping from a variety of theoretical perspectives.

### Perspectives in Psychology

**Course Code:** PSYC 440/840  
**Level:** Undergraduate  
**Credit Hours:** 3  
**Course Delivery:** Classroom  

**Prereqs:**  
- 12 hrs psychology.

Currently important fundamental issues in psychology considered within a framework of their philosophical foundations and historical perspectives.

### Multivariate Research Design and Data Analysis

**Course Code:** PSYC 451/851  
**Level:** Undergraduate  
**Credit Hours:** 4  
**Course Format:** Lab 3, Lecture 3  
**Course Delivery:** Classroom  

**Prereqs:**  
- PSYC 350 with a grade of B or better  
- PSYC 450 (usually offered in the fall) and PSYC 451 (usually offered in the spring) can be taken in any order.

Presentation of multivariate research designs and statistical models employed in psychological and behavioral research. Analysis using multiple regression and linear discriminant function models; interpretation and presentation of the results in oral, written, and web-based formats. Create, perform, and present an individual research project.

### Behavior Genetics

**Course Code:** PSYC 458/858  
**Level:** Undergraduate  
**Credit Hours:**  
**Course Delivery:** Classroom
Introduction to concepts and research in behavior genetics. The role of heredity in normal and disordered behaviors will be examined, with a special emphasis on the mechanisms by which genetic variation influences individual differences in behavior.

**Human Memory**

**Prereqs:**
12 hrs psychology or 12 hrs biological sciences, including PSYC 373 or BIOS 373.

**Course Format:** Lecture 3

**Course Delivery:** Classroom

**Credit Hours:** 3

Issues in human memory within the context of cognitive psychology: attention; short and long term memory; retrieval processes; semantic memory; how long-term memory is involved in comprehension and knowledge; how emotion affects memory; and the major research paradigms used in the study of memory.

**Learning Processes**

**Prereqs:**
12 hrs psychology, including PSYC 350.

**Course Format:** Classroom

**Credit Hours:** 3

Theoretical evaluation of studies of learning, thinking, and perception.

**Motivation and Emotion**

**Prereqs:**
12 hrs psychology, including PSYC 350.

**Course Format:** Classroom

**Credit Hours:** 3

Major problems and methods involved in the study of motivation and emotion including theoretical considerations.

**Perception**

**Prereqs:**
12 hrs psychology, including either PSYC 263 or 373.

**Course Format:** Classroom

**Credit Hours:** 3

Analysis and comparison of approaches to the study of current problems in human perception and information processing. Psychophysical judgment, signal detection theory, perception of form and space, and the role of imagery in perception.

**Behavioral Neuroscience**

**Prereqs:**
Crosslisted as BIOS 419/819

**Course Format:** Classroom

**Credit Hours:** 3
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12 hrs psychology or 12 hrs biological sciences, including [PSYC 373](http://bulletin.unl.edu/courses/PSYC/373) or [BIOS 373](http://bulletin.unl.edu/courses/BIOS/373).

Relationship of physiological variables to behavior, an introduction to laboratory techniques in neuropsychology.

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<td>Attention and Performance</td>
<td><a href="http://bulletin.unl.edu/courses/PSYC/263">PSYC 263</a>.</td>
<td>Theory and research on human attention and the critical link between attention and performance within the context of cognitive psychology. The influence of various factors on attention (e.g., emotion, video games, cognitive disorders) and how these influence behavior (e.g., eye movements, perception, motor control, search).</td>
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<td>PSYC 471/871</td>
<td>Human Sexuality and Society</td>
<td>Junior standing and 12 hrs in one of the departments in which the course is listed.</td>
<td>Open to advanced students planning careers in the professions in which knowledge of human behavior and society is important (e.g., helping professions, medicine, law, ministry, education, etc.).</td>
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<td>PSYC 472/872</td>
<td>Transpersonal Psychology</td>
<td>12 hrs psychology.</td>
<td>Transpersonal psychology perspective including 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.</td>
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<td>PSYC 483/883</td>
<td>Psychology of Social Behavior</td>
<td>12 hrs PSYC, including <a href="http://bulletin.unl.edu/courses/PSYC/288">PSYC 288</a>.</td>
<td>Current problems, methods, and findings in the study of individual behavior as it is influenced by the social environment.</td>
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Course Delivery: Classroom

12 hrs psychology, including one 200-level Group 2 course.

Detailed comparative study of the classic and modern theories of personality from the point of view of conflicts in the philosophies of science and images of man implied in the various theories.

**Clinical Psychology**

Prereqs:
12 hrs psychology, including one 200-level Group 2 course.

Fundamental procedures in clinical practice, a critical evaluation of diagnostic and therapeutic techniques.

**Community Psychology**

Prereqs:
12 hrs psychology, including one 200-level Group 2 course.

Examines the phenomena and perspectives typically included under the rubric community psychology, e.g., community mental health, crisis intervention, and social change interventions.

**Child Behavior and Development**

Prereqs:
12 hrs psychology, including one 200-level Group 2 course.

Current issues in theory and research in developmental psychology examined (e.g., emotional development, the changing American family, the preschool years, social understanding), along with methods of research in these and other areas.

**Masters Thesis**

Prereqs:
Admission to masters degree program and permission of major adviser

Credit Hours: 6-10
Campus: 
Course Delivery: Classroom

**Pro-seminars in Cognition and Learning**

Prereqs:
Permission

Credit Hours: 3
Campus: 
Course Delivery: Classroom

**Developmental: Biological and Cognitive Development**

Prereqs:
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Credit Hours: 3
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<td>Advanced graduate standing and permission</td>
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<tr>
<td>PSYC 924</td>
<td>Seminar in Psychology: Learning</td>
<td>1-9</td>
<td>Advanced graduate standing and permission</td>
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<tr>
<td>PSYC 925</td>
<td>Ethics for Psychologists</td>
<td>1</td>
<td>Permission</td>
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<tr>
<td>PSYC 925A</td>
<td>Ethics for Clinical Psychologists</td>
<td>1</td>
<td>Advanced graduate standing and permission</td>
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</table>

Introduction to ethical principles and reasoning for research, teaching and professional practice in psychology.
Course Delivery: Classroom

Application of ethical principles to practica and professional practice. Critique of the status of a professional mental health discipline, a discipline’s ethical code, and practice in society.

Ethics for Psychology and the Law

PSYC 925B

Prereqs: PSYC 925

Application of ethical principles to the practice of psychology in interaction with legal institutions with an emphasis on the communication of psychological expertise and research to those legal institutions.

Seminar in Psychology: Personality

PSYC 926

Prereqs: Advanced graduate standing and permission.

Seminar in Psychology: Social Behavior

PSYC 929

Prereqs: Advanced graduate standing and permission.

Seminar in Psychology: Psychometric Methods

PSYC 930

Prereqs: Advanced graduate standing and permission.

Fundamentals of Research Design and Data Analysis 1

PSYC 941

Prereqs: Instructor permission

This course is a prerequisite for PSYC 942.

Presentation of basic methods, designs, and data analysis techniques employed in psychological and behavioral research. Univariate and bivariate statistical analyses and research hypothesis testing, multiple groups ANOVA, multiple regression, and the general linear model (GLM).

Fundamentals of Research Design and Data Analysis 2

PSYC 942

Prereqs:

Credit Hours: 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Course Delivery</th>
<th>Prereqs</th>
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</thead>
<tbody>
<tr>
<td>PSYC 941</td>
<td>Fundamentals of Multivariate Modeling</td>
<td>Lecture 3</td>
<td>PSYC 942 and instructor permission</td>
</tr>
<tr>
<td>PSYC 942</td>
<td>Multilevel Models for Longitudinal and Repeated Measures Data</td>
<td>Lecture 3</td>
<td>PSYC 943 and instructor permission</td>
</tr>
<tr>
<td>PSYC 943</td>
<td>Advanced Multilevel Models</td>
<td>Lecture 3</td>
<td>PSYC 944 and permission</td>
</tr>
<tr>
<td>PSYC 944</td>
<td>Psychology of Survey Response</td>
<td>Lecture 3</td>
<td>PSYC 945</td>
</tr>
</tbody>
</table>
**Questionnaire Design**

Design of questionnaires for survey research and the theoretical and practical issues arising from them. Selection of appropriate measurement techniques for assessing opinions, past behaviors and events, and factual material.

**Latent Trait Measurement and Structural Equation Models**

Prereqs: [PSYC 943](http://bulletin.unl.edu/courses/PSYC/943) and instructor permission

Contemporary measurement theory and latent variable models for scale construction and evaluation, including confirmatory factor analysis, item response modeling, diagnostic classification models, and structural equation modeling.

**Introduction to Clinical Assessment**

Prereqs: Permission

This course is a prerequisite for [PSYC 955](http://bulletin.unl.edu/courses/PSYC/955), [PSYC 957](http://bulletin.unl.edu/courses/PSYC/957), and [PSYC 958](http://bulletin.unl.edu/courses/PSYC/958).

Introduction to the theory and application of assessment procedures and techniques. Measurement and interpretive issues in clinical assessment. Laboratory introduction to structured techniques emphasizing intellectual assessment.

**Clinical Assessment Techniques**

Prereqs: [PSYC 955](http://bulletin.unl.edu/courses/PSYC/955) or permission

Didactic and laboratory training in the administration, scoring, and beginning interpretation of projective and objective assessment techniques.

**Topics in Clinical Assessment**

Prereqs: [PSYC 955](http://bulletin.unl.edu/courses/PSYC/955) and [PSYC 956](http://bulletin.unl.edu/courses/PSYC/956) or equivalent advanced training and permission

A selected topic taught during the course. Examples include clinical neuropsychology, assessment techniques and assessment batteries, individual case conference presentation, and assessment of sexual dysfunctions.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Campus</th>
<th>Course Delivery</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 958</td>
<td>Seminar in Dispositional Assessment</td>
<td>3</td>
<td></td>
<td>Classroom</td>
<td>PSYC 955 and 956 or permission</td>
<td>Advanced interpretation, issues, and research in clinical psychology assessment. Emphasis on the “dispositional assessment” model of clinical analysis. Student presentations and individual case interpretation.</td>
</tr>
<tr>
<td>PSYC 960</td>
<td>Seminar in Alcohol Use and Abuse</td>
<td>3</td>
<td></td>
<td>Classroom</td>
<td>Permission</td>
<td>Biopsychosocial perspective of alcohol abuse. Focus on multiple factors that contribute to alcohol problems, including physiological/genetic, psychological and sociocultural determinants. Intervention, treatment and prevention issues. Societal and governmental attitudes and policies. Emphasis on theoretical and empirical literature bearing on the above areas.</td>
</tr>
<tr>
<td>PSYC 963</td>
<td>Group Processes and Group Psychotherapy</td>
<td>3</td>
<td></td>
<td>Classroom</td>
<td>Open to students in community-clinical psychology or permission</td>
<td>Group phenomena which are relevant to mental health service providers. Incorporates both didactic and experiential teaching of group process and group outcome issues. Focus on group process issues in group therapy (using the group concepts of Yalom and other writers) and experiencing these concepts in a training group.</td>
</tr>
<tr>
<td>PSYC 970</td>
<td>Clinical Interviewing</td>
<td>1–3</td>
<td></td>
<td>Classroom</td>
<td>Admission to the community-clinical psychology program or permission</td>
<td>Basic skills needed in seeing a mental health client (e.g., listening, empathy, reflection and restatement) explored through didactic, group interaction and live individual interviews. Focus is preparing the student to meet their first psychotherapy client in a competent manner. Doing observing and rating pseudo and patient interviews.</td>
</tr>
<tr>
<td>PSYC 971</td>
<td>Psychological Literature I</td>
<td>1–6</td>
<td></td>
<td>Classroom</td>
<td></td>
<td>Reading assignments in special fields; library reading, conferences.</td>
</tr>
<tr>
<td>PSYC 972</td>
<td>Psychological Literature II</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td>Course Code</td>
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<td>Credit Hours</td>
<td>Prereqs</td>
<td>Course Delivery</td>
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<tr>
<td>972</td>
<td>For course description, see PSYC 971 (<a href="http://bulletin.unl.edu/courses/PSYC/971">http://bulletin.unl.edu/courses/PSYC/971</a>).</td>
<td>1-6</td>
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<tr>
<td>PSYC 974</td>
<td>Teaching Methods for Psychology</td>
<td>1-3</td>
<td>Permission</td>
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<tr>
<td>PSYC 975</td>
<td>Advanced Experimental Psychology</td>
<td>1-9</td>
<td>Permission</td>
<td>Classroom</td>
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<tr>
<td>PSYC 976</td>
<td>Psychology of Race and Ethnicity</td>
<td>3</td>
<td>Permission</td>
<td>Lecture 3, Classroom</td>
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</tr>
<tr>
<td>PSYC 979</td>
<td>Cultural Diversity in Psychology</td>
<td>3</td>
<td>Permission</td>
<td>Classroom</td>
<td></td>
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<tr>
<td>PSYC 981</td>
<td>Clinical Intervention I</td>
<td>3</td>
<td>Graduate standing in clinical psychology training program or permission of director of clinical training</td>
<td>Classroom</td>
<td></td>
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</tr>
</tbody>
</table>
Practical and didactic training in assessment and intervention for psychological and behavioral disorders. Emphasis on entry-level clinical skills including establishment of the therapeutic relationship, case conceptualization, and development of treatment plans within the scientist–practitioner model.

**Clinical Intervention II**

**Prereqs:**
- PSYC 981 and either graduate standing in clinical psychology training program or permission of director of clinical training

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

**Therapy in Clinical Psychology I**

**Prereqs:**
- Permission

Theory and methods employed by different “schools” of therapy analyzed and related to basic psychological theory.

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

**Child Psychopathology and Assessment**

**Prereqs:**
- Advanced graduate standing and permission

Major categories of child psychopathology, theoretical formulations of etiology of such disorders, empirical findings and issues related to each disturbance and appropriate instruments for assessing each disorder.

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

**Child Therapy**

**Prereqs:**
- Advanced graduate standing and permission

Various child intervention techniques with an emphasis on behavioral parent training for child noncompliance.

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

**Practicum in Teaching Methods for Psychology**

**Prereqs:**
- PSYC 974 and permission

Students will contract with instructor to teach an undergraduate psychology course under supervision. Individual instruction on teaching methods, classroom assessment, and practical classroom techniques.

Credit Hours: 1–6  
Max credits per degree: 6  
Course Format: Independent Study  
Campus:  
Course Delivery: Classroom
Research Methods in Social and Personality Psychology

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs: 
Permission and second-year graduate standing; at least 1 sem graduate-level statistics

Research design and the application of design to real research problems, including the application of statistics, problems of control, confounding, alternative explanations, demand characteristics, and experimenter effects. In addition to readings in theory of design and experimentation, the practical solution of design problems and critique of research are emphasized.

Field Methods in Psychology

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs: 
Second-year graduate standing and permission

Design and implementation of field research, including observational methods, experimental and quasi-experimental designs, and program evaluation. In addition to readings in the theory of field research methodology, the solutions to specific, commonly occurring design and statistical problems are emphasized.

Seminar in Program Evaluation

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Major issues involved in the evaluation of programs which deliver human services. Includes needs assessments, outcome evaluation techniques, qualitative methods, goal attainment scaling, multi-attribute utility theory, role relationships and political problems with which evaluators must contend.

Research Problems Other Than Thesis

Credit Hours: 1–24
Campus: 
Course Delivery: Classroom

Clinical Practicum

Credit Hours: 1–30
Max credits per degree: 30
Campus: 
Course Delivery: Classroom

Prereqs: 
Full graduate standing in clinical psychology training program or permission of director of clinical training

Individually supervised evaluative and diagnostic work with clinic subjects. Emphasis on the refinement of skills in evaluating and diagnosing behavior deviations.

Practicum in Law and Psychology

Credit Hours: 
Campus: 
Course Delivery: 

Prereqs: 


For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Rick Bevins, Ph.D.
Graduate Chair: Debra Hope, Ph.D.

The department offers doctoral programs in six program areas of psychology (clinical, cognitive, developmental, law and psychology, neuroscience and behavior, and social). Students are admitted into one of these six programs.

Those admitted to graduate standing must have completed an undergraduate major in psychology, or its equivalent, including a laboratory course in experimental psychology. An undergraduate course in statistics is required. Students with otherwise superior undergraduate credentials who do not meet admission requirements may be admitted as either provisional or unclassified students while removing deficiencies.

In deciding on admissions, the primary considerations are the undergraduate transcript, the student's GPA, scores on the Graduate Record Examination, letters of recommendation, and relevant background experiences and skills.

Students admitted into their program will be presented with opportunities to acquire teaching, research, service or consultation skills, and expertise in psychology.

The PhD program in clinical psychology requires successful completion of a one-year, full-time clinical internship. The internship must be taken at a facility approved by the clinical faculty.

Law/Psychology Studies

Advisory Committee: Professor Wiener (chair)

Department of Psychology: Professors Bornstein, Flowers, Spaulding, Tomkins, Wilcox; Associate Professor Scalora; Assistant Professors Brank, Gervais
College of Law: Professors Gardner, Lawson, Poser, Schopp, Willborn

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 basic and applied research and 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. 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 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 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 MA 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 clinical psychology with emphasis on forensic psychology. The latter program leads to the PhD degree only, but it includes psycholegal course work, research, and clinical experiences. Students in other subfields of psychology also may construct specialty programs (e.g., developmental psychology and the law).

### Faculty

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Psychology).

Retrieved from "[http://bulletin.unl.edu/graduate/Psychology](http://bulletin.unl.edu/graduate/Psychology)"

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### Public Administration

#### Description

**School Director:** Russell L. Smith, Ph.D.

**UNL MPA Program Coordinator:** Meagan Van Gelder, Ph.D.

**UNL Graduate Adviser:** Ethel Williams, Ph.D.

**Master of Public Administration**

The mission of the master of public administration (MPA) is to strengthen the public service in a democratic and diverse society by educating students to manage and lead public and nonprofit institutions effectively, ethically and democratically.

The School of Public Administration is a member of the National Association of Schools of Public Affairs and Administration (NASPAA). Ranked among the top MPA programs in the US, the MPA program is fully accredited through 2004–2005.

Students living in Lincoln may complete the MPA degree by taking courses in Lincoln and/or Omaha.

Additional information may be obtained from:

School of Public Administration
University of Nebraska at Omaha
Annex 27
Omaha, NE 68182
(402) 554–2625

or

MPA Program–Lincoln
University of Nebraska–Lincoln
309 Architecture Hall
PO Box 880649
Lincoln, NE 68588–0649
(402) 472–4378

### Faculty

- Bartle, John –1994; Professor; BA 1979 Swarthmore; MPA 1983 Texas; PhD 1990 Ohio State
- Blair, Robert –1997; Associate Professor; BA 1973, MPA 1975 Nebraska (Omaha); PhD 1996 Nebraska (Lincoln)
- Box, Richard –1998; Professor; BS 1971, MS 1975 Southern Oregon State; MPA 1983 Golden State; DPA 1990 Southern California
- Brown, Sam –2002; Assistant Professor; PhD 1998 Maryland (Baltimore)
- Ebdon, Carol –1997; Associate Professor; BA 1978 John Carroll; MPA 1979 Toledo; PhD 1997 SUNY (Albany)
- Hamilton, Mary –2004; Sr. Executive-in-Residence; BA 1966 Bethel; MA 1969 North Carolina (Chapel Hill); PhD 1976 Maryland (College Park)
- Krane, Dale –1989; Professor; BA 1965, MA 1966 Indiana; PhD 1973 Minnesota
- Kriz, Ken –2003; Assistant Professor; PhD 2000 Indiana (Bloomington)
- Marshall, Gary –1995; Associate Professor; BA 1981 Massachusetts; MPA 1987 George Washington; PhD 1993 Virginia Tech
- Milliken, J. B. –2004; Professor and President, University of Nebraska; BA 1978 Nebraska (Lincoln); JD 1983 New York
- Reed, B. J. –1982; Professor and Dean, College of Public Affairs and Community Services; BA 1971, MS 1972 Fort Hays State; PhD 1977 Missouri
- Reed, Christine –1982; Professor; PhD 1983 Brown
- Schumaker, Alice –1998; Assistant Professor; PhD 1997 Nebraska (Lincoln)
- Smith, Russell –1986; Professor and Chair; BA 1972 Houston; MA 1974 North Texas State; PhD 1977 Tennessee
- Tarry, Scott –2000; Associate Professor; PhD 1993 Michigan
- Williams, Ethel –1996; Associate Professor; PhD 1996 Nebraska (Lincoln)
Social Work

Description
School Director: Theresa Barron-McKeagney, Ph.D., LCSW

The School of Social Work is administered by the University of Nebraska at Omaha. The school's BSW and MSW 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
http://socialwork.unomaha.edu

Faculty

- Anderson, Debra K. –2002; Associate Professor; BSW 1982 Mary Bismarck; MSW 1988 Missouri (Columbia); PhD 2000 Nebraska (Omaha)
- Barron-McKeagney, Theresa –1989; Associate Professor and Director; BSW 1981 Iowa; MSW 1986 Nebraska (Omaha); PhD 1993 Nebraska (Lincoln)
- Coyne, Ann –1975; Professor; BA 1958 Cornell; MSW 1975, PhD 1980 Nebraska (Lincoln)
- D'Souza, Henry –1988; Professor; MSW 1975 Mysore; PhD 1989 Michigan
- Weber, Gwen –1986; Professor; BA 1967, MSW 1969, PhD 1979 Nebraska (Lincoln)
- Woody, Jane –1975; Professor; MSW 1973 Western Michigan; PhD 1970 Michigan State

Sociology

Courses for SOCI (SOCI)

Water Quality Strategy

Crosslisted as POLS 475/875, SOCI 475/875, GEOL 475/875, CIVE 475/875, SOIL 475, NRES 475/875, WATS 475, MSYM 475/875, CRPL 475/875

Prereqs:
Senior standing or permission.

Capstone course.

Holistic approach to the selection and analysis of planning strategies for protecting water quality from nonpoint sources of contamination. Introduction to the use of methods of analyzing the impact of strategies on whole systems and subsystems; for selecting strategies; and for evaluating present strategies.

Pro-seminar in Latin American Studies

Crosslisted as HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878

Prereqs:
Junior standing and permission.

Topical seminar required for all Latin American Studies majors.

An interdisciplinary analysis of topical issues in Latin American Studies.
**Policy and Program Evaluation Research**

Crosslisted as SOCI 468/868

**Prereqs:**
6 hrs social sciences.

Techniques useful for research aiding in policy making and for assessing the impact of policy. Acquaints student with the role of research in policy formation and evaluation and to give the student experience in conducting such research.

**Credit Hours:** 3

**Course Delivery:** Classroom

**Groups:** Public Administration and Policy

**Pro-seminar in International Relations I**

Crosslisted as HIST 479/879, SOCI 466/866, ANTH 479/879, GEOG 448/848, ECON 466/866, AECN 467

**Prereqs:**
Senior standing and permission.

Open to students with an interest in international relations.

Topic varies

**Credit Hours:** 3

**Max credits per degree:** 3

**Course Delivery:** Classroom

**Groups:** International Relations

**Human Sexuality and Society**

Crosslisted as SOCI 471/871, EDPS 471/871, CYAF 471/871

**Prereqs:**
Junior standing and 12 hrs in one of the departments in which the course is listed.

Open to advanced students planning careers 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 the study of human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.

**Credit Hours:** 3

**Course Delivery:** Classroom

**Questionnaire Design**

Crosslisted as SOCI 947, SRAM 947

**Design of questionnaires for survey research and the theoretical and practical issues arising from them. Selection of appropriate measurement techniques for assessing opinions, past behaviors and events, and factual material.**

**Credit Hours:** 3

**Course Format:** Lecture 3

**Campus:**

**Course Delivery:** Classroom

**Strategies of Social Research: Qualitative Methods**

**Systematic review and application of qualitative research methods, including participant observation, unstructured interviewing, audiovisual techniques and personal document analysis; data collection and interpretation emphasized as well as different theoretical assumptions underlying their various approaches.**

**Credit Hours:** 3

**Course Delivery:** Classroom

**Social Change**

Crosslisted as SOCI 415/815

**LINK (http://bulletin.unl.edu/courses/SOCI/415)
### Contemporary Family Issues

**Course Code:** SOCI 425/825  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** Analysis of sociological principles of social change at both the community and primary group level; analysis of research and theoretical literature.

Contemporary issues confronting American families and family research. Adolescent pregnancy, work-family policy, family violence, divorce, single parents, and step families.

### Mass Communication

**Course Code:** SOCI 435/835  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** Analysis of the structure and effects of the media of mass communication.

### Social Psychology

**Course Code:** SOCI 441/841  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** Psychosocial bases of group behavior, inter-stimulation, and behavioral products.

### Personality and Social Structure

**Course Code:** SOCI 442/842  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** Personality and the sociocultural environment.

### Social Demography

**Course Code:** SOCI 444/844  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** Historical and cross-cultural approach to population issues by linking changes in fertility and mortality to social institutions. Focuses on the link between population processes and such issues as gender roles, the role of the family, the Third World, and poverty and inequality.

### Sociology of Urban Areas

**Course Code:** SOCI 445/845  
**Credit Hours:** 3  
**Course Delivery:** Classroom  
**Prereqs:** 9 hrs sociology or related social sciences  
**Description:** 

### Links
- [Contemporary Family Issues](http://bulletin.unl.edu/courses/SOCI/425)
- [Mass Communication](http://bulletin.unl.edu/courses/SOCI/435)
- [Social Psychology](http://bulletin.unl.edu/courses/SOCI/441)
- [Personality and Social Structure](http://bulletin.unl.edu/courses/SOCI/442)
- [Social Demography](http://bulletin.unl.edu/courses/SOCI/444)
- [Sociology of Urban Areas](http://bulletin.unl.edu/courses/SOCI/445)
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<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
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<tr>
<td>446/846</td>
<td>Environmental Sociology</td>
<td>9 hrs sociology or related social sciences</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>448/848</td>
<td>Family Diversity</td>
<td>9 hrs sociology or related social sciences or permission</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>449/849</td>
<td>Family Research and Theory</td>
<td>9 hrs sociology or related social sciences</td>
<td>3</td>
<td>Classroom</td>
</tr>
<tr>
<td>450/850</td>
<td>Social Institutions</td>
<td>9 hrs sociology or related social sciences</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>452/852</td>
<td>Sociology of Religion</td>
<td>9 hrs sociology or related social sciences</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Prereqs</td>
<td>Credit Hours</td>
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<tr>
<td>SOCI 453</td>
<td>Sociology of Health and Health Professions</td>
<td>9 hrs sociology or related social sciences.</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
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<td>Social and cultural bases of health and illness. Social factors in the definition of illness and in the organization and distribution of health care.</td>
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<tr>
<td>SOCI 455</td>
<td>History of Sociological Theory</td>
<td>9 hrs sociology or related social science.</td>
<td>3</td>
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<td>Survey of the nineteenth- and early twentieth-century writers whose ideas have had a strong impact on the development of contemporary sociology and sociological theories. Emphasis on the work of such persons as Karl Marx, Émile Durkheim, Max Weber, George Herbert Mead, and Georg Simmel.</td>
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<tr>
<td>SOCI 460</td>
<td>Education and Society</td>
<td>9 hrs sociology or related social sciences.</td>
<td>3</td>
<td>Classroom</td>
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<td>Analysis of education as a social institution and its relationship to other institutions, e.g., economy, polity, religion, and the family. Emphasizes the role of the educational institution as an agent of stability and change. Emphasis on research and policy evaluation.</td>
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<tr>
<td>SOCI 462</td>
<td>Advanced Social Research Methods</td>
<td>SOCI 101, 205 and 206; and permission.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The logic and design of sociological research: the nature of science and logic of social inquiry; epistemic relations; design of research problems; data collection techniques and sampling.</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SOCI 463</td>
<td>Quantitative Methods of Social Research I</td>
<td>SOCI 101, 205 and 206; and permission.</td>
<td>3</td>
<td>Lecture 3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The logic and techniques of sociological analysis: techniques of scaling and index construction; contingency table analysis; measures of association; parametric and nonparametric statistical inference; and generalizations from systematic findings.</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SOCI 464</td>
<td>Sociological Theory</td>
<td>Crosslisted as SRAM 863</td>
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</table>

Crosslisted as SRAM 863

The logic and techniques of sociological analysis: techniques of scaling and index construction; contingency table analysis; measures of association; parametric and nonparametric statistical inference; and generalizations from systematic findings.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Hours</th>
<th>Course Delivery</th>
<th>Prereqs</th>
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<tbody>
<tr>
<td>464/864</td>
<td>Survey Design and Analysis</td>
<td>3</td>
<td>Classroom</td>
<td>9 hrs sociology or related social sciences. The conceptual structures of selected theorists and of the basis of theory construction and testing.</td>
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<tr>
<td>465/865</td>
<td>Sociology of Occupations and Professions</td>
<td>3</td>
<td>Classroom</td>
<td>For SOCI 465: SOCI 205 (<a href="http://bulletin.unl.edu/courses/SOCI/205">http://bulletin.unl.edu/courses/SOCI/205</a>) and SOCI 206 (<a href="http://bulletin.unl.edu/courses/SOCI/206">http://bulletin.unl.edu/courses/SOCI/206</a>). This course is a prerequisite for: SOCI 465 (<a href="http://bulletin.unl.edu/courses/SOCI/465">http://bulletin.unl.edu/courses/SOCI/465</a>). For SOCI 865: None. Basic issues related to the design and analysis of sample surveys. The basics of questionnaire construction, sampling, data collection, analysis and data presentation.</td>
</tr>
<tr>
<td>470/870</td>
<td>Sociology of Deviance</td>
<td>3</td>
<td>Classroom</td>
<td>9 hrs sociology or related social sciences. Presentation of frameworks for occupations and professions; analysis of occupational structure and mobility in American society and its relation to adult socialization and career development; occupational and professional associations and society.</td>
</tr>
<tr>
<td>474/874</td>
<td>Social Inequality: Stratification and Life Chances</td>
<td>3</td>
<td>Classroom</td>
<td>9 hrs sociology or related social sciences. CRIM 413 (<a href="http://bulletin.unl.edu/courses/CRIM/413">http://bulletin.unl.edu/courses/CRIM/413</a>) and SOCI 474 (<a href="http://bulletin.unl.edu/courses/SOCI/474">http://bulletin.unl.edu/courses/SOCI/474</a>) cannot both be applied toward the degree. Theory and empirical research on conformity and deviance. Survey of the development of scholarly thinking on the nature and sources of deviance, societal reactions to deviance, and processes of social control.</td>
</tr>
<tr>
<td>480/880</td>
<td>Social Inequality: Stratification and Life Chances</td>
<td>3</td>
<td>Classroom</td>
<td>9 hrs sociology or related social sciences. Structured inequalities, including social class, race/ethnicity, gender and age stratification. The intersections of these as institutionalized inequalities examined for their causes and effects on individuals and groups. Emphasis on the role of social power, economic resources and occupational structures in the nature of inequality and social mobility in the United States.</td>
</tr>
</tbody>
</table>
### Minority Groups
**Course Code:** SOCI 481/881  
**Crosslisted as:** ETHN 481/881  
**Prereqs:**  
9 hrs sociology or related social sciences.  
**Systematic examination of racial, ethnic, and other minority groups. History and present status of such groups, the origins of prejudice and discrimination, and the application of social science knowledge toward the elimination of minority group problems.**

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Sociology of Women
**Course Code:** SOCI 490/890  
**Prereqs:**  
9 hrs social sciences.  
**SOCI 200** is strongly recommended.  
**Evaluation and application of scholarly theory and research on women in their societal context. The nature and effects of sex stratification, gendered culture, institutionalized sexism, feminist theory and sociology of knowledge.**

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Political Sociology
**Course Code:** SOCI 491/891  
**Prereqs:**  
9 hrs sociology or related social sciences.  
**Application of sociological analysis to the problem of power; power structures and elite formation as they relate to democratic society and political extremism.**

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Special Topics in Crime, Deviance, and Social Control
**Course Code:** SOCI 496/896  
**Prereqs:**  
Varies.  
**See course description or registration guide. Topic for the term announced prior to early registration.**  
**Variety of topics in crime, deviance, and social control.**

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Special Topics
**Course Code:** SOCI 498/898  
**Prereqs:**  
Varies.  
**See course description or registration guide. Topic for the term announced prior to early registration.**  
**Wide variety of different topics.**

**Credit Hours:** 3  
**Course Delivery:** Classroom

### Fieldwork in Sociology
**Course Code:** SOCI 897  
**Link:** [http://bulletin.unl.edu/courses/SOCI/897](http://bulletin.unl.edu/courses/SOCI/897)
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<tr>
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<th>Course Title</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
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<th>Prereqs</th>
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<tr>
<td>SOCI 899</td>
<td>Masters Thesis</td>
<td>1–6</td>
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<td>Classroom</td>
<td>Permission</td>
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<tr>
<td></td>
<td>Opportunity to apply concepts and methods in field setting and to obtain experience that will be valuable preparation for professional assignments in research, policy analysis, and administration.</td>
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<tr>
<td>SOCI 901</td>
<td>Seminar in Sociological Theory</td>
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<td>Classroom</td>
<td>Admission to masters degree program and permission of major adviser</td>
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<td>LINK (<a href="http://bulletin.unl.edu/courses/SOCI/899">http://bulletin.unl.edu/courses/SOCI/899</a>)</td>
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<tr>
<td>SOCI 902</td>
<td>Seminar in Research Methods</td>
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<td>9</td>
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<tr>
<td>SOCI 903</td>
<td>Seminar in Social Psychology</td>
<td>3</td>
<td>9</td>
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<td>Permission</td>
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<tr>
<td>SOCI 904</td>
<td>Seminar in Family</td>
<td>3</td>
<td>9</td>
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<tr>
<td>SOCI 905</td>
<td>Seminar in Stratification, Class, and Inequality</td>
<td>3</td>
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Prereqs: Permission
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<tr>
<td>SOCI 906</td>
<td>Seminar in Race and Ethnicity</td>
<td>3</td>
<td>9</td>
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<tr>
<td>SOCI 907</td>
<td>Seminar in Sex and Gender</td>
<td>3</td>
<td>9</td>
<td>Permission</td>
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<tr>
<td>SOCI 908</td>
<td>Seminar in Crime and Deviance</td>
<td>3</td>
<td>9</td>
<td>Permission</td>
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<tr>
<td>SOCI 995</td>
<td>Seminar in Professional Development</td>
<td>1</td>
<td>3</td>
<td>Permission</td>
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<tr>
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<td>P/N only. Professional development for careers in college teaching and research in sociology.</td>
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<tr>
<td></td>
<td>A. Teaching (1 cr)</td>
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<td></td>
<td>B. Graduate Study and Career Research (1 cr)</td>
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<td>C. Publications (1 cr)</td>
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<td>D. Teaching (1 cr)</td>
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<tr>
<td>SOCI 995A</td>
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<td>SOCI 995B</td>
<td>Graduate Study and Career Research</td>
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<tr>
<td>995D</td>
<td>Publications</td>
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<td>995D</td>
<td>Research Other Than Thesis</td>
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<tr>
<td>998</td>
<td>Special Topics Seminar</td>
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<td>Permission</td>
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<tr>
<td>999</td>
<td>Doctoral Dissertation</td>
<td>1–24</td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
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<tr>
<td>818</td>
<td>Data Collection Methods</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
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<tr>
<td>819</td>
<td>Applied Sampling</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
</tr>
</tbody>
</table>

**Data Collection Methods**

Effects of various data collection methods on survey errors. The strengths, weaknesses, and challenges of data collection modes and mixed-mode methods. Processes underlying data collection and practical challenges that arise with each mode: coverage error; nonresponse error; interviewer effects and training; timing; and mode effects.

**Applied Sampling**

Design of probability samples, sampling populations of humans and unique challenges posed by such populations, restricted by cost and available sampling frames. Simple random sampling, stratification, cluster sampling, systematic sampling, multistage sampling, and probability proportional to size sampling, area probability sampling, and telephone samples.
Description
For a brief description of the program, application requirements and contact information, view the graduate program summary.
(http://www.unl.edu/gradstudies/prospective/programs/Sociology)

Department Chair: Julia McQuillan, Ph.D.
Graduate Committee: Assistant Professor Falcí (Chair); Professor Whitbeck; Assistant Professors Cheadle, Smyth
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 Examination and have their scores submitted as part of their application. 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 chosen area of specialization. Students are required to take SOCI 855, 862, 863, and 864. All candidates for advanced degrees are required to take SOCI 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
For faculty list, research interests and department contact information, view the graduate program summary.
(http://www.unl.edu/gradstudies/prospective/programs/Sociology)

Retrieved from "http://bulletin.unl.edu/graduate/Sociology" (http://bulletin.unl.edu/graduate/Sociology)"
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Education
Subject Areas
- Education (EDUC) (#EDUC)
- Education and Human Sciences (CEHS) (#CEHS)
- Educational Administration (EDAD) (#EDAD)
- Educational Psychology (EDPS) (#EDPS)
- Special Education (SPED) (#SPED)
- Speech-Language Pathology and Audiology (SLPA) (#SLPA)
- Teaching, Learning and Teacher Education (TEAC) (#TEAC)

Courses for EDUC (EDUC)

Special Topics in Education
Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

Prereqs:
EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel; EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

Courses for CEHS (CEHS)

International Cultures Experience in the Local Community

Lecture and discussion will be required as part of the field discussion.
Field hours will be assigned at the rate of three hours per week.

An international cultural experience in the local community by providing field-based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.

International Experience in Communities, Schools, and Families

Lecture and discussion will be required as part of the field discussion.
Field hours will be assigned at the rate of three hours per week.

An international cultural experience in the local community by providing field-based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.
Courses for EDAD (EDAD)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDAD 421/821</td>
<td>Foundations of Human Resource Development</td>
<td>Credit Hours: 3</td>
</tr>
<tr>
<td>EDAD 422/822</td>
<td>Instructional Design in Human Resource Development</td>
<td>Credit Hours: 3</td>
</tr>
<tr>
<td>EDAD 801</td>
<td>Cross-Cultural Leadership Studies</td>
<td>Credit Hours: 3</td>
</tr>
<tr>
<td>EDAD 811</td>
<td>Practicum in Educational Administration and Supervision</td>
<td>Credit Hours: 3-4</td>
</tr>
</tbody>
</table>

### EDAD 421/821 Foundations of Human Resource Development

Lays the foundation for further study of Human Resource Development (HRD) by examining the knowledge of HRD professionals, the roles they play, and the organizational settings in which HRD occurs. The design and development of education and training programs, how change occurs in organizations, how career development can optimize the match between individual and organizational goals and needs, and how to improve performance in organizations by analyzing performance opportunities and designing employee training to address these opportunities.

### EDAD 422/822 Instructional Design in Human Resource Development

Examines the role of instruction for enhancing human learning and performance in organizations. The analysis of performance problems/opportunities and design of interventions for learning and performance improvement. The essential components of instruction, selecting 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.

### EDAD 801 Cross-Cultural Leadership Studies

For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their 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 through the comparison of cultural viewpoints. Native American understanding of leadership.

### EDAD 811 Practicum in Educational Administration and Supervision

May be repeated for credit. Rating and supervision of teachers; principles and procedures in the development of school policies; selection and
<table>
<thead>
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<tbody>
<tr>
<td><strong>EDAD 813</strong> Administration in Physical Education and Athletics</td>
</tr>
<tr>
<td>Organization and administration of physical education and athletic programs in colleges and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.</td>
</tr>
<tr>
<td>Credit Hours: 3</td>
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<td>Campus:</td>
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<td>Course Delivery: Classroom</td>
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<tr>
<td><strong>EDAD 814</strong> Risk Management for Sport Facilities</td>
</tr>
<tr>
<td>Legal and risk management aspects of construction, supervision, and management of sport, athletic, and recreation indoor and outdoor facilities.</td>
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<tr>
<td>Credit Hours: 3</td>
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<td>Campus:</td>
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<tr>
<td><strong>EDAD 830</strong> Administrative Theory in Educational Organizations</td>
</tr>
<tr>
<td>Introduction to classic and contemporary administrative theory as applied to educational organizations. The theoretical nature of the course content is relevant to those with an interest in a broad variety of educational institutions. General organizational theory, organizational models, historical schools of administrative theory, authority, power, motivation, and leadership. Frequently students are involved in studying problems of practice as a means of testing theory.</td>
</tr>
<tr>
<td>Credit Hours: 3</td>
</tr>
<tr>
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</tr>
<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td><strong>EDAD 833</strong> Educational Finance</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td>Credit Hours: 3</td>
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<tr>
<td>Campus:</td>
</tr>
<tr>
<td>Course Delivery: Classroom</td>
</tr>
<tr>
<td><strong>EDAD 835</strong> Business Management of Schools</td>
</tr>
<tr>
<td>Allocation and management of fiscal resources including aspects of financial planning and reporting, budgeting and accounting procedures, purchasing, risk management and insurance, investing and bond issues, and auxiliary service.</td>
</tr>
<tr>
<td>Credit Hours: 3</td>
</tr>
<tr>
<td>Campus:</td>
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<tr>
<td>Course Delivery: Classroom</td>
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<tr>
<td><strong>EDAD 836</strong> Planning for Change</td>
</tr>
<tr>
<td>Rationale for planning in a changing environment will be explored; the theoretical base for planning presented; strategic, futuristic planning and operational planning explored; the development of planning strategies, techniques and procedures; the process of evaluation, feedback and revisions explored; and the management of the change process analyzed.</td>
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<tr>
<td>Credit Hours: 2–3</td>
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<td>Campus:</td>
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<tr>
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<td>Course Code</td>
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<tr>
<td>EDAD 837</td>
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<td>EDAD 852</td>
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</table>
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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

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 states and school districts that are grounded in state and federal law.

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.

Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom of speech, association, and press; and constitutional principles enforcing the first amendment’s command that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof.”
**Introduction to Law, Legal Process, and Legislation**

Credit Hours: 3
Campus: Classroom

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.

**Torts I**

Crosslisted as LAW 503G

Credit Hours: 1-6
Max credits per degree: 6
Campus: Classroom

Legal protection afforded in civil proceedings against interference with the security of one's person, property, relations, and other intangible interests. 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.

**Torts II**

Credit Hours: 1-6
Max credits per degree: 6
Campus: Classroom

Legal protection afforded in civil proceedings against interference with the security of one's person, property, relations, and other intangible interests. 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.

**Designing Instructional Technology K–12**

Credit Hours: 1-3
Max credits per degree: 3
Campus: Classroom

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Workshop Seminar**

Credit Hours: 1-3
Max credits per degree: 3
Campus: Classroom

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Independent Study**

Credit Hours: 1-6

Prereqs:
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<th>Course Name</th>
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<td>EDAD 899</td>
<td>Masters Thesis</td>
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<td>EDAD 901</td>
<td>System-Level School Improvement</td>
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<td>This course is a prerequisite for: <a href="http://bulletin.unl.edu/courses/EDAD/902">EDAD 902</a></td>
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<td>Data for Action Planning</td>
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<td>Issues in Community Relations</td>
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<td>Analysis in Continuous Improvement</td>
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<tr>
<td>EDAD 905</td>
<td>Issues in Governance of Educational Institutions</td>
<td>1-3</td>
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<td></td>
<td>Issues in the governance of K-12 schools including administrator–school board roles and relationships.</td>
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<tr>
<td>EDAD 906</td>
<td>Issues in System Level Administration</td>
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<td>Prereqs: Masters degree or equivalent.</td>
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<td>Selected system level issues faced by pre-K to grade 12 school administrators.</td>
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<tr>
<td>EDAD 907</td>
<td>Issues in Educational Politics and Policies</td>
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<td>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 institutional structures with competing interests; understand people as the actors in roles they occupy in the political system.</td>
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<tr>
<td>EDAD 908/929</td>
<td>Seminar in Adult and Continuing Education</td>
<td>1-6</td>
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<tr>
<td></td>
<td>Crosslisted as EDPS 929</td>
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<tr>
<td>EDAD 909</td>
<td>Seminar in Human Resource Development</td>
<td>1-3</td>
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<td>Prereqs: EDAD 821 or 822</td>
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<td>Current research and theory within the field of human resource development, broadly defined. Stresses key problems affecting the training, development, and education of human resources within organizational settings.</td>
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<tr>
<td>EDAD 910</td>
<td>The Higher Education Environment</td>
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<td>Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutions. Environment concepts, components and structures are studied together with analysis techniques and methodological approaches to future study.</td>
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</table>
### Educational Leadership in Higher Education

**EDAD 912A**

Strategic thinking, application of leadership theories in the educational setting. Develop a clear personal philosophy of leadership and engage in collaborative active-learning. Multi-media simulations and/or scenarios and role playing to examine options, consequences, and leadership effectiveness in decision-making.

- Credit Hours: 3
- Course Format: Lecture 3
- Campus:
- Course Delivery: Classroom

### Educational Leadership in Community Colleges

**EDAD 912B**

Issues facing community college leaders and the knowledge, skills, and competencies necessary to provide effective leadership in the community college setting. Case studies of community colleges, combined with the literature on community college leadership, and active learning opportunities to examine current practices and develop a personal philosophy of leadership.

- Credit Hours: 3
- Course Format: Lecture 3
- Campus:
- Course Delivery: Classroom

### Administrative Issues in Higher Education

**EDAD 921**

Introduction to contemporary issues in the administration of higher education with a focus on the scholarly literature, a comparative analysis of administration in types of institutions, leadership and planning, institutional and environmental issues, and selected topics.

- Credit Hours: 3
- Course Format: Lecture 3
- Campus:
- Course Delivery: Classroom

### Finance in Higher Education

**EDAD 922**

Federal and state government funding, institutional planning, technological and community influences, human resources finance, budgeting, and sources of financial support as they relate to higher education institutions and agencies.

- Credit Hours: 3
- Course Format: Lecture 3
- Campus:
- Course Delivery: Classroom

### The Community/Junior College

**EDAD 923**

Designed particularly for those interested in upper secondary and college levels. Junior college movement; relationship of movement to provisions 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.

- Credit Hours: 3
- Course Format: Lecture
- Campus:
- Course Delivery: Classroom

### Administration of Higher Education Instructional Programs

**EDAD 924**

Administration of higher education instructional programs. Exploration of curricular issues including an assessment of program quality and reputation, program reallocations, retrenchments, and expansions.

- Credit Hours: 3
- Course Format: Lecture 3
- Campus:
- Course Delivery: Classroom
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Overview</th>
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<tbody>
<tr>
<td>EDAD 925</td>
<td>Law and Higher Education</td>
<td>Examination of legal principles applicable to higher education institutions. Overview of the legal system, higher education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights and responsibilities, institutional and personal liability, and other selected issues.</td>
</tr>
<tr>
<td>EDAD 926</td>
<td>The American Professoriate: An Administrative Perspective</td>
<td>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.</td>
</tr>
<tr>
<td>EDAD 931</td>
<td>Higher Education Information Systems</td>
<td>Foundation in management information systems. Issues in information systems, current research and writings, key terms, and how information systems impacts organizational culture, business processes, work-flow, and overall operations of an institution. The roles in the application, analysis, and management of higher education administration technology.</td>
</tr>
<tr>
<td>EDAD 932</td>
<td>Global Issues in Higher Education</td>
<td>Selected issues affecting global educational policies and practices.</td>
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<tr>
<td>EDAD 933</td>
<td>Strategic Planning</td>
<td><strong>EDAD 933</strong> requires the student to analyze their respective institution's planning process and plan, and to participate in a simulation activity that reinforces the principles and practices of strategic planning. System theory, practice and problem solving. The strategic planning process in higher education. Models of strategic planning.</td>
</tr>
<tr>
<td>EDAD 934</td>
<td>Teaching and Learning in the Community College</td>
<td>Develop comprehensive understanding of five aspects of the community college: Curricular missions in general education, transfer education, career education, remedial/developmental education and community education; faculty and student populations; exemplary teaching and assessment of student learning outcomes; program and curriculum development; and human resources aspects related to instructional programs in hiring faculty and providing faculty development programs.</td>
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<tr>
<td>935</td>
<td>Workforce, Economic, and Community Development</td>
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<td>948</td>
<td>Instructional Leadership: Emerging Trends and Practices</td>
<td>3</td>
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<tr>
<td>956</td>
<td>Employment Law Seminar</td>
<td>1-4</td>
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<tr>
<td>959</td>
<td>Law and Educational Administration</td>
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<tr>
<td>960</td>
<td>Public Employment Law</td>
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<tr>
<td>961</td>
<td>Trial Advocacy</td>
<td>1-4</td>
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</table>

**Workforce, Economic, and Community Development**

Workforce, economic and community development role of higher education within the broader context of recent economic, social, and technological changes in communities, society, and the economy. Applicable to higher education in general with an emphasis on the example of two-year community colleges.

**Instructional Leadership: Emerging Trends and Practices**

Crosslisted as TEAC 948

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**Employment Law Seminar**

Crosslisted as LAW 759G

Selected current national and state legal issues pertaining to private and public employment.

**Law and Educational Administration**

Crosslisted as LAW 695G

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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.

**Public Employment Law**

Legal issues relating to public employment with particular emphasis on public schools and colleges; collective bargaining by public employees, impasse, and 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, wage and hour laws, retirement plans, and public records.

**Trial Advocacy**

Prereqs: LAW 646G

Credit Hours: 1-4

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<td>EDAD 963</td>
<td>Legislation Seminar</td>
<td>LAW 777G</td>
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<td>Local Government Law</td>
<td>LAW 788G</td>
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<td>EDAD 966</td>
<td>Seminar in Educational Administration</td>
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<td>EDAD 968</td>
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<td>LAW 621G</td>
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<td>Criminal Law</td>
<td>LAW 508G</td>
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<td>EDAD 971</td>
<td>Evidence</td>
<td>LAW 646G</td>
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**Course Delivery:** Classroom

**Credit Hours:**
- Legislation Seminar: 1-4
- Local Government Law: 1-4
- Seminar in Educational Administration: 1-3
- Education Law Seminar: 1-4
- Criminal Law: 3
- Evidence: 1-4

**Campus:**
- Legislation Seminar
- Local Government Law
- Seminar in Educational Administration
- Education Law Seminar
- Criminal Law
- Evidence
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<th>Max credits per degree</th>
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<tr>
<td>EDAD 973</td>
<td>Jurisprudence</td>
<td>LAW 672G</td>
<td>What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.</td>
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<td>EDAD 976</td>
<td>Legal Control of Discrimination</td>
<td>LAW 680G</td>
<td>Selected legal issues pertaining to the legal control of discrimination.</td>
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<td>EDAD 977</td>
<td>Constitutional History</td>
<td>LAW 619/619G</td>
<td>American constitutional history with a focus on &quot;transformative&quot; moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.</td>
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<td>EDAD 978</td>
<td>Mass Communications Law</td>
<td>LAW 649G</td>
<td>In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.</td>
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<tr>
<td>EDAD 979</td>
<td>Seminar in College Student Personnel Work</td>
<td>EDPS 979</td>
<td>Current professional issues 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.</td>
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<tr>
<td>EDAD 981</td>
<td>Introduction to Research</td>
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<td>A written report is required. Investigation and analysis of current problems in education administration and supervision.</td>
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<tr>
<td>EDAD 988</td>
<td>Dissertation Proposal Development</td>
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</table>
Admission to a doctoral program

Intended for students who are working on the development of their dissertation proposal. Component parts of the dissertation proposal. Students from all areas of Teachers College and the University of Nebraska who are in the process of developing their proposal will find this course to be of use. Typically the course should be taken after the research tools have been completed.

EDAD 989 Survey of Administrative Research

Intended primarily for students of education who are candidates for doctoral degrees. Readings, discussions, and an analysis of educational problems and research.

EDAD 990 Workshop Seminar

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

EDAD 991 Field Studies in Education

Crosslisted as NUTR 991, TEAC 991

Prereqs: Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

EDAD 993 Workshop Seminar

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

EDAD 995 Doctoral Seminar

Prereqs: Permission

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. Intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

EDAD 998 Seminar: Internship in Educational Administration


### Doctoral Dissertation

**Course Code:** EDAD 999  
**Credit Hours:** 1-6  
**Max credits per degree:** 12  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Permission

Opportunity for educational administrators to gain an understanding of administering changes or innovations, and to obtain supervised field experience. Consideration will be given antecedents of change, change models, the role of government, forces that restrict or stimulate change, tools to implement change, and evaluation.

[LINK](http://bulletin.unl.edu/courses/EDAD/999)

### Historical Methods in Educational Research

**Course Code:** EDPS 900J  
**Credit Hours:** 1-24  
**Max credits per degree:** 55  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair

Crosslisted as *EDAD 900*

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

[LINK](http://bulletin.unl.edu/courses/EDPS/900J)

### Seminar in College Student Development

**Course Code:** EDPS 977  
**Credit Hours:** 2-3  
**Max credits per degree:** 6  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** EDPS *800 or equivalent; EDPS 459*  
(https://bulletin.unl.edu/courses/EDPS/459/859)  
or equivalent

Special field experiences and research projects are available to students for additional credit. Current knowledge, theories, and practices, and related issues in the area of college student development.

[LINK](http://bulletin.unl.edu/courses/EDPS/977)

### Special Topics in Education

**Course Code:** SPED 892  
**Credit Hours:** 1-3  
**Max credits per degree:** 12  
**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  
**Prereqs:** EDPS 859  
(https://bulletin.unl.edu/courses/EDPS/859) or equivalent

Crosslisted as *EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892*

Aspects of education not covered elsewhere in the curriculum.

[LINK](http://bulletin.unl.edu/courses/SPED/892)

### Coordination in Occupational Training Programs

**Course Code:** TEAC 425/825  
**Credit Hours:** 1-3  
**Course Delivery:** Classroom

Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of
Courses for EDPS (EDPS)

**Pro-seminar in Latin American Studies**

Crosslisted as HIST 478/878, POLS 478/878, SOCI 478/878, MODL 478/878, LAMS 478, GEOG 478/878, EDPS 478/878

Prereqs:
Junior standing and permission.

Topical seminar required for all Latin American Studies majors.

An interdisciplinary analysis of topical issues in Latin American Studies.

Credit Hours: 3
Max credits per degree: 6
Course Delivery: Classroom
Groups: Integrative Courses, Research and Reading

**Teaching Learners to Learn**

Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

Credit Hours: 3
Campus:
Course Delivery: Classroom

**Seminar in Adult and Continuing Education**

Crosslisted as EDPS 929

Current professional issues 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.

Credit Hours: 1–6
Max credits per degree: 6
Campus:
Course Delivery: Classroom

**Seminar in College Student Personnel Work**

Crosslisted as EDPS 979

Mental, social, and emotional development of boys and girls during the adolescent period.

Credit Hours: 2–3
Max credits per degree: 6
Campus:
Course Delivery: Classroom

**Psychology of Adolescence**

Crosslisted as EDPS 451/851

Current professional issues 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.

Credit Hours: 3
Course Delivery: Classroom

**Human Cognition and Instruction**

Crosslisted as EDPS 454/854

Current professional issues 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.

Credit Hours: 3
Course Delivery: Classroom
### Cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.

#### EDPS 459/859
**Statistical Methods**

This course is a prerequisite for:
- EDPS 800
- EDPS 470
- NUTR 486
- EDPS 500A
- EDPS 500B
- EDPS 500C
- EDPS 500D
- EDPS 500E

Computation and interpretation of measures of central position, variability, and correlation; introduction to sampling, probability, and tests of significance.

#### EDPS 462/862
**Psychology of Disability**

Research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.

#### EDPS 463/863
**Introduction to Applied Behavior Analysis**

This course is a prerequisite for: EDPS 954

Research methods and findings, concepts, and principles of operant conditioning as related to the experimental analysis of human behavioral events and to the development of behavior engineering technologies.

#### EDPS 465/865
**Practices in Counseling and Personnel Services**

Basic practices and related research in counseling and helping practices in educational or other youth-serving agencies. Specialized applications to populations presenting unique problems are offered in sections B through L.

- B. Special Practices for Handicapped Children and Youth (1 cr) Prereq or parallel: EDPS 465A
- D. Special Practices for Exceptionally Talented and Gifted (1 cr) Prereq or parallel: EDPS 465A
- E. Special Practices in the Elementary School (1 cr) Prereq or parallel: EDPS 465A
- F. Special Practices for Vocational Education/Development Programs (1 cr) Prereq or parallel: EDPS 465A
- L. Special Practices for Community Helpers Working with Adults (1 cr) Prereq or parallel: EDPS 465A

Basic practices and related research in counseling and helping practices in educational or other youth-serving agencies. Specialized applications to populations presenting unique problems are offered in sections B through L.

- B. Special Practices for Handicapped Children and Youth (1 cr) Prereq or parallel: EDPS 465A
- D. Special Practices for Exceptionally Talented and Gifted (1 cr) Prereq or parallel: EDPS 465A
- E. Special Practices in the Elementary School (1 cr) Prereq or parallel: EDPS 465A
- F. Special Practices for Vocational Education/Development Programs (1 cr) Prereq or parallel: EDPS 465A
- L. Special Practices for Community Helpers Working with Adults (1 cr) Prereq or parallel: EDPS 465A
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<th>Credit Hours</th>
<th>Course Delivery</th>
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<td>EDPS 469/869</td>
<td>Psychopathological Disorders of Childhood and Adolescence</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/469">Link</a></td>
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<tr>
<td></td>
<td>Investigation of the genesis, course, classification, and treatment of function and organic pathologies found in children and adolescents.</td>
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<tr>
<td>EDPS 470/870</td>
<td>Introduction to Educational and Psychological Measurement</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/470">Link</a></td>
<td>3</td>
<td>Classroom</td>
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<td>Prereqs: EDPS 459 or equivalent.</td>
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<td>Introduction to the construction, 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.</td>
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<tr>
<td>EDPS 496/896</td>
<td>Directed Field Experience</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/496">Link</a></td>
<td>1-24</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: Permission.</td>
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<tr>
<td>EDPS 498/898</td>
<td>Special Topics</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/498">Link</a></td>
<td>1-6</td>
<td>Classroom</td>
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<td>Prereqs: Permission.</td>
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<td></td>
<td>Seminar on current issues or topics in educational psychology. Topics vary.</td>
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<tr>
<td>EDPS 800</td>
<td>Foundations of Educational Research</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/800">Link</a></td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: EDPS 459 or equivalent or parallel EDPS 859</td>
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<td></td>
<td>Purposes 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.</td>
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<tr>
<td>EDPS 845</td>
<td>Computer-Assisted Research Data Analysis</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/845">Link</a></td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: One statistics course beyond EDPS 859</td>
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<td></td>
<td>Statistical software packages for both mainframe and microcomputers. How to develop and manage data files; how to transfer data files between computers; and principles of data transformation and selection.</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
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<tr>
<td>EDPS 846</td>
<td>Foundations of Health Behavior</td>
<td>NUTR 846</td>
<td>3</td>
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<tr>
<td></td>
<td>The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education.</td>
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<tr>
<td>EDPS 847</td>
<td>Theoretical Models of Health Behavior Change</td>
<td>NUTR 847</td>
<td>3</td>
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<td></td>
<td>Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks.</td>
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<tr>
<td>EDPS 850</td>
<td>Child Psychology</td>
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<tr>
<td></td>
<td>Advanced study of the behavior and development of preschool and elementary school children.</td>
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<tr>
<td>EDPS 853</td>
<td>Psychological Assessment I</td>
<td></td>
<td>3</td>
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<td></td>
<td>Prereqs: EDPS 870 or equivalent</td>
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<td></td>
<td>This course is a prerequisite for EDPS 956.</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDPS 860</td>
<td>Applications of Selected Advanced Statistics</td>
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<td>Prereqs: EDPS 859</td>
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<td></td>
<td>Variety of parametric and nonparametric 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. Appropriate mainframe and microcomputer statistical packages utilized to assist in the numerical analysis of data.</td>
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<tr>
<td>EDPS 866</td>
<td>Counseling Pre-Practicum</td>
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<td></td>
<td>Counseling skills required for basic, entry-level clinical work. Practicing</td>
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</tbody>
</table>
skills, receiving peer/instructor performance feedback, and role-playing clinical situations.

**EDPS 867**

**Roles and Functions in School Psychological Services**

Foundations, models, and practices of contemporary school psychology and an exploration of transitions and future developments in the profession. Investigations of the major legal and ethical systems affecting specialists in the schools and the application of standards for ethical professional practice.

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**Prerequisites:**
- EDPS *866 or comparable course or permission

**EDPS 868**

**Multicultural Counseling**

Prereqs:
- EDPS *866 or comparable course or permission

Ethnic subcultures in the US, cross-cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity in the counseling relationship.

**Credit Hours:** 3

**Campus:**

**Course Delivery:** Classroom

**EDPS 890**

**Workshop Seminar**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Credit Hours:** 1–12

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

**EDPS 893**

**Workshop Seminar**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Credit Hours:** 1–12

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

**EDPS 897J**

**Gifted/Talented**

**EDPS 899**

**Masters Thesis**

Prereqs:
- Admission to masters degree program and permission of major adviser

**Credit Hours:** 6–10

**Campus:**

**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPS 900A</td>
<td>Correlational and Experimental Methods in Education Research</td>
<td>EDPS 459 or equivalent; EDPS *800 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td></td>
<td>Integrated view of correlational and experimental research in education and social sciences. Builds on idea of relationships among variables and concept of casual relationships between variables. Possible research designs in light of these general principles.</td>
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<tr>
<td>EDPS 900B</td>
<td>Single Case/Small N Methods in Educational Research</td>
<td>EDPS 459 or equivalent; EDPS *800 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>General issues related to the use of single case and/or small N methods, in which individuals are observed over time before and subsequent to experimental intervention. Comparison to traditional experimental methods. Repeated measurement techniques. Various research designs appropriate to single case methods.</td>
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<tr>
<td>EDPS 900D</td>
<td>Survey Methods in Educational Research</td>
<td>EDPS 459 or equivalent; EDPS *800 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<td>Principles and applications of survey research. Use of appropriate sampling techniques and applications of survey methods to the study of relative incidence, distribution, and interrelations of educational, sociological, and psychological variables.</td>
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<tr>
<td>EDPS 900J</td>
<td>Historical Methods in Educational Research</td>
<td>EDPS *800 or equivalent; EDPS 459 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Crosslisted as EDAD 900J</td>
<td>Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.</td>
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<tr>
<td>EDPS 900K</td>
<td>Qualitative Approaches to Educational Research</td>
<td>EDPS 459 or equivalent; EDPS *800 or equivalent</td>
<td>3</td>
<td>Lecture 3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Uses of qualitative research methods in education. The theoretical premises</td>
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</table>
of research using qualitative methods and the application of this information through critique and planning research. Qualitative methods for data collection.

### Research and Evaluation Literature on Health Promotion

**Course Code:** EDPS 905  
**Crosslisted as:** NUTR 905

Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care–based health promotion and education programs.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Seminar in Qualitative Research

**Course Code:** EDPS 935  
**Crosslisted as:** TEAC 935

**Prereqs:**  
EDUC 900K or permission

Seminar intended for doctoral–level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Mixed Methods Research

**Course Code:** EDPS 936

**Prereqs:**  
EDUC 800 or equivalent, and EDUC 900K

EDPS 936 is for students already familiar with quantitative and qualitative research. An introduction to mixed methods research as a distinct methodology in social science research. Topics include the value and use of this approach, philosophical assumptions, various types of design, and approaches to designing and conducting mixed methods research.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

### Intermediate Statistics: Experimental Methods

**Course Code:** EDPS 941  
**Crosslisted as:** SRAM 941

**Prereqs:**  
EDPS 859

Computation, interpretation, and application of analysis of variance techniques, including factorial and mixed model designs. Computer and microcomputer software accessed.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

### Intermediate Statistics: Correlational Methods

**Course Code:** EDPS 942  
**Crosslisted as:** SRAM 942

**Prereqs:**  
EDPS 859 or equivalent

Various correlational-based statistical procedures presented, including linear and nonlinear regression, multiple regression, statistical control, analysis of interactions, the general linear model, factor analysis, and discriminant analysis.

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom
Multicultural Issues in School Psychological Service Delivery

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.

Cognitive and Behavioral Therapy with Children and Adolescents

Prereqs: Permission

This course is a prerequisite for: EDPS 955

Cognitive and behavioral techniques. Theoretical issues, application and evaluation of major empirically-validated therapeutic treatments that represent best practices in child and adolescent therapy.

Intellectual Assessment

Prereqs: or coreq: EDPS 859, 870

This course is a prerequisite for: EDPS 951

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.

Academic and Behavioral Assessment

Prereqs: EDPS 950 and permission

This course is a prerequisite for: EDPS 954

Advanced study of the theory and practice in the assessment of educational and psychological problems of children and youth to include assessment of systems that impact on the behavior of children and youth. Assessment techniques include environmental observation, interviewing, standardized assessment procedures for academic skills, adaptive behavior, social and emotional problems, curriculum based assessment, and functional analysis and assessment. Ecological-behavioral basis of assessment is explored. A complete psychological and educational evaluation is conducted in a school or other relevant setting.

Systems of Consultation in School Psychology

Prereqs: EDPS 863

Intensive analysis of the theory and practice of various systems of mental health consultation in the schools with special emphasis and practicum with mental health service models other than conventional clinical, psychometric, and direct psychoeducational remediation models.
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDPS 953</td>
<td>Psychological Assessment II</td>
<td>Prereqs: EDPS 853 or equivalent</td>
<td>4</td>
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<td>Classroom</td>
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<td>This course is a prerequisite for EDPS 956</td>
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<tr>
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<td>Advanced assessment and testing skills. Selection, administration and interpretation of a battery of psychological tests and integration and synthesis of relevant test and non-test data into an accessible report writing format. Development of effective consultation and test interpretation feedback skills.</td>
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<tr>
<td>EDPS 954</td>
<td>Interventions in School Psychology</td>
<td>Prereqs: EDPS 463 (EDPS 863), EDPS 951</td>
<td>3</td>
<td>Lecture 3</td>
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<td></td>
<td>Prepares school psychologists to plan and provide evidence-based psychoeducational interventions for children, youth, families and schools. Application of ecobehavioral theory, models of school mental health, the scientist-practitioner model, the practice of psychotherapy, and empirical evidence of the effectiveness of interventions for culturally and linguistically diverse students.</td>
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<tr>
<td>EDPS 955</td>
<td>Child Therapy</td>
<td>Prereqs: EDPS 949</td>
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<td></td>
<td>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.</td>
</tr>
<tr>
<td>EDPS 956</td>
<td>Projective Psychological Assessment</td>
<td>Prereqs: EDPS 853 (EDPS 953) Permission may be granted by Instructor to take Psychological Assessment II after Projective Psychological Assessment.</td>
<td>4</td>
<td>Lecture</td>
<td>Classroom</td>
<td>The primary goal of this course is to assist doctoral students in developing their ability to utilize projective assessment techniques to integrate information from a variety of sources about a person (an adult or older adolescent) into an integrated, useful psychological report. The broad array of data will include not only the results of formal tests (e.g., the Rorschach), but also personal and family history, and behavioral observations.</td>
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<tr>
<td>EDPS 958B</td>
<td>Practicum in School Psychology Consultation Techniques</td>
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**Notes:**
- EDPS 953 is a prerequisite for EDPS 956.
- EDPS 954 requires Prereqs: EDPS 463 (EDPS 863), EDPS 951.
- EDPS 955 requires Prereqs: EDPS 949.
- EDPS 956 requires Prereqs: EDPS 853 (EDPS 953).
### Problem Solving and Concept Learning in Humans

**Prereqs:**
- EDPS 863 [Link](http://bulletin.unl.edu/courses/EDPS/863), 952 [Link](http://bulletin.unl.edu/courses/EDPS/952), 997D [Link](http://bulletin.unl.edu/courses/EDPS/997D) or equivalent, and permission.

Practicum experience in ecological/behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/feedback sessions each week.

**Credit Hours:** 1–4

**Max credits per degree:** 8

**Campus:** 

**Course Delivery:** Classroom

### Cognitive Development

**Prereqs:**
- EDPS 850 [Link](http://bulletin.unl.edu/courses/EDPS/850) or 851 [Link](http://bulletin.unl.edu/courses/EDPS/851) and 854 [Link](http://bulletin.unl.edu/courses/EDPS/854)

Critical examination of the non-Piagetean research literature and theory which examines higher mental processes in humans through the lifespan.

**Credit Hours:** 3

**Campus:** 

**Course Delivery:** Classroom

### Research Literature in Personality and Social Development

**Prereqs:**
- EDPS 850 [Link](http://bulletin.unl.edu/courses/EDPS/850) or 851 [Link](http://bulletin.unl.edu/courses/EDPS/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.

**Credit Hours:** 3

**Campus:** 

**Course Delivery:** Classroom

### Developmental Psychobiology

**Prereqs:**
- EDPS 850 [Link](http://bulletin.unl.edu/courses/EDPS/850) or 851 [Link](http://bulletin.unl.edu/courses/EDPS/851) and permission

Biological foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.

**Credit Hours:** 3

**Campus:** 

**Course Delivery:** Classroom

### Counseling Theories and Intervention Techniques
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDPS 965A</td>
<td>Group Counseling: Social Psychological Aspects</td>
<td>EDPS *866</td>
<td>3</td>
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<td>Classroom</td>
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<td>Parallel: EDPS 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>) and permission of counseling area. Overview of theoretical approaches to counseling. Close examination of selected theories and intervention procedures.</td>
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<tr>
<td>EDPS 966</td>
<td>Psychology of Learning</td>
<td>EDPS *866</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Parallel: EDPS 964 (<a href="http://bulletin.unl.edu/courses/EDPS/964">http://bulletin.unl.edu/courses/EDPS/964</a>) and 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>). Develops student competencies in analyzing organizational contexts, designing group counseling experiences, and evaluating group experiences.</td>
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<tr>
<td>EDPS 967</td>
<td>Psychology of Motivation in Education</td>
<td>EDPS *866</td>
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<td>Theories of learning and experimental investigation in the field of animal and human behavior and their application to the classroom.</td>
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<tr>
<td>EDPS 968</td>
<td>Gender and Counseling Psychology</td>
<td>Admitted as a graduate student in the Counseling Psychology program.</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>The major purpose of this course is for students to learn about gender issues within the field of counseling psychology from a multicultural and feminist perspective and to gain the essential knowledge and techniques in working with gender issues in diverse settings.</td>
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<tr>
<td>EDPS 969</td>
<td>Nonparametric Statistical Methods</td>
<td>EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Prereqs: EDPS 859 (<a href="http://bulletin.unl.edu/courses/EDPS/859">http://bulletin.unl.edu/courses/EDPS/859</a>) or equivalent</td>
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Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi Square tests, rank tests of location (Wilcoxon, Mann Whitney, Kruskal-Wallis, Friedman), tests of goodness of fit (Chi Square, Kolmogorov-Smirnoff), tests of randomness (Runs).

College Major Forum

This course is a prerequisite for EDPS 973B, EDPS 978.

EDPS 97 (http://bulletin.unl.edu/courses/EDPS/97) is Pass/No Pass only.

This is an eight week seminar course for first semester students in the General Studies Learning Community. Students will complete activities to identify interests, research majors that match their interests and complete a "Guided Professional Shadowing" experience to gain first-hand knowledge about a career of their choice.

Theory and Methods of Educational Measurement

Crosslisted as SRAM 970

Prereqs:
EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) and 870 (http://bulletin.unl.edu/courses/EDPS/870); EDPS/SRAM 941 (http://bulletin.unl.edu/courses/SRAM/941); or equivalent

Presentation of various measurement theories and concepts, including classical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion-referenced tests.

Structural Equation Modeling

Crosslisted as SRAM 971

Prereqs:
EDPS/SRAM 942 (http://bulletin.unl.edu/courses/SRAM/942) and 970 (http://bulletin.unl.edu/courses/SRAM/970); or equivalent

Introduction to the techniques of path analysis, confirmatory factor analysis, and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

Multivariate Analysis

Crosslisted as SRAM 972

Prereqs:
EDPS/SRAM 941 (http://bulletin.unl.edu/courses/SRAM/941) and 942 (http://bulletin.unl.edu/courses/SRAM/942)

Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

Evaluation Theory and Practice
973A

This course is a prerequisite for EDPS 973B (http://bulletin.unl.edu/courses/EDPS/973B)

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.

973B Evaluation Practicum

Prereqs: EDPS 973A (http://bulletin.unl.edu/courses/EDPS/973A) or permission

Actual supervised evaluation of a program or project.

974 Guidance and Counseling in Schools


975 Occupations and Vocational Psychology

Evaluation and uses of occupational and educational information; job analysis; psychological and behavioral attributes relating to work and life-styes; occupational taxonomies; career-development theories; impact of accelerating changes on personal and social planning; investigations of value-oriented expectations as sources of work satisfaction and dissatisfaction; critical assessment of the concept of vocational choice. For counselors and educators.

976 Advanced Counseling Psychology I: Counseling Theory and Practice

Prereqs: Doctoral level counseling students and others by permission

This course is a prerequisite for EDPS 978 (http://bulletin.unl.edu/courses/EDPS/978)

Counseling methodology in relationship to personality theory and research. Consideration of various theories and research in relation to counseling practice.

977 Seminar in College Student Development

Crosslisted as EDAD 980

Special field experiences and research projects are available to students for additional credit.

Current knowledge, theories, and practices, and related issues in the area of
### EDPS 978 Advanced Counseling Psychology II: Research in Counseling

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  
*Prereqs:*  
[EDPS 976](http://bulletin.unl.edu/courses/EDPS/976): [EDUC 900A](http://bulletin.unl.edu/courses/EDUC/900A) and either [EDUC 900B](http://bulletin.unl.edu/courses/EDUC/900B) or 900K  

Research strategies appropriate for counseling psychology. Identification of researchable problem and completion of research proposal including literature review, design, and proposed data analysis procedures.

### EDPS 980 Item Response Theory

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom  
*Prereqs:*  
[EDPS 870](http://bulletin.unl.edu/courses/EDPS/870) and 970  

Principles of item response theory (IRT) and its application to a variety of issues in educational and psychological measurement. Theoretical foundations of IRT discussed along with its assumptions and varied applications. Experience using IRT calibration and scoring computer software.

### EDPS 981 School Practice in School Psychology

**Credit Hours:** 2–4  
**Max credits per semester:** 4  
**Max credits per degree:** 8  
**Course Format:** Field, Lab, Lecture  
**Campus:**  
**Course Delivery:** Classroom  
*Prereqs:*  
by permission of course instructor  

Supervised practice in local school districts related to academic, social, behavioral and emotional disorders of children and adolescents.

### EDPS 982 Clinical Practice in School Psychology

**Credit Hours:** 2–4  
**Max credits per semester:** 4  
**Max credits per degree:** 16  
**Course Format:** Field, Lab, Lecture  
**Course Delivery:** Classroom  
*Prereqs:*  
by permission of course instructor  

Supervised clinical practice related to academic, social, behavioral and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasized.

### EDPS 983 Community Practice in School Psychology

**Credit Hours:** 2–4  
**Max credits per semester:** 4  
*Prereqs:*  
Doctoral standing in professional psychology program and permission  

Supervised clinical experience working with children, adolescents and
Ethics and Ethical Decision Making in Counseling and Education

Ethical principles in the practice of counseling. Application of ethical guidelines and development of ethical decision-making models relevant to school and mental health contents.

Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Couple and Family Counseling

Couple and family systems and change strategies. Active, brief forms of couple and family counseling and enrichment formats.

Prereqs: EDPS *866 or equivalent

Credit Hours: 3
Campus: Classroom
Course Format: Lecture 3
Course Delivery: Classroom

Developmental Perspectives on Gender and Sexuality in Counseling


Credit Hours: 3
Campus: Classroom
Course Format: Lecture 3
Course Delivery: Classroom

Psychology of Reading

Crosslisted as TEAC 989

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Prereqs: TEAC *811 or 841 or SPED 886

Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Seminar in Educational Psychology and Measurements

Prereqs: Permission

Credit Hours: 1-12
Campus: Classroom
Max credits per degree: 12
### Workshop Seminar

**Course Format:** Lecture  
**Campus:**  
**Course Delivery:** Classroom  

**EDPS 993**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

[LINK](http://bulletin.unl.edu/courses/EDPS/993)

### Doctoral Seminar

**Prereqs:** Permission  

**EDPS 995**

*EDPS 995* is intended primarily for EDPS 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

[LINK](http://bulletin.unl.edu/courses/EDPS/995)

### Research Other Than Thesis

**Edps 996A**

Independent operational research under faculty supervision.

[LINK](http://bulletin.unl.edu/courses/EDPS/996A)

### Readings in Educational Psychology

**Edps 996B**

Readings on selected problems in educational psychology.

[LINK](http://bulletin.unl.edu/courses/EDPS/996B)

### Practicum in Counseling

**Prereqs:** Masters admission in educational psychology or permission of counseling area, EDPS 866  

This course is a prerequisite for:  
* EDPS 997B [LINK](http://bulletin.unl.edu/courses/EDPS/997B)  
* EDPS 997G [LINK](http://bulletin.unl.edu/courses/EDPS/997G)

Parallel: EDPS 964 [LINK](http://bulletin.unl.edu/courses/EDPS/964). Supervised laboratory clinic-based experiences in counseling.

**EDPS 997A**

[LINK](http://bulletin.unl.edu/courses/EDPS/997A)

### Field Placement in Counseling

**EDPS 997B**

[LINK](http://bulletin.unl.edu/courses/EDPS/997B)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Max Credits per Semester</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>997B</td>
<td>Practicum in Behavior Management Technologies</td>
<td>EDPS 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>)</td>
<td>2-4</td>
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<td>Classroom</td>
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<tr>
<td>997D</td>
<td>Practicum in Counselor Supervision and Consultation</td>
<td>EDPS 863 (<a href="http://bulletin.unl.edu/courses/EDPS/863">http://bulletin.unl.edu/courses/EDPS/863</a>) and permission</td>
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<tr>
<td>997E</td>
<td>Advanced Practicum in Counseling</td>
<td>EDPS 997G (<a href="http://bulletin.unl.edu/courses/EDPS/997G">http://bulletin.unl.edu/courses/EDPS/997G</a>) or equivalent</td>
<td>2</td>
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<td>Classroom</td>
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<tr>
<td>997G</td>
<td>Supervision in School Psychology</td>
<td>EDPS 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>) and permission</td>
<td>2-4</td>
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<td>Classroom</td>
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<tr>
<td>997J</td>
<td>Advanced Practicum in Gifted Education</td>
<td>Permission</td>
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<td>Classroom</td>
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<tr>
<td>997K</td>
<td>Supervised field experiences in school counseling, college student personnel, and community social service agencies.</td>
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**Doctoral Dissertation**

**Course Code:** EDPS 999  
**Course Delivery:** Classroom  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair  
**Credit Hours:** 1-24  
**Max credits per degree:** 55

**Human Sexuality and Society**

**Course Code:** PSYC 471/871  
**Course Delivery:** Classroom  
**Prereqs:** Junior standing and 12 hrs in one of the departments in which the course is listed.  
**Credit Hours:** 3

**Special Topics in Education**

**Course Code:** SPED 892  
**Course Delivery:** Classroom  
**Prereqs:** EDPS 859 or parallel; EDPS 859 or equivalent  
**Credit Hours:** 1-3  
**Max credits per degree:** 12

**Sociological/Anthropological Research Methods in Education**

**Course Code:** TEAC 930  
**Course Delivery:** Classroom  
**Credit Hours:** 1-3  
**Max credits per degree:** 15

### Courses for SPED (SPED)

**Teaching Learners to Learn**

**Course Code:** EDAD 855  
**Course Delivery:** Classroom  
**Prereqs:** EDPS 855, NUTR 855, SPED 855, TEAC 855  
**Credit Hours:** 1-3  
**Max credits per degree:** 15
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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

<table>
<thead>
<tr>
<th>EDAD 856</th>
<th>Supervising Special Education</th>
<th>Crosslisted as SPED 856</th>
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<tbody>
<tr>
<td>Credit Hours:</td>
<td>3</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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</table>

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

<table>
<thead>
<tr>
<th>EDAD 857</th>
<th>Special Education Administration</th>
<th>Crosslisted as SPED 857</th>
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<tbody>
<tr>
<td>Credit Hours:</td>
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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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

<table>
<thead>
<tr>
<th>EDAD 858</th>
<th>Special Education Law</th>
<th>Crosslisted as SPED 858</th>
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</thead>
<tbody>
<tr>
<td>Credit Hours:</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

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 states and school districts that are grounded in state and federal law.

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<tr>
<th>EDPS 997J</th>
<th>Advanced Practicum in Gifted Education</th>
<th>Crosslisted as SPED 997J</th>
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<tbody>
<tr>
<td>Prereqs:</td>
<td>Permission</td>
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<td>Credit Hours:</td>
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Advanced practicum in the education of the gifted/talented child. Psychodiagnostic procedures; theory and research; and program organization, operation, and evaluation in a field setting.

<table>
<thead>
<tr>
<th>SLPA 884</th>
<th>Speech and Language Development of the Hearing Impaired</th>
<th>Crosslisted as SPED 884</th>
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</thead>
<tbody>
<tr>
<td>Credit Hours:</td>
<td>3</td>
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<tr>
<td>Course Format:</td>
<td>Lecture 3</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
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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 skills.

<table>
<thead>
<tr>
<th>SLPA 956</th>
<th>Language Study of Teachers of Deaf and Hard of Hearing (DHH)</th>
<th>Crosslisted as SPED 956</th>
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</thead>
<tbody>
<tr>
<td>Credit Hours:</td>
<td>3</td>
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<td>Campus:</td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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</table>
### Theoretical and practical aspects of American Sign Language (ASL) structure.
- Issues relevant to the use of sign language in education, written English as a second language, classroom discourse, and educational interpreting.
- Sociolinguistic aspects of sign language among deaf and hearing individuals.

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>SPED 400/800</strong></td>
<td>Characteristics of Exceptional Persons</td>
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</table>

This course is a prerequisite for: [SPED 406](http://bulletin.unl.edu/courses/SPED/406), [SPED 406A](http://bulletin.unl.edu/courses/SPED/406A), [SPED 409](http://bulletin.unl.edu/courses/SPED/409), [SPED 809](http://bulletin.unl.edu/courses/SPED/809), [SPED 843](http://bulletin.unl.edu/courses/SPED/843)

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<th>Course</th>
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<tr>
<td><strong>SPED 401A/801A</strong></td>
<td>Accommodating Exceptional Learners in the Elementary School Classroom</td>
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Prereqs:
- Admission to the Teacher Education Program; [EDPS 362](http://bulletin.unl.edu/courses/EDPS/362), [TEAC 195](http://bulletin.unl.edu/courses/TEAC/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.

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<th>Course</th>
<th>Description</th>
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<tr>
<td><strong>SPED 401B/801B</strong></td>
<td>Accommodating Exceptional Learners in the Secondary School Classroom</td>
</tr>
</tbody>
</table>

Prereqs:
- Admission to the Teacher Education Program; [EDPS 362](http://bulletin.unl.edu/courses/EDPS/362), [TEAC 195](http://bulletin.unl.edu/courses/TEAC/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.

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<th>Course</th>
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<tr>
<td><strong>SPED 405/805</strong></td>
<td>Code-based Reading Instruction</td>
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</table>

Prereqs:
- Parallel [SPED 405A](http://bulletin.unl.edu/courses/SPED/405A), [SPED 805A](http://bulletin.unl.edu/courses/SPED/805A).

This course is a prerequisite for: [SPED 405](http://bulletin.unl.edu/courses/SPED/405)

Direct, systematic, multi-sensory techniques for teaching reading, writing and spelling to students who have severe reading problems.
Reading Center Practicum I

Prereqs:
Permission.

This course is a prerequisite for: SPED 405 (http://bulletin.unl.edu/courses/SPED/405)

SPED 405A (http://bulletin.unl.edu/courses/SPED/405A/805A) requires two hours per week in a Reading Center.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, lesson planning and teaching using direct instruction, code-based instructional strategies.

Reading and Writing Disabilities: Adolescents

Crosslisted as TEAC 806

Prereqs:
SPED 400 (http://bulletin.unl.edu/courses/SPED/400)/800, SPED 412 (http://bulletin.unl.edu/courses/SPED/412)/812, and TEAC 441 (http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate students only. Parallel SPED 406A (http://bulletin.unl.edu/courses/SPED/406A/806A).

This course is a prerequisite for: SPED 406 (http://bulletin.unl.edu/courses/SPED/406)

SPED 406A (http://bulletin.unl.edu/courses/SPED/406A/806A) requires two hours per week in a Reading Center.

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

Reading Center Practicum II

Crosslisted as TEAC 806

Prereqs:
SPED 400 (http://bulletin.unl.edu/courses/SPED/400)/800, SPED 412 (http://bulletin.unl.edu/courses/SPED/412)/812, and TEAC 441 (http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate students only. Taken parallel with SPED 406 (http://bulletin.unl.edu/courses/SPED/406/806).

This course is a prerequisite for: SPED 406 (http://bulletin.unl.edu/courses/SPED/406)

SPED 406A (http://bulletin.unl.edu/courses/SPED/406A/806A) requires two hours per week in a Reading Center.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

Teaching Students with Disabilities in the Secondary School

Prereqs:
SPED 201 (http://bulletin.unl.edu/courses/SPED/201) or 400

Credit Hours: 3
Course Delivery: Classroom

Information about the mildly/moderately disabled secondary-level student; including characteristics, assessment, models for programs, social skill training, behavior management, working with parents, and curriculum modification.

**Issues in Secondary Programs for Students with Mild Disabilities**

Prereqs: Special Education Professional Semester and SPED 407

Issues in secondary education for students with mild disabilities based on current literature and needs of individual students.

**Assessment Techniques for Diverse Learners**

Prereqs: Sophomore standing; SPED 201 and 303.

The role of general education teachers in the primary purposes of assessment of learners with diverse needs. Knowledge and experience with interpreting norm-referenced test information as related to planning educational programs. Use of assessment information for instructional planning and evaluation. Testing accommodations and classroom grading.

**Instructional Methods for Students with Diverse Needs**

Prereqs: Sophomore standing; SPED 201 and 303.

Instructional methods and accommodations for special education and general education teachers necessary to work successfully with students with disabilities or who are at-risk for academic failure. Curriculum modification, classroom management, strategy instruction, and instructional modifications for content areas.

**Reading and Writing Disabilities: Elementary Students**

Prereqs: SPED 201, TEAC 311, TEAC 313 for elementary education majors; SPED 201, SPED 412, and SPED 414 (or equivalent) for SPED.
majors. Must be taken with: SPED 415A
([http://bulletin.unl.edu/courses/SPED/415A](http://bulletin.unl.edu/courses/SPED/415A))

This course is a prerequisite for: SPED 415 ([http://bulletin.unl.edu/courses/SPED/415](http://bulletin.unl.edu/courses/SPED/415))

Theory and techniques for assessing and teaching early literacy skills in small groups and one-on-one for children who struggle with literacy.

**Career Education for the Special Needs Student**

**SPED 436/836**

**Prereqs:**
SPED 434 ([http://bulletin.unl.edu/courses/SPED/434](http://bulletin.unl.edu/courses/SPED/434))/834 ([http://bulletin.unl.edu/courses/SPED/834](http://bulletin.unl.edu/courses/SPED/834)) or permission.

Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject areas.

**Medically Fragile infants**

**SPED 463/863**

**Prereqs:**
Major in Special Education, Speech–language Pathology or Child Youth and Family Studies. Senior status or permission of instructor.

Unique needs, family-coping strategies, specialized medical staff and various health care settings for chronically ill infants, toddlers and preschool age children. Overview of etiology, characteristics and developmental implications of selected medical conditions related to developmental disabilities.

**Psychology and Sociology of Deafness**

**SPED 472/872**

Education of the hearing impaired including history of, professional roles in, and educational programming within this field. Social/psychological theories as related to the hearing impaired. Patterns of social/emotional development, psychological characteristics, issues of family stress and social adaptation and discussion of counseling techniques.

**Educating Students with Intellectual Impairments & Developmental Disabilities**

**SPED 480/880**

This course is a prerequisite for: SPED 881 ([http://bulletin.unl.edu/courses/SPED/881](http://bulletin.unl.edu/courses/SPED/881))

Concepts related to history, definitions, identification, etiology, and assessment of students with intellectual impairments and developmental disabilities. Examine attitudes, assumptions, and stereotypes concerning persons with intellectual impairments and other developmental disabilities. Instructional methods, adaptations and teaming to provide individualized interventions and include students in least restrictive environments/general education settings. Applied assignments will be conducted in field experience and student teaching.

**Independent Study in Special Education**

**SPED 495/895**
Directed Field Experience

Prereqs:
Prior arrangements with faculty member and permission.
Special research or reading project under direction of a staff member in the department.

Credit Hours: 1-3
Course Delivery: Classroom

SPED 496/896

Directed Field Experience

Prereqs:
Permission.
Pass/No Pass only for SPED 496 (http://bulletin.unl.edu/courses/SPED/496) section. SPED 896 (http://bulletin.unl.edu/courses/SPED/896) is graded.

E. Field Experience: General Special Education (1–6 cr, max 12) M. Field Experience: Mild/Moderate (1–6 cr, max 12) Y. Field Experience: Inclusion (1–6 cr, max 12)

Credit Hours: 1–6
Max credits per semester: 12
Course Format: Field
Course Delivery: Classroom

SPED 496Y/896Y

Directed Field Experience: Inclusion

Prereqs:
Permission.
Pass/No Pass only for SPED 496 (http://bulletin.unl.edu/courses/SPED/496) section. SPED 896 (http://bulletin.unl.edu/courses/SPED/896) is graded.

Credit Hours: 1–6
Max credits per semester: 12
Course Format: Field
Course Delivery: Classroom

Advanced Assessment Techniques

Prereqs:
SPED 800 (http://bulletin.unl.edu/courses/SPED/800) or equivalent; or permission

Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school resource personnel.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Effective Instruction for Learners with Special Needs

Prereqs:
SPED 800 (http://bulletin.unl.edu/courses/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.

Credit Hours: 3
Campus:
Course Delivery: Classroom

Managing Challenging Behavior

Prereqs:
SPED 800 (http://bulletin.unl.edu/courses/SPED/800), *802, *803; or permission

Functional approaches that can be used by teachers and mental health practitioners for assessing, preventing, and managing children’s challenging behavior.

Credit Hours: 3
Campus:
Course Delivery: Classroom
behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

Autism Spectrum Disorders (ASDs): Effective Assessment and Intervention

**Prereqs:**
- SPED 400
- SPED 800

SPED 809 requires observation in schools and applied assignments.

Designed for educators of children and youth with Autism Spectrum Disorders (ASDs) in school settings. Assessment strategies to identify characteristics of ASDs focused on individual needs and strengths-based outcomes. Knowledge and skills regarding evidence–based practices and individualized educational programs.

Autism Spectrum Disorders (ASDs): Methods and Program Planning

**Prereqs:**
- SPED *809 or equivalent


Mathematics Instruction for Diverse Learners

**Prereqs:**
- SPED 201 or 400
- SPED 800

SPED *820 and associated practicum is designed to meet professional standards (i.e., Council for Exceptional Children, Teacher Education Accreditation Council) for teachers in the area of instruction for diverse learners.

Functional Behavioral Assessment

**Prereqs:**
- SPED 303 or equivalent.

This course is a prerequisite for SPED 824A.

Functional behavioral assessments (FBAs) and development of behavior intervention plans (BIPs) based on the assessments. Contextual and
Practicum in Functional Behavioral Assessment

**Prereqs:**
SPED 303 (http://bulletin.unl.edu/courses/SPED/303) or approved equivalent. Parallel SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

This course is a prerequisite for: SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

Opportunities to engage in the activities and practice the skills associated with SPED 824 (http://bulletin.unl.edu/courses/SPED/824). Culmination of the practicum is performing a complete functional behavioral assessment and developing a behavior intervention plan for a student who displays challenging behaviors.

**Behavioral Systems and Interventions**

**Prereqs:**
SPED 813 (http://bulletin.unl.edu/courses/SPED/813) or equivalent

Three-tier models for encouraging and maintaining students' appropriate behaviors. Evaluation and implementation of interventions at the school-wide, classroom and/or small group, and individual levels. Presentation of different models i.e., Response to Intervention (RtI) and School-Wide Positive Behavior Support (SWPBS).

**Introduction to Special Vocational Needs**

Foundational course emphasizing the characteristics and identification of special needs learners in vocational settings. Determines needs, interests, and abilities of these students.

**Emotional and Behavioral Disorders**

**Prereqs:**
SPED 800 (http://bulletin.unl.edu/courses/SPED/800) or permission

Etiology, theories and assessment of child and adolescent emotional and behavioral disorders. Addresses issues of definitions and classification (DSM-IV and special education) or deviant behavior and psychopathology, as well as an overview of service delivery systems in education and mental health.

**Characteristics of Emotional and Learning Disorders**

**Prereqs:**
SPED 400 (http://bulletin.unl.edu/courses/SPED/400) / 800 (http://bulletin.unl.edu/courses/SPED/800)

Learning, academic, behavioral, social–emotional and language characteristics of students who are classified as having disabilities for purposes of special education. Definitions, classification systems,
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 846</td>
<td>Foundations of Visual Impairment: Programs and Services for Individuals with Visual Impairments</td>
<td>Admission to visually impaired program; hold or concurrently earn subject/field endorsement</td>
<td>3</td>
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<tr>
<td>SPED 847</td>
<td>Introduction to Eye Anatomy of Students with Visual Impairments</td>
<td>SPED *846 or permission</td>
<td>3</td>
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<tr>
<td>SPED 849</td>
<td>Braille Codes and Material Adaptations for Students with Visual Impairments</td>
<td>SPED *846 and *847, or permission</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>SPED 851</td>
<td>Intermediate Braille Codes and Instructional Material Adaptations for Students with Visual Impairments</td>
<td>SPED *846, *847, and *849</td>
<td>3</td>
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<td>Classroom</td>
</tr>
<tr>
<td>SPED 852</td>
<td>Instructional Methods for Teachers of Students with Visual Impairments</td>
<td>SPED *846, *847, *849, and *851</td>
<td>3</td>
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<tr>
<td>Course Code</td>
<td>Applied Technology Methods for Students with Visual Impairments</td>
<td>Prereqs:</td>
<td>Credit Hours:</td>
<td>Campus:</td>
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<tr>
<td>SPED 852A</td>
<td>Theory and skill development in the selection and use of technology for students with visual impairments. Technology assessments, data collection, equipment feature, source of equipment, funding sources, writing technology instructional plans, and demonstration of using various equipment and technology.</td>
<td>SPED *846 and *847, or equivalents</td>
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<tr>
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<th>Applied Instructional Methods to Teach Students with Visual Impairments</th>
<th>Prereqs:</th>
<th>Credit Hours:</th>
<th>Campus:</th>
<th>Course Delivery:</th>
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<tbody>
<tr>
<td>SPED 852B</td>
<td>Practice using appropriate instructional methods and materials for educating the blind and low vision child.</td>
<td>SPED *846, *847, *849, *851, and *852; or equivalents</td>
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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Orientation and Mobility Skills for Students with Visual Impairments</th>
<th>Prereqs:</th>
<th>Credit Hours:</th>
<th>Campus:</th>
<th>Course Delivery:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 853</td>
<td>Theory and applied practice in basic orientation and mobility techniques for use with students with visual impairments. Practical methods for work in concept development, orientation skills, travel skills and techniques, personal safety and independent travel. Needs of specific populations such as people with low vision and individuals with additional disabilities. Vision simulators and occluders. An introduction to the history and development of the profession.</td>
<td>SPED *846, *847, *849, *851, and *852</td>
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<thead>
<tr>
<th>Course Code</th>
<th>Issues in Early Childhood Special Education</th>
<th>Requirments:</th>
<th>Credit Hours:</th>
<th>Campus:</th>
<th>Course Delivery:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 860</td>
<td>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, transitions, service delivery systems, teamwork and assessment for young children.</td>
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<td>3</td>
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<td>Classroom</td>
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<thead>
<tr>
<th>Course Code</th>
<th>Infants with Disabilities and Home Visiting</th>
<th>Prereqs:</th>
<th>Credit Hours:</th>
<th>Course Format:</th>
<th>Campus:</th>
<th>Course Delivery:</th>
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<tbody>
<tr>
<td>SPED 861</td>
<td>Assessment and intervention strategies for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, and transdisciplinary services.</td>
<td>SPED 960 and permission.</td>
<td>3</td>
<td>Lecture 3</td>
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<tr>
<th>Course Code</th>
<th>Preschool Children with Disabilities in a Classroom</th>
<th>Requirments:</th>
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<tr>
<td>SPED 862</td>
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</table>
Selection, design and implementation of developmentally appropriate, activity–based interventions for preschool-age children with disabilities. Ecological assessments. Instructional factors, such as classroom environments, activity planning, selection, use and modification of strategies, home–school communications, and consulting to staff in inclusive settings.

**SPED 873**

Teaching the Content Areas to the Hearing Impaired

Methods for teaching content areas (science, math, and social studies) to hearing impaired students from preschool through grade 12. Adapting curricula and materials from these areas for the hearing impaired students.

**SPED 874**

Language Arts and Literacy for the Hearing Impaired

Assessment instruments, curricula and instructional methods for developing language and literacy in classrooms for hearing impaired children, preschool through grade 12. Methods for coordinating speech and/or language and/or auditory training program in the classroom with that in the speech and/or language therapy program.

**SPED 875**

Itinerant Teaching Methods for Students who are Deaf or Hard of Hearing


**SPED 876**

Language Development for Teachers

Introduction to the foundations of normal speech and language development and potential difficulties in both early stages and in the classroom. Analysis of child language samples. Strategies for explaining language development to parents and professional colleagues.

**SPED 881**

Methods for Students with Intellectual and Severe Disabilities

Prereqs:
- SPED 480/880

SPED 881 requires observations in schools and applied assignments.
Planning, implementing, and evaluating effective longitudinal education for individuals with intellectual impairments and severe disabilities. Knowledge and skills regarding best practices within inclusive education settings for these learners emphasizing an ecological and functional model that addresses useful skills in current and future environments.

**Specialized Instruction for Students with Severe and Multiple Disabilities**

**Prereqs:**
SPED *881 for the Severely/Multihandicapped endorsement program or SPED *862 for Preschool Handicapped endorsement program; and permission. Majors in severe disabilities must parallel with SPED 896P (http://bulletin.unl.edu/courses/SPED/896P) (1 cr).

This course is a prerequisite for: SPED 881 (http://bulletin.unl.edu/courses/SPED/881)

SPED *882 requires observations in schools and applied assignments.

Selection, design, and implementation of best practice instruction for students with severe disabilities, multiple disabilities, or deaf-blindness.

**Assessment, Evaluation, and Instruction of**

Crosslisted as TEAC 886

This course is a prerequisite for: EDPS 889 (http://bulletin.unl.edu/courses/EDPS/889)

TEAC/SPED *886 includes case study and planning for special student populations.

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.

A. Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.

B. Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Special Topics in Education**

Crosslisted as EDAO 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

**Prereqs:**
EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or parallel; EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Student Teaching: Exceptional Learners**
**897**

**Prereqs:** Permission

Laboratory and teaching experience in the area(s) of specialization.

- A. Mainstream (1–12 cr)
- B. Behavior Disorders
- D. Deaf/Hard of Hearing
- E. General Special Education
- J. Gifted/Talented (EDPS *897J)
- L. Learning Disabilities
- M. Mildly/Moderate Disabilities
- P. Severe Disabilities
- Q. Early Childhood Special Education
- V. Visual Impairments
- Y. Inclusion
- Z. Multicultural Education

**Masters Thesis**

**Prereqs:** Admission to masters degree program and permission of major adviser

**SPED 899**

**Credit Hours:** 1–10

**Max credits per degree:** 15

**Campus:** 

**Course Delivery:** Classroom

**Seminar in Special Education**

**Prereqs:** Permission

- B. Behavior Disorders
- D. Deaf/Hard of Hearing
- E. General Special Education
- J. Gifted/Talented
- L. Learning Disabilities
- M. Mildly/Moderate Disabilities
- P. Severe Disabilities
- Q. Early Childhood Special Education
- V. Visual Impairments

**SPED 907**

**Credit Hours:** 1–3

**Max credits per degree:** 12

**Campus:** 

**Course Delivery:** Classroom

**Resource Consultation Services**

**Prereqs:** SPED 800 (http://bulletin.unl.edu/courses/SPED/800), and one of the following: *831, *851, *861, *881; or permission

Roles and functions of school resource personnel in serving as educational consultants to regular school staff.

**SPED 908**

**Credit Hours:** 3

**Campus:** 

**Course Delivery:** Classroom

**Cognitive Strategy Instruction**

**Prereqs:** SPED 800 (http://bulletin.unl.edu/courses/SPED/800), *803, and *831 or permission

How to implement cognitive strategy instruction with students learning
difficulties. Practical model which allows students to successfully teach

cognitive strategies. Metacognition, attribution training, and attention deficit
disorders.

### Strategic Approaches for EBD

**Prereqs:**
- SPED 800
- *804, and *841; or permission

Strategic therapy techniques for assessment and treatment of EBD.

A. Special Topics in EBD (1-3 cr)

[LINK](http://bulletin.unl.edu/courses/SPED/942)

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<thead>
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<th>Credit Hours:</th>
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<td>Course Delivery:</td>
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</table>

### Family and School Collaboration in Special Education

**Prereqs:**
- Professional experience or completion of one practicum and/or field
  experience with young children (birth to age 5) or other individuals
  ages 5 to 21 years who have disabilities

This course is a prerequisite for: [SPED 861](http://bulletin.unl.edu/courses/SPED/861)

Functions and interactions of both family and education systems. Impact of
having a child with a disability on the normal and stressed family system.
Promote family–professional partnerships in assessment and intervention for
the child and/or student with an IFSP/IEP. Communication skills are reviewed
and practiced for effective teaming among educators and for interviewing,
consulting, collaborating and coaching with family members and other
community team members.

[LINK](http://bulletin.unl.edu/courses/SPED/960)

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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
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### Assessment of Students with Severe, Sensory, and Developmental Disabilities

**Prereqs:**
- SPED *881 and *882; and permission

This course is a prerequisite for: [SPED 987E](http://bulletin.unl.edu/courses/SPED/987E)

Designed to meet the needs of educators who conduct assessment of
students with low incidence disabilities in school settings. Strategies
emphasize assessing capabilities and needs in relationship to valued life
outcomes. Processes of instructional outcomes. Some assessment conducted
in schools and community settings. Learning outcomes individualized to
match special education certification program.

[LINK](http://bulletin.unl.edu/courses/SPED/980)

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<tr>
<td>Course Delivery:</td>
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### Functional Assessment and Behavioral Support for Students with Severe Developmental Disabilities

**Prereqs:**
- SPED 882 and permission.

Majors in severe disabilities must parallel with [SPED 896P](http://bulletin.unl.edu/courses/SPED/896P) (1 cr).

SPED 981 requires observation in schools and applied assignments.

Assessment and intervention strategies for developing positive behavior
support for students with severe disabilities or developmental disabilities
who have challenging behavior. Rationale and principles for using an
educative approach, functional behavior analysis, and a variety of
individualized ecological and curricular interventions. Process of assessment
conducted in school settings.

[LINK](http://bulletin.unl.edu/courses/SPED/981)

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<tr>
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</table>
### Seminar in Special Education

**SPED 987E**

**Prereqs:**
SPED 980 [LINK](http://bulletin.unl.edu/courses/SPED/980) and 981 [LINK](http://bulletin.unl.edu/courses/SPED/981)

**Credit Hours:** 1-12

**Campus:**

**Course Delivery:** Classroom

### Workshop Seminar

**SPED 990**

*Refer to Workshop Seminars in Education under the “Education” section of this bulletin.*

**Credit Hours:** 1-12

**Campus:**

**Course Delivery:** Classroom

### Doctoral Seminar

**SPED 995**

**Prereqs:**
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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

**Credit Hours:** 3

**Max credits per degree:** 18

**Campus:**

**Course Delivery:** Classroom

### Research Other Than Thesis

**SPED 996A**

*(1-12, max 12)* Independent operational research under faculty supervision.

**Campus:**

**Course Delivery:** Classroom

### Readings in Special Education

**SPED 996B**

**Prereqs:**
Permission

*(1-12, max 12)* Readings on selected problems in special education.

**Campus:**

**Course Delivery:** Classroom

### Resource Teacher Externship

**SPED 997E**

**Prereqs:**
SPED *802, *803

Extensive practicum experience in school settings for individuals preparing to serve as school resource teachers and consultants.

**Credit Hours:** 1-6

**Campus:**

**Course Delivery:** Classroom

### Doctoral Dissertation

**SPED**

**Credit Hours:**

**Campus:**

**Course Delivery:** Classroom
### Courses for SLPA (SLPA)

<table>
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<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>CYAF 891</td>
<td><strong>Special Topics in Human Sciences</strong></td>
<td>Admission to doctoral degree program and permission of supervisory committee chair</td>
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<tr>
<td>SLPA 450/850</td>
<td><strong>Audiology for Educators of the Deaf or Hard of Hearing</strong></td>
<td>Aspects of human sciences not covered elsewhere in the curriculum.</td>
</tr>
<tr>
<td>SLPA 452/852</td>
<td><strong>Normal Language Development During School Years</strong></td>
<td>Anatomoy and physiology of hearing; components of adequate evaluation for placement and educational planning; diagnosis using audiogram, functional and communication assessment; stimulation and utilization of residual hearing; and management of assistive and/or augmentative devices.</td>
</tr>
<tr>
<td>SLPA 454/854</td>
<td><strong>Research Methodology in Speech-Language Pathology and Audiology</strong></td>
<td>Normal syntactic, semantic, and pragmatic language development in school-age children and youth. Complex syntax, semantic development, pragmatic development, using language to learn, language-literacy relations, and abstract language development.</td>
</tr>
<tr>
<td>SLPA 461/861</td>
<td><strong>Language Disorders: Preschool Level</strong></td>
<td>Introduction to research principles, methods, and design. Survey and critique of research in special education and communication disorders.</td>
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</table>

### Prerequisites

- Parallel SLPA 461L [Link](http://bulletin.unl.edu/courses/SLPA/461L)
- This course is a prerequisite for SLPA 461 [Link](http://bulletin.unl.edu/courses/SLPA/461)
Characteristics of language impaired preschool children and the nature of their disorders. Introduction to principles of assessment and treatment.

**SLPA 461L/861L**
**Language Disorders: Preschool Level Lab**

- **Credit Hours:** 1
- **Course Format:** Lab
- **Course Delivery:** Classroom

**Prereqs:**
Parallel with SLPA 461 ([link](http://bulletin.unl.edu/courses/SLPA/461L))

This course is a prerequisite for: SLPA 461 ([link](http://bulletin.unl.edu/courses/SLPA/461L))

Practical application of language assessment and intervention in preschool children with language disorders.

**SLPA 486/886**
**Augmentative Communication**

- **Credit Hours:** 2–3
- **Course Delivery:** Classroom

*Speech pathology students must register for 3 cr only; special education students may register for 2-3*

Introduction to the augmentative communication options for persons unable to speak or write because of physical, language, or cognitive disability.

**SLPA 488/888**
**Linguistic Needs of Bilingual and Culturally Different Students**

- **Credit Hours:** 3
- **Course Delivery:** Classroom

**ACE Outcomes:** 9

**Prereqs:**
SLPA 250 ([link](http://bulletin.unl.edu/courses/SLPA/250)) and 251 ([link](http://bulletin.unl.edu/courses/SLPA/251)) or permission.

Theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicapping conditions, socio-economic status, and cultural-ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.

**SLPA 496/896**
**Readings and Research in Speech-Language Pathology and Audiology**

- **Credit Hours:** 1–3
- **Course Delivery:** Classroom

**Prereqs:**
Permission.

**SLPA 851**
**Clinical Phonology: Assessment and Management**

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**
SLPA 250 ([link](http://bulletin.unl.edu/courses/SLPA/250)) and 464 ([link](http://bulletin.unl.edu/courses/SLPA/464)) or permission.

Theoretical foundations; applied clinical phonology.

**SLPA 853**
**Neurological Foundations of Speech and Language**

**Prereqs:**
SLPA 250 ([link](http://bulletin.unl.edu/courses/SLPA/250)) and 464 ([link](http://bulletin.unl.edu/courses/SLPA/464)) or permission.

Theoretical foundations; applied clinical phonology.
Basic concepts of neurology, protection and blood supply of the Central Nervous System (CNS), anatomical structures of the CNS, neuromotor control of speech, cranial nerves for speech production and neuron motor disorders.

Language Disorders in Special Populations
Advanced information about language disorders, assessment, and intervention in various populations.
A. Birth to Three: Communication Assessment and Intervention
E. Preadolescents and Adolescents
J. Severe Disabilities and Autism: Communication Assessment and Intervention
K. Special Topics in Language Disorders

Language Disorders in Elementary School-aged Population
Advanced information about language disorders, assessment, and intervention in elementary school-aged children.

Voice Disorders
Prereqs: SLPA 455
Etiology and symptoms of voice disorders, procedures used in clinical evaluation, and methods and procedures used in therapy.

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 skills.

Fluency Disorders
Research related to the nature, diagnosis and clinical management of stuttering is considered. Therapy models are presented along with data bearing on the efficacy of particular approaches. Specific rehabilitation procedures.
**887**

**Prereqs:**
For non-SLPA majors only

Review of prominent theories relating language to cognitive development and learning; student interaction on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classrooms to accommodate a child that has a language and learning disorder.

**890**

**Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**892**

**Counseling and Behavior Issues in Speech Language Pathology**

Basic skills in counseling and behavior management as applied to the field of communication disorders. Practical, direct application to students' clinical work with individuals with a variety of communication disorders.

**893**

**Clinical Decision Making**

Critical Thinking skills necessary for decision-making during the assessment and treatment of individuals with communication disorders. Understanding and applying clinical processes related to the practice of speech-language pathology.

**897**

**Advanced Practicum**

**Prereqs:**
Completion of the undergraduate preprofessional program

Supervised practicum experiences provided with difficult speech, language and/or hearing problems in a variety of clinical, medical, geriatric, rehabilitational and public school settings.

A. Audiology (1–3 cr per sem)
B. Speech/Language Pathology (1–3 cr per sem)
E. Externship (1–3 cr per sem)
G. Public Schools (1–3 cr per sem)
T. Externship in Audiology (1–6 cr per sem, max 12)

**898**

**Special Topics in Speech Pathology and Audiology**

**Prereqs:**
Permission

Special topics in speech pathology and audiology.
**Masters Thesis**

Credit Hours: 1-10

Campus: 

Course Delivery: Classroom

Prereqs: Admission to masters degree program and permission of major adviser

**Advanced Clinical Evaluation**

Instruction and practice in understanding, applying, and interpreting advanced clinical tests. Understanding the use of differential diagnostic tests used in assessment of peripheral and central lesions.

Credit Hours: 3

Campus: 

Course Delivery: Classroom

**Basic Instrumentation**

Basic electrical theory and practical electronic information for the audiologist. Basic electrical and electronic information applicable to hearing, perception and acoustics. Basic electronics and electronic components, analog and digital circuits, transducers, calibration of audiometric instruments, amplifiers, attenuators and test equipment.

Credit Hours: 3

Course Format: Lab, Lecture

Campus: 

Course Delivery: Classroom

**Advanced Clinical Assessment II**


Credit Hours: 3

Campus: 

Course Delivery: Classroom

**Physiological Acoustics**

Pneumatic/mechanical/hydraulic/electrical interfaces involved in the transduction of acoustic energy through the auditory system. Investigation of external ear biophysics, the middle ear transfer function, cochlear hydrodynamics and hydro-mechanics, and auditory biopotentials.

Credit Hours: 3

Campus: 

Course Delivery: Classroom

**Auditory Signal Processing**

Principles of signal processing relevant to tests of hearing and to theories of functioning of the auditory system. Introduction of concepts in mathematics, vibration and acoustics. Time- and frequency-domain representations of signals, digital filtering, analysis of lumped-element circuits, linear and nonlinear signal analyses, modulation theory, and the effect of noise on measurements. Applications relevant to audiology including hearing aid performance and measurements, middle–ear transmission, cochlear mechanics, and auditory-nerve firing patterns. Application of these models to understanding physiological sources of conductive and sensorineural
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<th>Course Title</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>SLPA 912</td>
<td>Psychoacoustics</td>
<td></td>
<td>Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking level differences, psychoacoustical scaling,</td>
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<td>difference limen for intensity and frequency, loudness, critical bands and critical ratios, absolute threshold measurement, differential</td>
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<td></td>
<td>threshold measurement, and temporal summation. Brief investigations of certain psychoacoustic phenomena.</td>
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<tr>
<td>SLPA 916</td>
<td>Medical Aspects of Audiology</td>
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<td>Effects of, and principles of, medical management of disorders of the cochlea, retrocochlear region, and central auditory mechanism. Anatomy</td>
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<td>and physiology of the inner ear and central auditory pathways, function and physiology of the vestibule and labyrinth, and histology and</td>
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<td>biochemistry of the inner ear and ascending auditory tracts.</td>
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<tr>
<td>SLPA 918</td>
<td>Auditory Assessment of Infants and Children</td>
<td>Prereqs: SLPA 271 or equivalent</td>
<td>Development of the auditory system in infants and young children. Techniques used in differential diagnosis, and screening of auditory</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>disorders in the pediatric population.</td>
</tr>
<tr>
<td>SLPA 920</td>
<td>Electrophysiological Assessment of Hearing</td>
<td></td>
<td>Instrumentation and procedures for electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.</td>
</tr>
<tr>
<td>SLPA 922</td>
<td>Pharmacology for Audiology</td>
<td></td>
<td>Introduction to pharmacological chemistry, drugs, and drug interactions. Ototoxic drugs and other drugs frequently seen in audiology practice</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>settings.</td>
</tr>
<tr>
<td>SLPA 924</td>
<td>Sensory Technology and Rehabilitation for the</td>
<td>Prereqs: SLPA 271 or equivalent</td>
<td>Students will initiate and carry out directed laboratory assignments.</td>
</tr>
<tr>
<td></td>
<td>Hearing Impaired</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conventional analog hearing aids which includes: the design and operation of hearing aids, electroacoustic measurements and accompanying instrumentation, earmold and plumbing acoustics, evaluation and selection procedures (adults), orientation.

### Sensory Technology and Rehabilitation for the Hearing Impaired

**SLPA 926**

**Prereqs:**  
SLPA 271 or equivalent

**Credit Hours:** 1-3  
**Campus:**  
**Course Delivery:** Classroom

Students will be expected to engage in class presentations. Various assistive technologies, other than conventional analog hearing aids, utilized by persons who are deaf and hard of hearing. Technologies such as cochlear implants, tactile devices, radio frequency systems, digital hearing aids, and telephone, television and alerting devices. Information regarding pediatric amplification, counseling, and speechreading introduced.

### Hearing Conservation and Industrial Audiology

**SLPA 928**

**Credit Hours:** 2  
**Campus:**  
**Course Delivery:** Classroom

Theories and basic resources for participation in industrial, government, or community hearing conservation programs.

### Genetics of Hearing Loss

**SLPA 930**

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

The genetic basis for hearing loss.

### Vestibular Assessment I

**SLPA 932**

**Credit Hours:** 4  
**Course Format:** Lab, Lecture  
**Campus:**  
**Course Delivery:** Classroom

Students will initiate and carry out directed laboratory assignments.  
The first of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Normal anatomy and physiology of the balance and ocular motor systems, contrasted with a wide range of pathological conditions. Electronystagmography (video–nystagmography two– and three–dimensional recordings) and assessment of the otolith organs.

### Vestibular Assessment II

**SLPA 934**

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

The second of a two–course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Advanced techniques for patient assessment using rotational chair and posturography protocols. Techniques for full assessment in an office situation without extensive equipment. Options for treatment and management of this group of patients. Vestibular and balance rehabilitation therapy program development.
Implantable Prosthetics

Design, operation, candidacy, assessment, surgical procedures, fitting, verification, and rehabilitation procedures related to implantable prosthetic devices for individuals who are deaf and hard of hearing. Cochlear implants, bone anchored hearing aids, implantable middle ear devices, and auditory brainstem implants.

Private Practice and/or Clinic Management

Principles and procedures for starting and surviving as an independent practitioner in audiology. Practice management strategies for use in any audiological setting.

Aural Rehabilitation Across the Lifespan

Habilitation (for pre-lingual deaf and hard of hearing infants and toddlers) and rehabilitation efforts for individuals of all ages who are deaf or hard of hearing.

Seminar in Audiology

Research and clinical procedures; findings and implications in audiology and hearing science.

Language Study of Teachers of Deaf and Hard of Hearing (DHH)


Speech Perception and Processing

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.
## Swallowing Disorders


**SLPA 966**

- **Credit Hours:** 2
- **Campus:**
- **Course Delivery:** Classroom

## Cleft Palate

Communication, dental, medical, and associated problems related to cleft palate.

**SLPA 967**

- **Prereqs:** SLPA 464 or equivalent
- **Credit Hours:** 2
- **Campus:**
- **Course Delivery:** Classroom

## Motor Speech Disorders

Motor speech disorders resulting from neuropathology of the central and peripheral nervous systems as found in cerebral palsy, Parkinsonism, and other developmental and acquired neuromotor problems of children and adults.

**SLPA 968**

- **Prereqs:** SLPA 853
- **Credit Hours:** 2
- **Campus:**
- **Course Delivery:** Classroom

## Seminar in Speech Physiology

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

**SLPA 980A**

- **Prereqs:** SLPA 455 and 456 or equivalent
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

## Seminar in Speech Acoustics

Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.

**SLPA 980B**

- **Prereqs:** SLPA 455 and 456 or equivalent
- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

## Seminar in Speech Pathology

Research procedures, findings and clinical implications in the following areas:

- B. Fluency Disorders (1-3 cr)

**SLPA 981**

- **Prereqs:** SLPA 851, 865, 967, and/or 968
- **Credit Hours:** 1-3
- **Max credits per degree:** 6
- **Campus:**
- **Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLPA 983</td>
<td>Seminar in Language</td>
<td>1-3</td>
<td>SLPA 251 or 852</td>
<td>Research procedures, findings and implications in language pathology and treatment in the areas of development, evaluation and habilitation. A. Child Language Development and Disorders (1-3 cr) B. Adolescent/Adult Language Development and Disorders (1-3 cr) E. Augmentative/Alternative Communication (1-3 cr)</td>
</tr>
<tr>
<td>SLPA 984</td>
<td>Seminar in Augmentative Communication</td>
<td>3</td>
<td>SLPA 886</td>
<td>Advanced seminar on research literature in the augmentative communication field.</td>
</tr>
<tr>
<td>SLPA 985</td>
<td>Traumatic Brain Injury</td>
<td>2</td>
<td>SLPA 853</td>
<td>Assessment and treatment of child and adult cognitive and communication disorders resulting from traumatic brain injury.</td>
</tr>
<tr>
<td>SLPA 987</td>
<td>Aphasia in Adults</td>
<td>2</td>
<td>SLPA 853</td>
<td>Adult language disorders resulting from stroke or other acquired central nervous system insult. Includes historical/theoretical development of understanding, cerebral dominance for language, classifications, rationale for diagnostic and therapeutic management, prognostic factors, agnosias and apraxia.</td>
</tr>
<tr>
<td>SLPA 990</td>
<td>Workshop Seminar</td>
<td>3</td>
<td></td>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
</tr>
<tr>
<td>SLPA 994</td>
<td>Doctoral Capstone Thesis</td>
<td>3</td>
<td></td>
<td>Selection of the topic for this project should take place no later than the</td>
</tr>
</tbody>
</table>
Max credits per degree: 9

Course Format: Independent Study

Campus:

Course Delivery: Classroom

summer of the third year by consultation with the project adviser. Enrollment in SLPA 994 (http://bulletin.unl.edu/courses/SLPA/994) is required during each semester that the project is underway. Capstone experience prepared in the form of a research project paper containing a significant treatment of some aspect of audiology.

SLPA 995

Doctoral Seminar

Prereqs: 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

SLPA 996

Research Problems Other Than Thesis

Prereqs: Permission

Credit Hours: 1–9

Max credits per degree: 55

Campus:

Course Delivery: Classroom

SLPA 999

Doctoral Dissertation

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1–24

Campus:

Course Delivery: Classroom

Courses for TEAC (TEAC)

BIOC 869

Chemistry for Secondary School Classrooms

Crosslisted as BIOS 883, CHEM 869, TEAC 869

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the National Science Education Standards. Individual course coverage includes: content, integration with other sciences and mathematics, graphing calculators, probe-experiments, simulations, at-home experiments, teaching materials, and industrial applications related to the title description.

A. Structure and Properties of Matter: Water and Solutions (1 cr)
B. Structure and Properties of Matter: Periodicity (1 cr)
D. Structure and Properties of Matter: Bonding and Structure (1 cr)
E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
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)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Crosslisted as</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 874</td>
<td>Topics in Chemical Pedagogy</td>
<td>TEAC 874</td>
<td>A maximum combined total of 12 hours from TEAC 869 and/or 874 may be counted toward a masters degree. Credit in this course will not count towards a graduate degree in chemistry. Courses are Web-based. Topical chemistry content for high school teachers organized according to the National Science Education Standards.</td>
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<td>A. Green Chemistry (2-3 cr)</td>
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<td>B. Demonstrations for High School Chemistry (1-3 cr)</td>
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<td></td>
<td>C. Experiments for High School Chemistry (1-3 cr)</td>
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<td>D. Developing a Safety Culture (1 cr)</td>
</tr>
<tr>
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<td></td>
<td>E. Chemistry of Life Processes: Biomolecules (1-3 cr)</td>
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<td></td>
<td>F. Addressing Misconceptions (1-3 cr)</td>
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<td>G. Mathematics Integration (MATH 874M) (2-3 cr) May be counted towards the MAT and MSCT degrees in mathematics and statistics, not the MA, MS, or PhD.</td>
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<td>H. Inquiry Strategies (1-3 cr)</td>
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<td>I. Chemistry in the Workplace (1-3 cr)</td>
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<td>J. Graphing Calculator Activities (2-3 cr)</td>
</tr>
<tr>
<td>CHEM 875</td>
<td>Chemical Pedagogy in the High School Laboratory</td>
<td>TEAC 875</td>
<td>Credit 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.</td>
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<tr>
<td></td>
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<td></td>
<td>A. Small-scale Experiments (1-3 cr)</td>
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<td></td>
<td>B. Technology Integration (3-6 cr)</td>
</tr>
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<td></td>
<td></td>
<td>C. Inquiry Experiments (1-3 cr)</td>
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<td></td>
<td></td>
<td>D. At-home Experiments (1-3 cr)</td>
</tr>
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<td></td>
<td>E. Probe Experiments (1-3 cr)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>F. Traditional Experiments (1-3 cr)</td>
</tr>
<tr>
<td>COMM 427/827</td>
<td>Instructional Communication</td>
<td>TEAC 429/829</td>
<td>Advanced introductory course in instructional communication, focusing on understanding variables associated with the communication process in instructional settings and managing instructional communication more effectively. Provides an experimental and a cognitive understanding of the role of communication in the instructional process.</td>
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<tr>
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<td>Prereqs: Junior/senior standing; College of Education and Human Sciences major; COMM 200, or permission.</td>
</tr>
<tr>
<td>CYAF 814</td>
<td>Evaluation in Career and Technical Education</td>
<td>TEAC 814</td>
<td></td>
</tr>
</tbody>
</table>
Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.

**Special Topics in Human Sciences**

- **Course Code**: CYAF 891
- **Crosslisted as**: HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891
- **Credit Hours**: 3
- **Campus**: Classroom
- **Course Delivery**: Classroom

Aspects of human sciences not covered elsewhere in the curriculum.

**Teaching Learners to Learn**

- **Course Code**: EDAD 855
- **Crosslisted as**: EDPS 855, NUTR 855, SPED 855, TEAC 855
- **Credit Hours**: 3
- **Campus**: Classroom
- **Course Delivery**: Classroom

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

**Instructional Leadership: Emerging Trends and Practices**

- **Course Code**: EDAD 948
- **Crosslisted as**: TEAC 948
- **Credit Hours**: 3
- **Campus**: Classroom
- **Course Delivery**: Classroom

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**Field Studies in Education**

- **Course Code**: EDAD 991
- **Crosslisted as**: NUTR 991, TEAC 991
- **Credit Hours**: 1–3
- **Max credits per degree**: 6
- **Campus**: Classroom
- **Course Delivery**: Classroom

**Prereqs:**
- Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

**Seminar in Qualitative Research**

- **Course Code**: EDPS 935
- **Crosslisted as**: TEAC 935
- **Credit Hours**: 3
- **Campus**: Classroom
- **Course Delivery**: Classroom

**Prereqs:**
- [EDUC 900K](http://bulletin.unl.edu/courses/EDUC/900K) or permission

Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.
Psychology of Reading
Crosslisted as TEAC 989

Prereqs:
TEAC *811 or 841 or SPED 886

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Nebraska Writing Project Internship
Crosslisted as TEAC 895A

Prereqs:
Permission

Nebraska Humanities Project
Crosslisted as TEAC 992

Place Conscious Teaching
Crosslisted as TEAC 992B

Theory and practice of teaching writing, literature, and rhetoric in connection with local place, region, and community.

American Cultural Perspectives through Popular Music and Guitar
Crosslisted as MUNM 450, TEAC 450/850

Exploration of the historical, social and cultural context of late 19th and 20th century America through learning to play jazz and popular music on the guitar to provide an authentic, performance-based encounter in music.

Approaches to Middle School General Music
Crosslisted as TEAC 873

Prereqs:
### Historical and Philosophical Foundations of American Music Education

**Course Code:** MUED 845  
**Course Title:** Historical and Philosophical Foundations of American Music Education

**Crosslisted as:** TEAC 845

**Prerequisites:**  
Undergraduate degree in MUED.

**Description:**

MUED 845 is required for a graduate degree in music education.

Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylton, Richmond and others are considered.

### Reading and Writing Disabilities: Adolescents

**Course Code:** SPED 406/806  
**Course Title:** Reading and Writing Disabilities: Adolescents

**Crosslisted as:** TEAC 806

**Prerequisites:**  
SPED 400, SPED 412 (required for undergraduate students only). Parallel SPED 406A/806A.

**Description:**  
Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

### Reading Center Practicum II

**Course Code:** SPED 406A/806A  
**Course Title:** Reading Center Practicum II

**Crosslisted as:** TEAC 806A

**Prerequisites:**  
SPED 400, SPED 412 (required for undergraduate students only). Taken parallel with SPED 406.

**Description:**  
Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Max Credits per Degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 886</td>
<td>Assessment, Evaluation, and Instruction of Crosslisted as TEAC 886</td>
<td></td>
<td>1-3</td>
<td>6</td>
<td>Lecture</td>
<td>Classroom</td>
</tr>
<tr>
<td>SPED 892</td>
<td>Special Topics in Education Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892</td>
<td>Prereqs: EDPS 859 or parallel; EDPS 859 or equivalent</td>
<td>1-3</td>
<td>12</td>
<td>Lecture</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 402/802</td>
<td>Contemporary Children's Literature: Principles and Practices</td>
<td>Prereqs: TEAC 302 and successful completion of student teaching or permission.</td>
<td>3</td>
<td></td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 411/811</td>
<td>Reading Processes and Practices</td>
<td>Overview of reading processes and programs with attention to strategies for comprehension and word identification, approaches, and materials. A. Teaching Reading (3 cr) B. Special Topics in Reading (1–6 cr)</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 413/813</td>
<td>Studies in Teaching English as a Second Language</td>
<td>Preparation for teaching K–12 learners whose language of nurture is not English. A. ESL: Acquisition (1–3 cr) B. ESL: Teaching and Curriculum (1–3 cr)</td>
<td>1-15</td>
<td>15</td>
<td></td>
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</tr>
</tbody>
</table>
### Teaching English Language Learners (ELLs) in Content Areas

**Course Code:** 413M/813M  
**Course Title:** Teaching English Language Learners (ELLs) in Content Areas  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/413M](http://bulletin.unl.edu/courses/TEAC/413M)

**Course Description:**  
Theory and pedagogy in the teaching of English Language Learners (ELLs) in course content areas at all levels of K–12 education. Identify and design linguistically and culturally responsive instruction for English learners in the disciplines (e.g. language arts, science, mathematics, social sciences).

### Teaching English Overseas

**Course Code:** 413P/413X/813P  
**Course Title:** Teaching English Overseas  
**Course Delivery:** Classroom, Web  
**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/413P](http://bulletin.unl.edu/courses/TEAC/413P)

**Course Description:**  
Methodologies for teaching English to speakers of other languages (TESOL) in international settings.

### Inclusive Early Childhood Methods

**Course Code:** 416/816  
**Course Title:** Inclusive Early Childhood Methods  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Max Credits per Semester:** 9  
**Course Format:** Lecture  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/416](http://bulletin.unl.edu/courses/TEAC/416)

**Prerequisites:**  
Admission to the Inclusive Early Childhood Teacher Education Program; FACS 270, 270L, 374, and 374L.  

**Course Description:**  
The creation and practice of developmentally appropriate instruction in curricular areas for K to 3rd grades. Role of the teacher and/or facilitator in relationship to the primary curriculum and learning environment.  

---

### Teaching Writing in the Elementary School

**Course Code:** 418/818  
**Course Title:** Teaching Writing in the Elementary School  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/418](http://bulletin.unl.edu/courses/TEAC/418)

**Course Description:**  
Learning and teaching of writing with consideration given to developmental factors of children and adolescents.

### Teaching Foreign Language in the Elementary School

**Course Code:** 420/820  
**Course Title:** Teaching Foreign Language in the Elementary School  
**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/420](http://bulletin.unl.edu/courses/TEAC/420)

**Course Description:**  
Theory, research and practice of most recent foreign language models and strategies.

### Coordination in Occupational Training Programs

**Course Code:** 425/825  
**Course Title:** Coordination in Occupational Training Programs  
**Course Delivery:** Classroom  
**Course Link:** [http://bulletin.unl.edu/courses/TEAC/425](http://bulletin.unl.edu/courses/TEAC/425)

**Crosslisted as:** EDAD 825
Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.

**TEAC**

**Introduction to Philosophy of Education**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>430/830</td>
<td>3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Open to advanced undergraduates and graduate students

Fundamental ideas and skills that students can use to begin to form personal philosophical perspectives on education that can be justified intellectually, practically, and ethically. Using case studies of realistic school situations and the theoretical work of a range of writers in education, students explore conceptions of teaching, learning, curriculum, and the relationship between school and society.

**TEAC**

**Studies in the Foundations of Education**

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<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Max Credits Per Degree</th>
<th>Delivery</th>
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</thead>
<tbody>
<tr>
<td>431/831</td>
<td>3</td>
<td>12</td>
<td>Classroom</td>
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</tbody>
</table>

Social and cultural analyses of curriculum, teaching, and education policy from disciplinary perspectives. A. The Anthropology of Education (3 cr) B. The History of Education (3 cr) E. The Sociology of Education (3 cr) J. Special Topics (3 cr)

**TEAC**

**Higher Education in America**

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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Prereqs</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>432/832</td>
<td>3</td>
<td>12 hrs education.</td>
<td>Classroom</td>
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</table>

History and development of America's colleges and universities and recent trends and problems in higher education.

**TEAC**

**Comparative Education**

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<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>433/833</td>
<td>3</td>
<td>Classroom</td>
</tr>
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</table>

Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.

**TEAC**

**Comparative Education Survey**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Max Credits Per Semester</th>
<th>Delivery</th>
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<tbody>
<tr>
<td>433A/833A</td>
<td>3</td>
<td>3</td>
<td>Classroom</td>
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</table>

Comparative Education investigates origins, goals, organization, challenges, and accomplishments of various countries’ school systems with intentional comparisons to American practices. The 'A' format is a survey course that considers examples from all over the world. The 'B' format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

**TEAC**

**Comparative Education: Special Topics/Travel Study**

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<tr>
<th>Course Code</th>
<th>Credits</th>
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<tr>
<td>433B</td>
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<td>Classroom</td>
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</table>

Comparative Education: Special Topics/Travel Study focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.
433B/833B

Prereqs: None

This course could be taken more than once for additional credits assuming the student uses it for travel-study to different places. For example, a student could not visit South Korea twice with the same professor teaching the same syllabus, but could visit South Korea once (as one 3-hour course) and South Africa (as another 3-hour course).

Course investigates origins, goals, organization, challenges, and accomplishments of various countries' school systems with intentional comparisons to American practices. The 'B' format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

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434/834 Ethics and Education

Open to advanced undergraduates and graduate students

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equity, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.

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436/836 Latin American Education

Prereqs: 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.

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438/838 Linguistics for the Classroom School Teacher

Prereqs: Admission to the Teacher Education Program.

Analysis of various aspects of linguistic study including dialects, usage, modern grammar, semantics, lexicography, etc., and their application in the K–12 school English classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the classroom.

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439/839 Literature for Adolescents

Prereqs: Admission to a Teacher Education Program.

Wide range of young adult literature available for use in schools. Critical and rhetorical tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; consideration for readers aged 11–16.
### Content Area Reading, Grades 4–12

This course is a prerequisite for SPED 406 and SPED 406A.

- **Simultaneous teaching of academic content and functional teaching of reading in the content areas; assessment of comprehension, vocabulary/concept attainment; analyses of text; improvement of content area learning through reading/writing development.**

### Learning and Teaching Principles and Practices

**Prereqs:**
- Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

- Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 or 406. Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline–based art education. Planning and incorporation of innovative approaches embracing the diversity of students. K. Career and Technical Education Prereq: As listed above. Procedures for writing, selecting and organizing subject matter for instruction. L. Methods of Teaching Information Technology (3 cr) Prereq: As listed above and TEAC 259 or parallel TEAC 397L or 894L. Objectives, teaching materials, and methods of presentation emphasizing the organization and management of computer science instruction. [IS]N. Secondary Language Arts (3 or 4 cr) Prereq: As listed above, including ENGL 357 or 377; and TEAC 438 or 438/838; and grade average of "B" (3.0) or better in subject-area. Theoretical issues in the teaching and learning of writing, language, and literature. O. Marketing Education Prereq: As listed above and TEAC 452K. Objectives, teaching materials, selection, and organization of subject matter, and methods of instruction and evaluation in marketing. [IS]P. Secondary Mathematics Prereq: As listed above. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners. [IS]R. Secondary Modern Languages Prereq: As listed above. Investigates issues in second language learning and teaching from the perspective of proficiency: contextualized practice in reading, writing, speaking, listening, and culture. Methodological approaches, review of research, testing guidelines, accuracy, the affective and cognitive needs of students, and the incorporation of authentic materials/language. V. Secondary Science Prereq: As listed above and parallel with TEAC 397. Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners. [IS]W. Secondary Social Science Prereq: As listed above. Theoretical issues in teaching and learning in the individual and integrated social sciences.
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Procedures for writing, selecting and organizing subject matter for instruction.

**TEAC 451P/851P**  
**Learning and Teaching Principles and Practices: Secondary Mathematics**  
**LINK** ([http://bulletin.unl.edu/courses/TEAC/451P](http://bulletin.unl.edu/courses/TEAC/451P))  
**Prereqs:** Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners.

**TEAC 451V/851V**  
**Learning and Teaching Principles and Practices:**  
**LINK** ([http://bulletin.unl.edu/courses/TEAC/451V](http://bulletin.unl.edu/courses/TEAC/451V))  
**Prereqs:** Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better. Parallel with **TEAC 397V** ([http://bulletin.unl.edu/courses/TEAC/397V](http://bulletin.unl.edu/courses/TEAC/397V)).

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners.

**TEAC 452/852**  
**Curriculum Principles and Practices**  
**LINK** ([http://bulletin.unl.edu/courses/TEAC/452](http://bulletin.unl.edu/courses/TEAC/452))  
**Prereqs:** Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with 2.5 GPA or better.

Focus on practical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and **TEAC 306** ([http://bulletin.unl.edu/courses/TEAC/306](http://bulletin.unl.edu/courses/TEAC/306)) or 406 ([http://bulletin.unl.edu/courses/TEAC/406](http://bulletin.unl.edu/courses/TEAC/406)) or 806 ([http://bulletin.unl.edu/courses/TEAC/806](http://bulletin.unl.edu/courses/TEAC/806)). Theory and research into curriculum incorporating technology, interdisciplinary approaches, active learning, and course content designed to enhance art understanding by students of diversity. J. Business Education Prereq: As listed above and **TEAC 451K** ([http://bulletin.unl.edu/courses/TEAC/451K](http://bulletin.unl.edu/courses/TEAC/451K)) and parallel with **TEAC 397I** ([http://bulletin.unl.edu/courses/TEAC/397I](http://bulletin.unl.edu/courses/TEAC/397I)). Objectives, teaching materials, selection and organization of subject matter, and methods of instruction and evaluation in business subjects. M. Industrial Education Prereq: As listed above and **TEAC 451K** ([http://bulletin.unl.edu/courses/TEAC/451K](http://bulletin.unl.edu/courses/TEAC/451K)) and parallel with **TEAC 397M** ([http://bulletin.unl.edu/courses/TEAC/397M](http://bulletin.unl.edu/courses/TEAC/397M)). Objectives, curricula, methodology, evaluation, planning, classroom management and course organization. [IS]N. Secondary Language Arts Prereq: As listed above and parallel with **TEAC 397** ([http://bulletin.unl.edu/courses/TEAC/397](http://bulletin.unl.edu/courses/TEAC/397)). Planning, teaching, and evaluating language arts lessons for diverse learners. P. Secondary Mathematics Prereq: As listed above and **TEAC 451P** ([http://bulletin.unl.edu/courses/TEAC/451P](http://bulletin.unl.edu/courses/TEAC/451P)) with a grade of “C+” or better. Conceptualizing the 7–12 curriculum through multimedia and active, discovery learning. [IS]R. Secondary Modern Languages Prereq: As listed above. Second-language acquisition and learning theory and their relationship to curriculum planning and development. Practice in creative language–use activities designed to build second language reading, writing,
speaking, listening, and culture skills. Development of teacher as observer, reflector, and recorder of individual student needs. [IS]V. Secondary Science Prereq: As listed above and TEAC 451V. Curricular materials, including the application of technology, as they relate to classroom instruction with diverse populations. [IS]W. Secondary Social Science 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.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per semester</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tr>
<td>TEAC 453/853</td>
<td>The Middle Level Professional Methods</td>
<td>Admission to the Teacher Education Program.</td>
<td>1-12</td>
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<td>TEAC 495/895</td>
<td>Independent Study</td>
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<td>1-3</td>
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</tbody>
</table>
**Problems in Secondary Education**

Credit Hours: 1-6  
Course Delivery: Classroom

**Prereqs:**  
Permission.

Opportunities for experienced teachers and administrators to develop plans, procedures, or experiments directed to the improvement of the curriculum or administration of the secondary school.

**Problems in Elementary Education**

Credit Hours: 2-3  
Course Delivery: Classroom

**Prereqs:**  
Permission.

Opportunities to develop plans, procedures, experiments, and models directed to the improvement of elementary school education on an independent study basis.

**Inquiry into Teaching and Learning**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

This course is a prerequisite for TEAC 888.

Contemporary educational research from multiple theoretical perspectives.

**Curriculum Inquiry**

Credit Hours: 3  
Campus:  
Course Delivery: Classroom

The relationship between curriculum theory and/or research to educational practices.

**Student Teaching Internship Seminar**

Credit Hours: 1-2  
Campus:  
Course Delivery: Classroom

**Prereqs:**  
Parallel TEAC 897.

Analysis of school programs with attention to teacher certification, teacher/student rights/responsibilities, proper conduct of teachers, selected legal aspects of education, methods of communicating with parents and community members, and current issues.  
A. Elementary (K–6) (1–2 cr) Parallel TEAC 897A.  
B. Elementary Art (1–2 cr) Parallel TEAC 897B.  
C. Elementary Foreign Language (1–2 cr) Parallel TEAC 897C.  
I. Secondary Art (1–2 cr) Parallel TEAC 897I.  
N. Secondary Language Arts (1–2 cr) Parallel TEAC 897N.
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<th>Course Code</th>
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<th>Campus</th>
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<tr>
<td>TEAC 805</td>
<td>Advanced Teaching Strategies</td>
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<td>3</td>
<td>Lecture</td>
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<tr>
<td>TEAC 812</td>
<td>Improvement of Instruction in Elementary School Science</td>
<td>12 hrs education including TEAC 315 or permission; teaching experience or student teaching</td>
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<td>Classroom</td>
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<td>TEAC 813J</td>
<td>Intercultural Communication</td>
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<td>3</td>
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<tr>
<td>TEAC 817</td>
<td>Emerging Reading and Language</td>
<td>Elementary endorsement</td>
<td>3</td>
<td>Classroom</td>
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</tbody>
</table>
Principles and Practices in Social Studies Education

Current issues and trends in the curriculum and teaching of social studies.
A. Special Topics (1–3 cr)

Credit Hours: 1–3
Max credits per degree: 9
Campus: Classroom

Improvement of Instruction in Industrial Education

Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.

Credit Hours: 3
Campus: Classroom

Comparative Education

Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.

Credit Hours: 3
Campus: Classroom

Ethnic Minorities and American Education

Chronological entry of European immigrant groups into an American society during the formative years of the development of the American public school system. Record of American social and educational history is replete with examples of inter- and intra-group human conflict as each immigrant group attempted to carve out its niche in a New World setting during a period of mass migration from Europe. Historical, sociological, and psychological barriers that became inherent during a dynamic period of nation building.

Credit Hours: 3
Campus: Classroom

Culture and Schooling

Description and explanation of cultural values as they relate to education.
A. Gender (1–3 cr)
B. Gender and Science (1–3 cr)
D. Special Topics (1–6 cr)
E. Rural Education (1–3 cr)

Credit Hours: 1–3
Max credits per degree: 15
Campus: Classroom

Objectives and Methods of Science Teaching

This course is a prerequisite for TEAC 924

A. Elementary
B. Middle School
D. Secondary and Community College
E. Special Topics (1–6 cr)

Credit Hours: 1–3
Campus: Classroom
### School Media Programs

**844**

Role of the media specialist as a member of the instructional team.

- Administration (3 cr)
- Reference (3 cr)
- Cataloging (3 cr)
- Selection (3 cr)
- Special Topics in School Media

**Credit Hours:** 1–3
**Campus:**
**Course Delivery:** Classroom

### Studies in Middle Level Schooling

**846**

Historical development, philosophy, and current literature of the middle school.

- Curriculum (1–3 cr, max 3)
- Leadership (1–3 cr, max 3)
- Teacher-Based Advisory (1–3 cr, max 3)
- Special Topics (1–3 cr, max 9)

**Credit Hours:** 1–9
**Max credits per degree:** 9
**Campus:**
**Course Delivery:** Classroom

### Principles of Business Education

**847**


**Credit Hours:** 3
**Campus:**
**Course Delivery:** Classroom

### Introduction to Curriculum Studies

**848**

Historical development and philosophy of high school curricula. Review of research on schooling, curriculum trends, and school organizational structures.

- Elementary Schools
- Middle Schools
- Secondary Schools
- Special Topics in Curriculum (1–6 cr)

**Credit Hours:** 1–3
**Campus:**
**Course Delivery:** Classroom

### Studies in Assessment and Leadership for Learning

**849**

Preparation for assessing K–12 learners and leading K–12 Teacher Learning Communities.

- Classroom Assessment (3 cr)
- Large-scale Assessment (3 cr)
- Leadership in Assessment (3 cr)
- Leading Classroom Assessment (3 cr)
- Special Topics in Assessment and Leadership for Learning (3 or 6 cr, max 6)

**Credit Hours:** 6
**Max credits per degree:** 18
**Course Format:** Lecture
**Campus:**
**Course Delivery:** Classroom

### Nebraska Writing Project

**857B**

Crosslisted as ENGL 857B

Topics in writing instruction, explored via the National Writing Project Institute model, for K–12 and college teachers of writing in all curricular domains.

**Credit Hours:** 1–3
**Course Format:** Lecture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
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<td>Utilization of Modern Technology</td>
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<td>Strategies of incorporating modern technology</td>
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<td>into the professional workplace; provides a</td>
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<td>thorough understanding of the operation and</td>
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<td>evaluation of integrating technology into the</td>
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<td>TEAC 859</td>
<td>Instructional Message Design</td>
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<td>Using selected principles from behavior science</td>
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<td>(perception, memory, attitudes, concepts)</td>
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<td>students analyze and design instructional</td>
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<td>messages. Systematic process for instructional</td>
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<td>TEAC 860</td>
<td>Production and Utilization of Instructional</td>
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<td>Classroom</td>
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<td>Materials</td>
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<td>Unique characteristics and contributions of</td>
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<td>processes. Students produce materials for</td>
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<td>Education for a Pluralistic Society: Foundation</td>
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<td>Educational practices and policies for people</td>
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<td>United States Foundation of multicultural</td>
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<td>education. Discussion of contemporary educational</td>
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<td>TEAC 881</td>
<td>Music in Early Childhood Education</td>
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<td>Prepares the teacher of the young child (3–8</td>
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<td>years) in the musical skills, methodology, and</td>
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<td>program of music in the public and private</td>
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<td>schools, the nursery schools, and day-care</td>
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<td>TEAC 887</td>
<td>Effecting High School Improvement</td>
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<td>The relationships and interactions among the</td>
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<td>high school student, a teacher, and the</td>
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<td>challenges for improving high schooling for all</td>
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<td>students.</td>
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</tbody>
</table>
**Teacher as Scholarly Practitioner**

**Course Code:** TEAC 888

**Prereqs:**
- TEAC 800 (http://bulletin.unl.edu/courses/TEAC/800) and 801 (http://bulletin.unl.edu/courses/TEAC/801), or permission

Seminar on the principles of practitioner inquiry and development of a proposal for an inquiry project.

A. Special Topics in Inquiry

**Credit Hours:** 1–3
**Max credits per degree:** 3
**Campus:**
**Course Delivery:** Classroom

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**Masters Seminar**

**Course Code:** TEAC 889

**Prereqs:**
- Permission

Working with a faculty mentor on either an individual or small-group basis, the student plans, conducts, and reports a summative work project.

**Credit Hours:** 1–3
**Max credits per degree:** 9
**Campus:**
**Course Delivery:** Classroom

---

**Workshop Seminar**

**Course Code:** TEAC 890

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Campus:**
**Course Delivery:** Classroom

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**Workshop Seminar**

**Course Code:** TEAC 893

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

**Campus:**
**Course Delivery:** Classroom

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**Professional Practicum Experiences**

**Course Code:** TEAC 894

**Prereqs:**
- Admission to Teacher Education Program

TEAC *894 does not count toward the MA or MEd degree. P/N only. Guided observations and/or clinical experiences in schools and/or agencies offering programs for children/youth.

A. Elementary (K–6) (1–10 cr)
B. Elementary Art (1–10 cr)
E. English as a Second Language (1–10 cr)
G. Elementary Foreign Language (1–10 cr)
I. Secondary Art (1–10 cr)
J. Business Education (1–10 cr)
L. Information Technology (1–10 cr, max 10)
M. Industrial Education (1–10 cr)
N. Secondary Language Arts (1–10 cr)
O. Marketing Education (1–10 cr)
P. Secondary Mathematics (1–10 cr)
Q. Middle School (1–10 cr)
R. Secondary Modern Language (1–10 cr)
T. Reading (1–10 cr)
V. Secondary Science (1–10 cr)
W. Secondary Social Science (1–10 cr)
Y. Mainstreaming (1–10 cr)
Z. Multicultural (1–10 cr)

**Credit Hours:** 1–10
**Max credits per degree:** 10
**Course Format:** Field
**Campus:**
**Course Delivery:** Classroom
**Student Teaching Internship**

**Prereqs:**
Admission by application only

This course is a prerequisite for: [TEAC 803](http://bulletin.unl.edu/courses/TEAC/803)

(See “Admission to Student Teaching” in the UNL Undergraduate Bulletin.)

This course will not count towards the MA or MEd degree. P/N only.

Supervised teaching experience in schools.

- A. Elementary (K–6)
- B. Elementary Art
- E. English as a Second Language
- D. Elementary Physical Education
- G. Elementary Foreign Language
- I. Secondary Art
- J. Business Education
- K. Health
- M. Industrial Education
- N. Secondary Language Arts
- P. Secondary Mathematics
- Q. Middle School
- R. Secondary Modern Language
- U. Secondary Physical Education
- V. Secondary Science
- W. Secondary Social Science
- Y. Mainstreaming
- Z. Multicultural

**Masters Thesis**

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Supervision and Administration in Vocational Education**

For course description, see [ALEC 901](http://bulletin.unl.edu/courses/ALEC/901).

**Colloquium in Educational Policy and Practice**

Educational policy and practice and their interconnection.

- A. Special Topics in Educational Policy and Practice (1–3 cr)

**Current Trends in the Education of Young Children**
Participation in special problems of teachers in service. Guidance, evaluations, research.

**Practicum in Postsecondary Teaching**

Crosslisted as ALEC 905

**Prereqs:**
ALEC *805 or permission

Work with a faculty mentor in a discipline of choice and an instructional supervisor to prepare instruction and teach students in a postsecondary setting. Practicum students are assisted in arranging for the practicum and are provided consultation and feedback during the practicum. Lesson planning and reflective papers are part of the practicum experience.

**Seminar in Elementary School Mathematics**

**Prereqs:**
TEAC 808 or equivalent

Theories, literature, and research procedures relative to elementary mathematics education.

**Seminar in Teacher Education**

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)

**Seminar in Elementary School Science**

Prereqs:
12 hrs laboratory science including courses in both physical and biological fields; TEAC 403 or 804 (or equivalent; teaching experience)

Literature which deals with research and experimentation in science for the elementary school. Aspects of the teaching and supervision of elementary school science that require investigation and research.

Current research and theory within the curriculum and teaching of career and technical education.

**Seminar in Curriculum and Teaching of Career and Technical Education**
### 921

Research in literacy and schooling.
- A. Curriculum and Teaching (3 cr)
- B. Special Topics (1-3 cr)
- D. Language, Culture, and Education (1-3 cr)

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<thead>
<tr>
<th>Credit Hours:</th>
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<tr>
<td>Max credits per degree:</td>
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<td>Course Format:</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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### 922

**Seminar in the Learning and Teaching of Foreign Languages**

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<tr>
<th>Credit Hours:</th>
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<tr>
<td>Max credits per degree:</td>
<td>21</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

**Prereqs:**
Undergraduate teaching major in a foreign language and teaching experience in a foreign language

Critical review and evaluation of current literature, research and theory.
- A. Reading in the Foreign Language Classroom (1-3 cr, max 3)
- B. Writing in the Foreign Language Classroom (1-3 cr, max 3)
- D. Listening in the Foreign Language Classroom (1-3 cr, max 3)
- E. Speaking in the Foreign Language Classroom (1-3 cr, max 3)
- J. Planning in the Foreign Language Classroom (1-3 cr, max 3)
- K. Technology-Enhanced Language Instruction (1-3 cr, max 3)

### 923

**Seminar in the Curriculum and Teaching of Secondary School Mathematics**

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<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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**Prereqs:**
Undergraduate teaching major and teaching experience in mathematics

Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of mathematics.

### 924

**Seminar in the Curriculum and Teaching of Science**

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<tr>
<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

**Prereqs:**
Undergraduate teaching major and teaching experience in science, and [TEAC 842](http://bulletin.unl.edu/courses/TEAC/842) and [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859)

Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.
- A. Elementary
- B. Middle School
- D. Secondary
- E. Inclusive Science Teaching
- J. Special Topics (1-6 cr)

### 925

**Seminar in the Curriculum and Teaching of Social Sciences**

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<tr>
<th>Credit Hours:</th>
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<tr>
<td>Max credits per degree:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

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)
Seminar in Individualized Instruction for Gifted, Talented, and Creative Students

Nature of curricular and instructional programs and practices for gifted, talented, and creative students in elementary and secondary schools. Range of learner outcomes, identification of instructional principles, personalizing instruction for this group of learners.

Sociological/Anthropological Research Methods in Education

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
A. Ethnographic Methods (1–3 cr, max 3)
B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3 cr, max 3)
D. Discourse Analysis Across School, Home and Community Settings (1–3 cr, max 3)
E. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max 3)
J. Hermeneutic Traditions in Education (1–3 cr, max 3)
K. Quantitative Research Traditions in Education (1–3 cr, max 3)

Research in the History of Education

Historical research methods in education culminating in the research and writing of a historical article as publication report.

Contract Studies in International Education

Prereqs: Permission

Student proposed course of studies in international education: may include field experiences, individual/group research, participation in mini-seminars, etc.

Seminar in College Teaching

Overview of teaching in post-secondary settings.

Philosophy of Science and Educational Research

Major themes in philosophy of science and relates these to conceptions of research on human beings and social institutions, particularly as this is applied to schooling. Students consider such fundamental issues as whether
**Seminar in Curriculum Studies 944**

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)
C. Curriculum Evaluation (1-3 cr)
D. Curriculum as Spatial Text (1-3 cr)

**Instructional Improvement and Decision Making 946**

Study and application of teaching models and techniques based on research, theory, and exemplary practice.
A. Instructional Assessment
B. Special Topics in Instruction

**Seminar in Education 949**

Critical analysis of literature and research on teaching, learning, and schooling.
A. Special Topics in Education (1-3 cr)

**Contextual Research in English/Language Arts 950**

Uses of qualitative research in English language arts; interpreting, planning, conducting, and reporting contextual research results.

**Seminar in Reading Education 951**

Scholarship in 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, 6 max)

**Language and Learning 952**

Role that language plays in empowering and constraining children as they attempt to make sense of their world. Consideration of application of language scholarship for general instruction.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Course Format</th>
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<tbody>
<tr>
<td>TEAC 953</td>
<td>Seminar on Writing in the Curriculum</td>
<td>3</td>
<td>Lecture</td>
<td>Classroom</td>
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<td>Writing development, writing instruction, and the</td>
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<td></td>
<td>use of writing in the content areas. Consideration</td>
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<td></td>
<td>of application of scholarship in writing for</td>
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<td>general learning and instruction.</td>
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<tr>
<td>TEAC 957B</td>
<td>Nebraska Writing Project</td>
<td>6</td>
<td>Lecture</td>
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<td></td>
<td>Crosslisted as ENGL 957B</td>
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<td>Summer institute for K–12 and college teachers of</td>
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<td>writing in all curricular areas, taught on the</td>
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<td>National Writing Project model.</td>
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<td>TEAC 959</td>
<td>Portfolio in Instructional Technology Competencies</td>
<td>1–12</td>
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<td>Classroom</td>
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<td>Prereqs:</td>
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<td>No more than six credits of TEAC 959 (http://</td>
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<td>bulletin.unl.edu/courses/TEAC/959) may be</td>
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<td>counted towards a masters degree. Portfolio</td>
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<td>components represent a significant contribution</td>
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<td>to the solution of an instructional problem and</td>
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<td>reflect broadly the major competencies of</td>
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<td>instructional technology: problem definition,</td>
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<td>learner analysis, media selection and message</td>
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<td>design, production, and evaluation.</td>
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<td>TEAC 960</td>
<td>Topical Seminar in Instructional Technology</td>
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<td>Classroom</td>
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<td>Prereqs:</td>
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<td>Critical analysis of research in a delimited</td>
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<td>problem area within instructional technology</td>
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<td>(e.g., ITV, CAI, videodisc, simulations,</td>
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<td>programmed instruction). Empirically testable</td>
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<td>research questions related to the topic.</td>
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<td>TEAC 961</td>
<td>Current Approaches to Elementary Music Education</td>
<td>3</td>
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<td>Classroom</td>
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<td>Prereqs:</td>
<td>Teaching experience</td>
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<td>Implementation of current programs, materials,</td>
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<td>and techniques for the improvement of music</td>
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<td>instruction in the elementary school.</td>
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<td>TEAC 990</td>
<td>Workshop Seminar</td>
<td>1–12</td>
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<td>Classroom</td>
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<td></td>
<td>Refer to Workshop Seminars in Education under</td>
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<td>the “Education” section of this bulletin.</td>
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</table>
Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Credit Hours: 1–12
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Doctoral Seminar

Prereqs: Permission

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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

Credit Hours: 3
Max credits per degree: 18
Campus: 
Course Delivery: Classroom

Individual Research Projects

Prereqs: Permission

Individual research under faculty supervision.

Credit Hours: 1–10
Max credits per degree: 10
Campus: 
Course Delivery: Classroom

Minor Research

Individual research on approved topics in Elementary Education.

Credit Hours: 1–6
Campus: 
Course Delivery: Classroom

Doctoral Dissertation

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1–24
Max credits per degree: 55
Campus: 
Course Delivery: Classroom

Contents

- 1 Description (#Description)
  - 1.1 Educational Administration (#Educational_Administration)
  - 1.2 Educational Psychology (#Educational_Psychology)
  - 1.3 Special Education and Communication Disorders (#Special_Education_and_Communication_Disorders)
  - 1.4 Teaching, Learning and Teacher Education (#Teaching, Learning and Teacher Education)
- 2 Faculty (#Faculty)
Description

The College of Education and Human Sciences (CEHS) offers graduate degree programs through its seven CEHS departments: Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design. In addition to graduate degree programs, CEHS also offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

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 focused interest but which are not included in other professional education courses. 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.

CEHS offers three masters degrees in nine majors and the education specialist degree in three majors. The MEd is offered only in Educational Administration; Special Education and Communication Disorders; and Teaching, Learning, and Teacher Education. The following requirements for the MEd are College requirements. Departmental requirements may exceed these. In work for the master of education degree, at least 6 semester hours selected from College of Education and Human Sciences courses outside the major must be included and supporting work may be substituted for the minor(s). For information on masters and specialist degree programs, consult the relevant department's listing in this bulletin.

CEHS offers two doctoral degrees, both the EdD and the PhD, under three majors: educational studies, human sciences, and psychological studies in education. In addition, CEHS participates in two additional doctoral majors.

The Educational Studies major includes six specializations. Instructional Technology; Internet-based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education is sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co-hosts, with Architecture, Architecture Education.

The Human Sciences major includes five specializations. Communication Disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies is sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Clothing and Design is based in the Department of Textiles, Clothing and Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.

The Psychological Studies in Education major includes four specializations, all hosted by the Department of Educational Psychology: Cognition, Learning and Development; Counseling Psychology; Qualitative and Quantitative Methodologies in Education; and School Psychology.

In addition, the Department of Educational Administration—in cooperation with UNO’s Department of Educational Administration—offers a major in Educational Administration, and the Department of Nutrition and Health Sciences participates in the Interdepartmental Nutrition major.

Specific program and application information is available under each department’s listing in this bulletin. Up-to-date information is also available on-line at cehs.unl.edu. Inquiries may be directed to cehsgrad@unl.edu or to (402) 472-5333.

Educational Administration

For a brief description of the program, application requirements and contact information, view the graduate program summary. [gradstudies/prospective/programs/EducationalAdministration](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration)

Interim Department Chair: Brent D. Cejda, Ph.D.
Graduate Committee Chair: Jody Isernhagen, Ph.D.

The Department of Educational Administration offers programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization.

Masters degree programs

The Masters Degree program meets the academic requirements for either a Master of Arts (MA) or a Master of Education (MEd) degree with a major in Educational Administration. The MA degree requires the completion of a thesis. Students enrolled in the Masters Degree program are interested in both K–12 and higher education administration.

The majority of students interested in K–12 education intend to satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, at either the standard or professional level, with administrative endorsements that will qualify them for employment as administrators in K–12 school systems. Students interested in higher education administration have the opportunity to pursue specializations in student affairs or human resource development or complete a general higher education program.

Doctoral degree programs

There are two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on-campus residency.

Certificates of Specialization

In addition to masters and doctoral degrees, the department offers four certificates of specialization.

Individuals who already have a Masters Degree in education can pursue a certificate endorsement program that will satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, a requirement for employment as an administrator in a K–12 school system.

The Certificate of Specialization in Educational Administration is designed to meet the requirements of a Nebraska Professional and Administrative Supervisory Certificate with an endorsement of superintendent.

The School Improvement Certificate Program that focuses on the K–12 school improvement process. The School Improvement Program benefits you—the teacher, by preparing you as a school leader while gaining the specialist credential, allowing you to increase your skills and build career opportunities.

The Community College Leadership Certificate is designed for those already employed in community colleges who aspire to administrative appointments as well as those who are in leadership positions and need or desire additional preparation.

Course Delivery

The Department of Educational Administration has been a campus leader in reaching out to students who need or wish to study from off campus and offers most of the course work for the MEd and EdD online. The primary emphasis in all courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of educational institutions.

Further information about graduate degree programs and about certification programs may be located on the department’s Website, located at cehs.unl.edu/edad.

Educational Psychology

For a brief description of the program, application requirements and contact information, view the graduate program summary.
Audiology (CCC-AUD) as well as licensure requirements in most states. Experiences that will meet or exceed the requirements of the American Speech-Language-Hearing Association (ASHA) for the Certificate of Clinical Competence in speech-language pathology. Candidates must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.

For a master of science degree in speech-language pathology, completion of an appropriate undergraduate or pre-professional program is required for full graduate standing. Students with strong potential but without an academic background in the major may be admitted on a provisional basis until deficiencies have been met. Completion of the masters degree requires a minimum of 48 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure. The application deadline for fall admission into the M.S. program in Speech-Language Pathology is January 15.

Special Education and Communication Disorders

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Department Chair: Sherri Jones, Ph.D.
Graduate Committee Chair: Karen Hux, Ph.D.
The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech-language pathology and the master of arts and master of education degrees in special education. The Department administers a Ph.D. in human sciences with a specialization in communication disorders and the Ph.D. or Ed.D. in educational studies with a specialization in special education. The department also offers the professional doctorate in audiology (AuD) degree in audiology and a combined AuD/PhD Program. For more information on doctoral programs in education call (402) 472-2141 or visit our website at www.unl.edu/barkley.

The masters degree program in speech-language pathology and the AuD program in audiology are accredited by the Council on Academic Accreditation in Audiology (CAA) and the American Speech-Language-Hearing Association (ASHA).

Doctoral Degrees

The PhD degree is available to students wishing careers in cognition, learning and development, research methods, measurement, counseling psychology, and school psychology through the field of educational specialization called psychological studies in education. For further information, see and contact the chair of the Department’s Graduate Committee.

Counseling and School Psychology Clinic

The Counseling and School Psychology Clinic in the Department of Educational Psychology serves the dual function of (1) providing training for qualified graduate students and of (2) providing services to individuals, public schools, families, and community agencies. Clinic therapists assist adults, families, children and youth experiencing academic, psychological, and behavioral concerns. In addition to therapeutic services, clinic therapists provide psychological testing and consultation for school related concerns. Therapeutic services are also provided for educational and vocational concerns. Service is provided by appointment.

Buros Center for Testing

The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practices. Founded by Oscar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evaluations of commercially available tests. In addition to its international reputation for providing test reviews, BIMM maintains the largest collection of tests and testing materials in the world. The Buros Institute for Assessment Consultation and Outreach (BIACO) was established in 1994 to expand the range of available assessment services to proprietary testing programs that include credentialing, state educational assessment, employment testing, and assessment literacy. Together, the two Buros Institutes advance the goals of the Department of Educational Psychology and the College of Education and Human Sciences by providing consultation and instructional services to graduate programs, by training and supporting graduate students in current assessment practices, and by serving assessment outreach needs both within and outside the state of Nebraska.
Students seeking admission to the AuD program should download the application from www.unl.edu/barkley. Three letters of recommendation, preferably from former college instructors, should be submitted to the AuD program coordinator along with the departmental application. Students do not apply to the Office of Graduate Studies and submission of the Graduate Record Examination is not required for admission. Students should contact the Graduate Support Staff at special@unl.edu for further application instructions.

**PhD/EdD 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. Students seeking admission into one of these programs should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the website at www.unl.edu/barkley or by emailing the Graduate Support Staff at special@unl.edu. Prospective students should submit three letters of recommendation along with the departmental application, a copy of their masters thesis and other relevant publications (if the student completed a thesis or has published) to the departmental 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 an applicant meets the qualifications for entrance into the program and whether a student’s interests are in accord with the type of education and direction the department faculty can provide. Final review of an application is made by the appropriate doctoral field graduate committee in special education or communications disorders.

### Teaching, Learning and Teacher Education

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).

**Interim Department Chair:** L. James Walter, Ph.D.

**Graduate Committee Chair:** Kathleen Wilson, Ph.D.

The Department of Teaching, Learning and Teacher Education (TLTE) provides masters, specialist and doctoral degree courses and programs for teachers, administrators, and other educational leaders and practitioners with a focus on scholarship and practice in curriculum and instruction in schools and non-school educational settings. Graduate endorsements are also offered in Reading Specialist K–12 and ESL.

#### Masters Degree

The aim of the TLTE masters program is to help educators build on their own experience, achieve a broad and deep understanding of educational practice, develop a professional identity, and engage in informed conversations about important teaching and learning issues towards making wise judgments regarding the many complex issues educators face. All candidates must complete a program which conforms to the requirements listed on the TLTE [masters program web page](http://cehs.unl.edu/tlte/graduate/masters). There are two masters degrees available in TLTE: the MA and MED. Both degree programs offer a good deal of flexibility to enable the student—in concert with a faculty adviser—to develop a course of study that meets the student’s needs and interests.

If you are interested in earning teacher certification at the elementary level in combination with a master degree, a 14 month full time program (MAet) is available. If instead you see yourself teaching at the middle school or high school level with a specialization in science or mathematics, read about our newest 14 month full time programs (MAMt and MAMt) where you can qualify for teacher certification and earn a Master of Arts degree. A limited number of fellowships are available with the MAMt and MAmt programs.

#### Educational Specialist (EdS) Degree.

This program in curriculum and instruction provides an opportunity for practitioners in the field to upgrade their professional skills. Two years of successful professional experiences is a minimum requirement for admission. Sixty–six hours beyond the bachelors degree, research competence, practicum experiences, and a written comprehensive examination are basic requirements for the program. It is recommended that you contact the department Graduate Chair before applying.

#### Doctoral Programs.

The EdD and PhD degrees are available under the major heading Educational Studies refer to the web page [doctoral programs in education](http://cehs.unl.edu/tlte/graduate/doctoral.shtml). The EdD is recommended for those whose primary interest is in the application of theory and knowledge to improve educational practice. The PhD is designed for students seeking to conduct research in order to generate new knowledge or reform educational theory. The Department of Teaching, Learning and Teacher Education administers three doctoral–level specializations, available for both the EdD and PhD in Educational Studies. Teaching, Curriculum and Learning focuses on teaching and learning processes; Instructional Technology focuses on using technology as a learning tool in various educational settings; and Internet–based Education focuses on using the Internet as a platform for teaching and learning. The most current information on these specializations is kept up–to–date on the web page for [TLTE doctoral programs](http://cehs.unl.edu/tlte/graduate/doctoral.shtml#tlte).

For additional information, see or of this bulletin. The Graduate Record Examination (GRE) is required for admission to the doctoral programs and foreign students must also submit a TOEFL score.

### Faculty

#### Educational Administration

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration).

#### Educational Psychology

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology).

#### Special Education and Communication Disorders

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders).

#### Teaching, Learning and Teacher Education

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).

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### Statistics

#### Courses for STAT (STAT)

<table>
<thead>
<tr>
<th>932</th>
<th>Biometrical Genetics and Plant Breeding</th>
<th>LINK (<a href="http://bulletin.unl.edu/courses/AGRO/932">http://bulletin.unl.edu/courses/AGRO/932</a>)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO</td>
<td>Crosslisted as STAT 932</td>
<td>LINK (<a href="http://bulletin.unl.edu/courses/AGRO/932">http://bulletin.unl.edu/courses/AGRO/932</a>)</td>
</tr>
</tbody>
</table>
**Sensory Evaluation**

Crosslisted as STAT 430/830

**Prereqs:**
- Introductory course in statistics.

*Offered fall semester of odd-numbered calendar years.*

Food evaluation using sensory techniques and statistical analysis.

---

**Ecological Statistics**

Crosslisted as STAT 803

**Prereqs:**
- STAT *801 or equivalent.

Model-based inference for ecological data, generalized linear and additive models, mixed models, survival analysis, multi-model inference and information theoretic model selection, and study design.

---

**Computational Biology**

Crosslisted as BIOC 442/842

**Prereqs:**
- Any introductory course in biology, or genetics, or statistics.

Databases, high-throughput biology, literature mining, gene expression, next-generation sequencing, proteomics, metabolomics, systems biology, and biological networks.

---

**Statistical Methods in Research**

**Prereqs:**
- Introductory course in statistics.

This course is a prerequisite for AGRO 816E, AGRO 907, AGRO 911, CIVE 963, CIVE 964, AGRO 966.

Statistical concepts and statistical methodology useful in descriptive, experimental, and analytical study of biological and other natural phenomena. Practical application of statistics rather than on statistical theory.

---

**Experimental Design**

**Prereqs:**
- STAT *802 recommended. Offered odd-numbered calendar years.

Theoretical concepts involved in planning breeding programs for the improvement of measurable morphological, physiological, and biochemical traits that are under polygenic control in crop plants of various types.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>STAT 804</td>
<td>Survey Sampling</td>
<td>STAT *801.</td>
<td>4</td>
<td>Lab 2, Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Suitable and efficiency of various designs in conducting experimental investigations in related areas and the statistical analysis of the data.</td>
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</tr>
<tr>
<td>STAT 831</td>
<td>Spatial Statistics</td>
<td>STAT *802</td>
<td>3</td>
<td>Lab 2, Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sampling techniques: simple random sampling, sampling proportions, estimation of sample size, stratified random sampling, ratio and regression estimates.</td>
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<tr>
<td>STAT 832</td>
<td>Statistics in Sports</td>
<td>STAT *802</td>
<td>2</td>
<td>Lab 2</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Offered odd–numbered calendar years. Statistical methods for modeling and analyzing correlated data, with emphasis on spatial correlation. Descriptive statistics, time series, correlograms, semivariograms, kriging and designing experiments in the presence of spatial correlation.</td>
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<tr>
<td>STAT 841</td>
<td>Statistical methods for Micro–array and Related Technologies</td>
<td>Any introductory course in biology, statistics, computer science or mathematics.</td>
<td>3</td>
<td>Lab 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>STAT 843</td>
<td>Next–Generation Sequencing and Systems Biology</td>
<td>Any introductory course in biology, statistics, computer science or mathematics.</td>
<td>3</td>
<td>Lab 3</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Next–generation RNA and genome sequencing, systems biology, Regulatory</td>
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</tbody>
</table>
networks of transcription, protein-protein interaction networks, theory and
practice. Databases, data integration and visualization. Students present
computational biology publications and projects.

**STAT 870 Multiple Regression Analysis**  
**Prereqs:**  
STAT *801, *802  
This course is a prerequisite for: STAT 974

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. Partial and multiple correlation,
dummy variables, covariance models, stepwise procedures, response
surfaces estimation, and evaluation of residuals.

**STAT 873 Applied Multivariate Statistical Analysis**  
**Prereqs:**  
STAT *801  
This course is a prerequisite for: STAT 973

Multivariate techniques used in research. Reduction of dimensionality and
multivariate dependencies, principle components, factor analysis, canonical
correlation, classification procedures, discriminant analysis, cluster analysis,
multidimensional scaling, multivariate extensions to the analysis of variance,
and the general linear model.

**STAT 874 Nonparametric Statistics**  
**Prereqs:**  
STAT *801 or 880

Statistical methods useful when data does not adhere to classical
distributional assumptions. Analysis of interval/ordinal/categorical data for
one, two and k sample problems, correlation and regression, goodness-of-
fit methods and related topics.

**STAT 875 Categorical Data Analysis**  
**Prereqs:**  
STAT *801, *802 or *870 recommended

Measures of associating contingency tables analysis, chi-squared tests, log-
linear and logistic models, generalized estimating equations, planning
studies involving categorical data.

**STAT 880 Introduction to Mathematical Statistics**  
**Prereqs:**  
MATH 208 or 107H; STAT 218

Credit Hours: 3  
Course Format: Lecture 3
This course is a prerequisite for STAT 804, IMSE 806, AREN 817, STAT 884, MATH 489, MECH 945, ECON 957, CSCE 970, CSCE 973, CSCE 977, STAT 880 is not open to students earning a MA or MS degree in mathematics or statistics.

**STAT 880**

Introductory mathematical statistics. Probability calculus; random variables, their probability distributions and expected values; sampling distributions; point estimation, confidence intervals and hypothesis testing theory and applications.

**Mathematical Statistics I—Distribution Theory**

**Prereqs:**
MATH 208 or MATH 107H.

This course is a prerequisite for STAT 883.

Sample space, random variable, expectation, conditional probability and independence, moment generating functions, special distributions, sampling distributions, order statistics, limiting distributions and central limit theorem.

**Mathematical Statistics II—Statistical Inference**

**Prereqs:**
STAT 882

Interval estimation; point estimation, sufficiency and completeness; Bayesian procedures; uniformly most powerful tests, sequential probability ratio test, likelihood ratio test, goodness of fit tests; elements of analysis of variance and nonparametric tests.

**Applied Stochastic Models**

**Prereqs:**
STAT 880 or IMSE 321 or equivalent.

Introduction to stochastic modeling in operations research. Includes the exponential distribution and the Poisson process, discrete–time and continuous–time Markov chains, renewal processes, queueing models, stochastic inventory models, stochastic models in reliability theory.

**Applied Statistics I**

**Prereqs:**
STAT 880 or IMSE 321.
### Statistics Seminar

**STAT 889**

- **Prereqs:** Permission
- **Credit Hours:** 1
- **Campus:** Classroom
- **Course Delivery:** Classroom

General linear models for estimation and testing problems analysis and interpretation for various experimental designs.

### Topics in Statistics and Probability

**STAT 892**

- **Prereqs:** Permission
- **Credit Hours:** 1-5
- **Max credits per degree:** 24
- **Campus:** Classroom
- **Course Delivery:** Classroom

Special topics in either statistics or the theory of probability.

### Statistics Project

**STAT 898**

- **Prereqs:** Permission
- **Credit Hours:** 1-5
- **Max credits per degree:** 5
- **Campus:** Classroom
- **Course Delivery:** Classroom

### Masters Thesis

**STAT 899**

- **Prereqs:** Admission to the Masters Degree Program and permission of major adviser
- **Credit Hours:** 1-6
- **Campus:** Classroom
- **Course Delivery:** Classroom

### Advanced Experimental Design

**STAT 902**

- **Prereqs:** STAT *802.
- **Credit Hours:** 3
- **Course Format:** Lecture 2
- **Campus:** Classroom
- **Course Delivery:** Classroom

Advanced design concepts and methods used in research: construction, analysis and interpretation of incomplete block designs, split-plots, confounded and fractional factorials, response surface methods, and other topics.

### Theory of Experimental Design

**STAT 904**

- **Prereqs:** Permission
- **Credit Hours:** 3
Theory of underlying construction and analysis of designed experiments. Multifactor designs, fractional factorials, incomplete block designs, row and column designs, orthogonal arrays, and response to surface designs. Optimality criteria. Mathematical and computer-aided design theory.

**Principles of Statistical Consulting**

**Prereqs:**
Permission

This course is a prerequisite for: [STAT 997](http://bulletin.unl.edu/courses/STAT/997)

[STAT 930](http://bulletin.unl.edu/courses/STAT/930) is primarily for graduate students in statistics.

Role and purpose of consulting. Statistical issues: understanding the client's problem and choosing an appropriate procedure. Interpersonal issues: client expectations, difficult clients, working effectively with people and teamwork.

**Bootstrap Methods and Their Application**

**Prereqs:**
STAT *883; STAT *870 or 970; prior experience with "R" software

Application, theory, and computational aspects of the bootstrap. Parametric, nonparametric, and jackknife re-sampling; influence function and nonparametric delta method; bootstrap confidence intervals and hypothesis tests; permutation tests; applications to regression; implementation using statistical software.

**Matrix Algebra Applications in Statistics**

**Prereqs:**
STAT *801 and 802

Concepts and matrix operations useful to expanding determinants, computing matrix inverses, determining ranks and linear (in)dependence, and finding latent roots and latent vectors. Introduction to matrix algebra applications in regression analyses and linear models.

**Linear Models**

**Prereqs:**
MATH 314 ([http://bulletin.unl.edu/courses/MATH/314](http://bulletin.unl.edu/courses/MATH/314)) / 814 ([http://bulletin.unl.edu/courses/MATH/814](http://bulletin.unl.edu/courses/MATH/814)).

This course is a prerequisite for: STAT 971 ([http://bulletin.unl.edu/courses/STAT/971](http://bulletin.unl.edu/courses/STAT/971)); STAT 972 ([http://bulletin.unl.edu/courses/STAT/972](http://bulletin.unl.edu/courses/STAT/972)).

Methods and underlying theory for analyzing data based on linear statistical models. General linear model with specific models as special cases: including linear models applications.

**Advanced Statistical Modelling**

[STAT 971](http://bulletin.unl.edu/courses/STAT/971)
<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
<th>Prereqs Notes</th>
</tr>
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<tbody>
<tr>
<td>STAT 970</td>
<td>Advanced Probability Theory</td>
<td><a href="http://bulletin.unl.edu/courses/STAT/970">Link</a></td>
<td>3</td>
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<tr>
<td>STAT 972</td>
<td>Variance Component Estimation</td>
<td><a href="http://bulletin.unl.edu/courses/STAT/972">Link</a></td>
<td>3</td>
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<tr>
<td></td>
<td>Prereqs: <a href="http://bulletin.unl.edu/courses/STAT/970">STAT 970</a> Offered odd-numbered calendar years. Design and analysis of random effects and mixed models Basic theoretical background for models with fixed effects, distribution of quadratic forms, quadratic estimators including ANOVA methods, likelihood estimators including ML and REML, computing strategies, and optimal design for nested and cross classifications.</td>
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<tr>
<td>STAT 973</td>
<td>Theory of Multivariate Analysis</td>
<td><a href="http://bulletin.unl.edu/courses/STAT/973">Link</a></td>
<td>3</td>
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<tr>
<td></td>
<td>Prereqs: <a href="http://bulletin.unl.edu/courses/STAT/873">STAT 873</a> or equivalent Statistical inference concerning parameters of multivariate normal distributions with applications to multiple decision problems.</td>
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<tr>
<td>STAT 974</td>
<td>Nonlinear Regression Analysis</td>
<td><a href="http://bulletin.unl.edu/courses/STAT/974">Link</a></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: <a href="http://bulletin.unl.edu/courses/STAT/870">STAT 870</a> and introductory calculus Basic concepts of nonlinear models and their associated applications. Estimating the parameters of these models under the classical assumptions as well as under relaxed assumptions. Major theoretical results and implementation using standard statistical software.</td>
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<tr>
<td>STAT 980</td>
<td>Advanced Probability Theory</td>
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<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: MATH *825 Probability spaces and random variables, expectations and fundamental inequalities, characteristic functions, four types of convergence, central limit theorem, introduction to stochastic processes.</td>
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<tr>
<td>STAT 982</td>
<td>Statistics Theory I</td>
<td><a href="http://bulletin.unl.edu/courses/STAT/982">Link</a></td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Prereqs: MATH *825 and STAT *883 This course is a prerequisite for: <a href="http://bulletin.unl.edu/courses/STAT/983">STAT 983</a></td>
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</tbody>
</table>
General decision problems, admissibility, mini-max and Bayes rules, invariance and unbiasedness, families of distributions problems in estimation theory.

**Statistics Theory II**

*Prereqs:*

[STAT 982](http://bulletin.unl.edu/courses/STAT/982)

<table>
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<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

**Advanced Topics in Probability and Statistics**

*Prereqs:*

Permission

<table>
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<th>Credit Hours:</th>
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<tr>
<td>Max credits per degree:</td>
<td>24</td>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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</table>

**Practicum in Statistical Consulting**

*Prereqs:*

[STAT 930](http://bulletin.unl.edu/courses/STAT/930)

<table>
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<th>Credit Hours:</th>
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<td>Campus:</td>
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<td>Course Delivery:</td>
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</tbody>
</table>

**Doctoral Dissertation**

*Prereqs:*

Admission to Doctoral Degree Program and permission of supervisory committee

<table>
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<tr>
<th>Credit Hours:</th>
<th>1-24</th>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

**Description**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/Statistics).

**Interim Department Chair:** Stephen Kachman, Ph.D.

**Graduate Committee:** Professors Eskridge (chair), Bilder, Parkhurst, Zhang

Graduate programs are offered leading to a master of science and a doctor of philosophy in statistics.

**Master of Science Degree**

The program of study for the masters degree may be under Options I, II, or III, with Option III the most common and Option I, the thesis option, rare. The primary aim of the statistics masters program is to provide students with an education that equips them to be competent practitioners of applied statistics. Programs can be tailored to emphasize applications in the biological sciences, environmental sciences, economics, engineering, agriculture, survey statistics or other areas of interest. Competence includes mastery of statistical theory and methods, significant exposure to disciplines with which statisticians interact, facility with statistical
consulting tools, and training and experience with statistical consulting. Programs can also be tailored to prepare students who plan to go on for doctoral study.

Requirements are designed to allow flexibility in designing programs around individual student needs. Students are expected to take a common core consisting of two semesters of mathematical statistics, (STAT 882 and 883), two semesters of statistical modeling (STAT 970 and 971), one semester of design and analysis of experiments (STAT 802), and one semester of multivariate methods (STAT 873). In addition, students must attain proficiency in a statistical computing language, gain statistical consulting experience and become familiar with at least one discipline to which statistics is applied. Students are required to pass a comprehensive examination based on ability to integrate material from the core curriculum. Students who choose a non–thesis option are required to complete a project. All students must present a seminar as part of their masters program.

Doctor of Philosophy Degree

The goal of the statistics PhD program is to train students to conduct original methodological and/or theoretical research in statistics and to apply advanced statistical methods to scientific problems. Students are expected to take advanced graduate classes in the theory and applications of statistics and other relevant classes. The PhD program requires a qualifying exam, a PhD comprehensive exam and a final oral exam. The Statistics PhD Qualifying Examination is intended to verify mastery of tasks that require integration among fundamental statistics courses, (STAT 802, 882, 883, and 970). Each PhD student in statistics must complete courses in advanced statistical modeling (STAT 971), advanced probability (STAT 980) and the two–semester advanced statistical inference sequence (STAT 982 and 983). In addition, students must complete twelve hours of 900–level classes excluding STAT 970, 997 and 999. The PhD requires 90 hours of graduate credit, including a dissertation. At least 45 hours must be completed at UNL after the filing of the program of studies which must be approved by the student’s PhD graduate committee. The PhD program typically includes 20 to 25 hours of dissertation research. In addition there is a research tool requirement.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary. 

Retrieved from "http://bulletin.unl.edu/graduate/Statistics"

Survey Research and Methodology

Courses for SRAM (SRAM)

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<tr>
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<th>Prereqs</th>
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<tr>
<td>EDPS 941</td>
<td>Intermediate Statistics: Experimental Methods</td>
<td>EDPS 859</td>
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<tr>
<td>EDPS 942</td>
<td>Intermediate Statistics: Correlational Methods</td>
<td>EDPS 859 or equivalent</td>
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<td></td>
<td>Crosslisted as SRAM 942</td>
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<tr>
<td>EDPS 970</td>
<td>Theory and Methods of Educational Measurement</td>
<td>EDPS 859 and 870 or equivalent</td>
<td>3</td>
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<td>Crosslisted as SRAM 970</td>
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<tr>
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<tr>
<td>EDPS 971</td>
<td>Structural Equation Modeling</td>
<td>SRAM 971</td>
<td>EDPS/SRAM 942 (<a href="http://bulletin.unl.edu/courses/SRAM/942">http://bulletin.unl.edu/courses/SRAM/942</a>) and 970 (<a href="http://bulletin.unl.edu/courses/SRAM/970">http://bulletin.unl.edu/courses/SRAM/970</a>); or equivalent</td>
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<tr>
<td>EDPS 972</td>
<td>Multivariate Analysis</td>
<td>SRAM 972</td>
<td>EDPS/SRAM 941 (<a href="http://bulletin.unl.edu/courses/SRAM/941">http://bulletin.unl.edu/courses/SRAM/941</a>) and 942 (<a href="http://bulletin.unl.edu/courses/SRAM/942">http://bulletin.unl.edu/courses/SRAM/942</a>)</td>
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<tr>
<td>MRKT 824</td>
<td>Advanced Quantitative Analysis in Marketing</td>
<td>SRAM 824</td>
<td>GRBA *813 or equivalent, or permission</td>
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<tr>
<td>MRKT 998D</td>
<td>Seminar in Special Topics</td>
<td>SRAM 998D</td>
<td>Permission</td>
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<td>POLS 800</td>
<td>Research Methods</td>
<td>SRAM 800</td>
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<tr>
<td>PSYC 946</td>
<td>Psychology of Survey Response</td>
<td>SRAM 946</td>
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</table>

Introduction to the techniques of path analysis, confirmatory factor analysis, and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

Review, evaluation, and design of advanced marketing research investigations. State-of-the-art methodological issues relevant to marketing to provide an understanding of multivariate data analysis pertinent to the marketing literature. Analysis of linkage, structure, and causality/change for marketing phenomena.

Basic techniques used in quantitative political science research. The general linear model. Basic probability theory, ordinary least squares regression, and how to solve problems often encountered when conducting quantitative analyses in political science.

Cognitive and communicative processes affect on dynamics of survey
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted As</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PSYC 947</td>
<td>Questionnaire Design</td>
<td>SOCI 947, SRAM 947</td>
<td>Design of questionnaires for survey research and the theoretical and practical issues arising from them. Selection of appropriate measurement techniques for assessing opinions, past behaviors and events, and factual material.</td>
</tr>
<tr>
<td>SOCI 463/863</td>
<td>Quantitative Methods of Social Research I</td>
<td>SRAM 863</td>
<td>The logic and techniques of sociological analysis: techniques of scaling and index construction; contingency table analysis; measures of association; parametric and nonparametric statistical inference; and generalizations from systematic findings.</td>
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<tr>
<td>SOCI 902</td>
<td>Seminar in Research Methods</td>
<td>SRAM 902</td>
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<tr>
<td>SRAM 816</td>
<td>Principles of Survey Analysis</td>
<td></td>
<td>Introduction to the basic principles of causality and inductive logic in contemporary social and behavioral science. One, two, and multi-way layouts in analysis of variance, fixed effects models, and linear regression in several variables; the Gauss–Markov–Theorem; multiple regression analysis; and basic principles of experimental and quasi-experimental designs.</td>
</tr>
<tr>
<td>SRAM 817</td>
<td>Cross-cultural and Multi-population Survey Methodology</td>
<td></td>
<td>Multi-national research projects and the methodological challenges. Key aspects of cross-national, cross-cultural survey research, study design and organization; survey error and bias; question design; harmonization; adaptation and translation; survey process quality monitoring and control; and process and output documentation.</td>
</tr>
<tr>
<td>SRAM 818</td>
<td>Data Collection Methods</td>
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</tbody>
</table>
**818**

Effects of various data collection methods on survey errors. The strengths, weaknesses, and challenges of data collection modes and mixed-mode methods. Processes underlying data collection and practical challenges that arise with each mode; coverage error; nonresponse error; interviewer effects and training; timing; and mode effects.

**Applied Sampling**

Crosslisted as **SOCI 819**

Design of probability samples, sampling populations of humans and unique challenges posed by such populations, restricted by cost and available sampling frames. Simple random sampling, stratification, cluster sampling, systematic sampling, multistage sampling, and probability proportional to size sampling, area probability sampling, and telephone samples.

**Professional Development in Survey Research**

Pass/No Pass only. **SRAM 894** provides first year MS students with a grounding in key principles and components of professional practice needed for a career in survey research and related fields. This course will replace the **SRAM 898** course sub-titled Professional Development in Survey Research.

Basic principles of practice including ethical requirements and procedures, IRB and CIDI, personal conduct, plagiarism. Introduction to relevant databases, data archives, key surveys. Practice in critical discussion, report and abstract writing, creating and presenting conference papers.

**Internship**

Prereqs: Permission

Experience applying concepts and methods of survey research in preparation for a professional career.

**Practicum in Survey Research and Methodology**

Prereqs: Permission

Application of theory and research gained during internship.

**Special Topics**

Topic varies.
**Masters Thesis**

**SRAM 899**

[LINK](http://bulletin.unl.edu/courses/SRAM/899)

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Credit Hours:** 6-10

**Course Format:**
Classroom

**Advanced Sampling**

**SRAM 915**

[LINK](http://bulletin.unl.edu/courses/SRAM/915)

Advanced topics related to sampling error in surveys. Complex sample designs used to measure populations of humans, effect of nonresponse on sampling error and data analysis; methods available to “repair” the missing information; the implications of complex sample designs for analyses; and variance estimation.

**Credit Hours:** 3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

**Instrument Design and Development for Cross-cultural Surveys**

**SRAM 920**

[LINK](http://bulletin.unl.edu/courses/SRAM/920)

Design instruments for multi-population surveys and to produce versions in different languages. Major approaches and strategies used in cross-national and cross-cultural research to design, test, adapt, and translate instruments for multilingual use.

**Credit Hours:** 3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

**Total Survey Error**

**SRAM 921**

[LINK](http://bulletin.unl.edu/courses/SRAM/921)

Common language of survey errors across social science disciplines. Causes of survey coverage, nonresponse, measurement, and processing errors; techniques used to reduce the error in practice; and statistical models and designs that exist to measure the error. Implications of cost and trade-offs between error sources.

**Credit Hours:** 3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

**Randomized and Nonrandomized Research Design**

**SRAM 922**

[LINK](http://bulletin.unl.edu/courses/SRAM/922)

Logic of causal inference in research design. Obstacles to causal inference, faulty measurement, un-representativeness, spuriousness, specification errors, and confounds, Experimental and quasi-experimental designs, with inferential pitfalls peculiar to each design. Statistical procedures to illustrate the logic behind various data analytic approaches and the different problems that can limit conclusions derived from these tools.

**Credit Hours:** 3

**Course Format:**
Lecture 3

**Course Delivery:**
Classroom

**Doctoral Dissertation**

**SRAM 999**

[LINK](http://bulletin.unl.edu/courses/SRAM/999)

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1-24

**Max credits per degree:** 55

**Campus:**
Classroom
Survey Research and Methodology (SRAM) Graduate Programs of Study

Program Director and Graduate Chair: Robert Belli, Ph.D.

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/SRAM).

The SRAM degree programs prepare students for professional positions and leadership in survey research disciplines in the U.S. context and around the world. The skills and knowledge SRAM students acquire enable them to collect, interpret, and present empirical data in cogent and powerful ways relevant for professional contexts.

The SRAM program offers a certificate as well as a master of science (MS) and a doctor of philosophy (PhD) degree. The curricula are interdisciplinary and combine theory with practical application. Students receive a thorough grounding in all aspects of survey methodology from study design through data collection to data analysis.

The MS program is a two-year, non-thesis program designed to train students to fill the expanding need in the public and private sectors for people who are able to design, execute and analyze survey research. Graduates can expect to find challenging, creative and well-paid positions in the private and nonprofit sectors; in media, research, government, and business. The program requires 47 credits; 29 in the core and elective areas, 9 in a minor area of emphasis and 9 in an internship and a related practicum. Core areas studied include general survey methodology, applied sampling, intermediate and advanced statistics, cognitive aspects of survey design, and cross-cultural and cross-national methodology. Minor areas of emphasis in the MS degree can include business, educational psychology, marketing, political science, psychology, public administration, sociology or statistics.

The PhD program is a four-year program that requires a dissertation of original work that advances knowledge in the field of survey methodology. In addition to advanced opportunities in government, business and nonprofit sectors, PhD graduates are expected to have opportunities in academic settings. The PhD requires completion of the MS program in Survey Research and Methodology or a comparable qualification. The PhD program requires a minimum of 90 credits. Students will have a choice of emphasis (study tracks) in either statistics or design and implementation more generally.

Both MS and PhD programs in Survey Research and Methodology are based on interdisciplinary curricula and the combination of theory and practice in instruction.

The Certificate program is an 18-credit, six-course program which provides a firm grounding in survey research methods in a limited amount of time. The program can be completed in nine months, August to early May. It is designed to meet the needs of people possibly already active in the business world who recognize the advantages to be gained through a solid understanding of survey methods and data analysis. It should suit anyone who wants to add this important area of expertise to their qualifications without engaging in an MS-length course of study. At the same time, all Certificate courses can count towards an MS in Survey Methodology. Core courses include the principles of survey analysis, the total survey error paradigm, applied sampling, questionnaire design, and data collection methods. Students choose a sixth elective course from among a range of core course options in the SRAM MS program.

Applications to SRAM. Students seeking admission must apply through the UNL Office of Graduate Studies. The application can be found at: [www.unl.edu/gradstudies/prospective/app-degree.shtml](http://www.unl.edu/gradstudies/prospective/app-degree.shtml). Applications are due by January 15 of each year.

Graduate Studies also requires MS and PhD program applicants to submit test scores from all sections of the Graduate Record Examinations (GRE) or from the GMAT (for students seeking to minor in marketing); two official copies of transcripts from all colleges/universities attended. Where relevant, applicants from abroad are also required to submit TOEFL results. These items should be mailed to:

Graduate Admissions Office
University of Nebraska-Lincoln
1100 Seaton Hall
Lincoln, NE 68588-0619

All applicants must submit a personal statement explaining their interest in pursuing a degree in survey research and methodology and include three letters of recommendation. The personal statement and letters of recommendation are to be sent to:

SRAM Program Admissions
University of Nebraska-Lincoln
201 North 13th Street
Lincoln, NE 68588-0241

SRAM Funding Opportunities. The Gallup Organization funds a number of scholarships for the SRAM degree programs. SRAM applicants interested in applying for one of these scholarships are asked to take the Clifton StrengthsFinder®. Students accepted into the PhD degree program normally receive SRAM...
graduate assistantships. For more information on these funding opportunities and the Clifton StrengthsFinder®, please contact the SRAM office. All UNL programs have possibilities to fund exceptional out-of-state students.

**Research Opportunities.** Students in the graduate programs in Survey Research and Methodology have access to research opportunities through assistantships, on-going faculty research, conference participation, as well as internships and practica in the MS program.

**Opportunities Abroad.** The Survey Research and Methodology graduate program has an on-going one-semester exchange opportunity with the post-graduate program in Quantitative Analysis in the Social Sciences (QASS) at the Catholic University in Brussels, Belgium. Both SRAM and the QASS are heavily invested in the modeling and analysis of quantitative survey data, and the communication of these analyses to key decision and policy makers. The QASS program attracts leading quantitative faculty from across Europe and the U.S. to provide up-to-the-moment instruction on the latest developments in quantitative methodology and analysis.

**Master of Science Program Description**

The curriculum constitutes a total of 47 credit hours of study, divided between 29 credit hours in the core and elective research areas, 9 credit hours in the student’s minor area of emphasis, and 9 credit hours in the student’s internship and practicum.

**Master of Science Curriculum.** 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 (29 credits) Core Areas:** One course (or equivalent) from each of the 9 areas listed below (26 credits) and one elective (3 credits) are required.

1. **Professional Development:**
   - SRAM 890

2. **Data Collection Methods:** Face-to-face, telephone, mail, and internet data collection methods; impact of data collection methods on survey errors; mode effects
   - SRAM 818

3. **Research Design:** Experimental design; quasi-experimental design; panel designs; and quantitative v. qualitative data collection and analysis
   - SRAM 898
   - SRAM 922
   - STAT 802

4. **Survey Error and Measurement:** Reliability, validity, bias; measurement models; and scale analysis
   - SRAM 921
   - EDPS 870
   - PSYC 948

5. **Sampling:** Sampling design; variance estimation and adjustment; and response rates and bias
   - SRAM 815
   - SRAM 915
   - STAT 804

6. **Instrument Design and Evaluation:** Questionnaire design; cognitive and communicative processes in answering survey questions; question– and response–order effects; attitude measurement; measurement of facts and behaviors.
   - SRAM/PSYC 946
   - SRAM/PSYC 947
   - One SRAM course TBA
   - One SRAM course TBA

7. **Cross Cultural Survey Research:** Study design; study specifications; study management; instrument design; instrument adaptation and translation; instrument testing; data collection
   - SRAM 817
   - SRAM 920

8. **Intermediate Statistics:** Multivariate analysis; ordinary least squares and logit regression; and analysis of interaction effects
   - SRAM 816
   - EDPS 969
   - SRAM/SOCI 863
   - SRAM/EDPS 941
   - SRAM/EDPS 942
   - STAT 870

9. **Advanced Statistics:** Structural equation modeling; modeling categorical data; discriminant analysis; general linear models; and conjoint analysis
   - PSYC 944
   - PSYC 945
   - SRAM/MRKT 824
   - SRAM 898
   - SRAM/SOCI 902
   - SRAM/EDPS 971
   - SRAM/EDPS 972
   - STAT 873
   - STAT 875
   - STAT 880
   - STAT 882
   - STAT 883
Building on the kind of skills and knowledge acquired in the SRAM MS program in Survey Research and Methodology, the PhD program aims to train students both in the issues that govern sound survey research practice and in the theoretical frameworks of those disciplines that contribute to Survey Research and Methodology. To be admitted into the PhD program, applicants must usually have completed a masters degree or its equivalent in Survey Research and Methodology, or a related field accepted by the Graduate Committee. Anyone accepted into the program may be required to complete courses that demonstrate that their credentials match the skills and knowledge that students acquire from earning an MS in Survey Research and Methodology. These required courses must be completed in order to become eligible to have a Supervisory Committee appointed. Decisions about which courses are required will rest with the Graduate Committee. Anyone accepted into the program may be required to complete courses that demonstrate that their credentials match the skills and knowledge that students acquire from earning an MS in Survey Research and Methodology. These required courses must be completed in order to become eligible to have a Supervisory Committee appointed. Decisions about which courses are required will rest with the Graduate Committee.

The PhD program builds on the kind of skills and knowledge acquired in the SRAM MS program in Survey Research and Methodology. To be admitted into the PhD program, applicants must usually have completed a masters degree or its equivalent in Survey Research and Methodology, or a related field accepted by the Graduate Committee. Anyone accepted into the program may be required to complete courses that demonstrate that their credentials match the skills and knowledge that students acquire from earning an MS in Survey Research and Methodology. These required courses must be completed in order to become eligible to have a Supervisory Committee appointed. Decisions about which courses are required will rest with the Graduate Committee.

The PhD program consists of a minimum of 90 credit hours. These may include transfer credits for students who have earned degrees outside of the University of Nebraska-Lincoln; 45 credit hours must be earned after the appointment of the PhD student’s Supervisory Committee. No courses may be taken on a Pass/No Pass basis and all PhD students are required to maintain a cumulative grade point average of 3.5 or higher. The PhD program is designed to train students both in the issues that govern sound survey research practice and in the theoretical frameworks of those disciplines that contribute to Survey Research and Methodology. Students will opt for either statistical or design and implementation tracks, each of which have their own sets of requirements. The PhD dissertation must consist of an original research contribution that advances knowledge in the field of Survey Research and Methodology and demonstrates the candidate’s expertise in both practice and theory.

Doctor of Philosophy Curriculum

Language and Research Tool Requirement Prior to admission to candidacy, students must demonstrate proficiency in technical and scientific writing. The student’s supervisory committee may require course work as part of the language and research tool requirement.

Core Courses (minimum of 15 credit hours) Core courses are designed to ensure that students acquire the methodological and theoretical skills necessary to design sound Survey Research and Methodological studies. Ph.D. students must satisfy the core course requirements of the SRAM MS program. The following courses (or equivalents) are also required:

- SRAM 915 – Advanced Sampling
- SRAM 921 – Total Survey Error
- SRAM 947 – Questionnaire Design
- SRAM 998 – Advanced Topics in Survey Analysis (Special Topics)
- SRAM 999 – Survey Management (Special Topics)

Statistical or Design and Implementation Tracks (minimum of 15 credit hours) Each student’s supervisory committee will tailor a program of study that best matches the student’s interests and strengths. Students will decide either to follow a statistical track or to follow a design and implementation track in their course of studies. Within either track, their studies will concentrate on essential aspects that contribute to Survey Research and Methodology.
Within the statistical track, students will be required to complete course work and seminars dealing with statistical, probability and sampling theory. For example, courses on the general linear model, mixed and hierarchical linear models, issues in advanced sampling, finite mixture models, analysis of data from complex sample designs, missing data imputation and related topics will be included in this track.

Within the design and implementation track, students complete course work in their areas of interest such as cognitive and social psychology, health and educational research, cross-cultural comparative research, or in any social science discipline that is dependent on survey data to draw scientific inferences.

PhD Comprehensive Examination In order to advance to candidacy (to be able to submit a dissertation), the student must pass a written comprehensive examination demonstrating mastery in core areas of Survey Research and Methodology and also in the student’s specialty area which is chosen from the statistical or the design and implementation tracks. In general, students are expected to pass the comprehensive examination before submitting a dissertation proposal.

The general purpose of the SRAM PhD comprehensive examination is to demonstrate mastery in both core and specialty areas of Survey Research and Methodology. The goal of the exam on core areas of survey methodology is to demonstrate each student’s breadth of knowledge across the fundamental areas of survey methodology. The goal of the exam on a student’s specialty area is to demonstrate depth of knowledge in a particular area in which the student wants to be considered an expert after completion of the Program.

Details of the Ph.D comprehensive examination

PhD students will be provided with a reading list with regard to the core areas of survey methodology. In addition, students will be required to develop their own reading list for their specialty area. This needs to be submitted in a timely fashion for approval by the student’s supervisory committee.

The examination will consist of two five-hour sessions over two days. The examination will be closed book, that is, no books, notes, or electronic files of any kind are to be used. Students will be presented with four questions for each session, and will be required to answer three of these in each session, thus answering six questions in total. Day one of the final exam will cover core areas, day two will cover the student’s specialty area.

Students have the choice to write their answers by hand or to type in their answers electronically on a computer. Examinations will be proctored. The scheduling of the examination, and who will serve as graders of the examination, requires approval by the student’s supervisory committee and the majority consent of the core SRAM faculty.

Steps for Ph.D. comprehensive examination

1. The supervisory committee works with the student to a) create a proposed reading list for the specialty section of the examination, b) determine who will be the proposed question writers and graders for the specialty section (who must be either supervisory committee members or SRAM core faculty), and c) determine a proposed date in which the examination is to take place.
2. The supervisory committee chair notifies all of SRAM core faculty with a) the proposed specialty section reading list, b) the proposed question writers and graders for the specialty section, and c) determine a proposed examination date. The provision of these materials must be submitted to the SRAM core faculty (including the graduate chair) at least one month before the proposed examination date. SRAM core faculty are defined as Graduate Faculty who have at least a .5 FTE in SRAM.
3. The graduate chair determines whether there is majority approval from the SRAM core faculty on the examination provisions that are proposed by the supervisory committee (via the supervisory committee chair). The graduate chair notifies the supervisory committee chair of any necessary revisions to the proposed plan within two weeks following the provision of materials. If any revisions are to be made, the supervisory committee must a) resubmit the revised plan to each of the SRAM core faculty, and b) allow for an additional week to receive majority approval from the SRAM core faculty on revisions to the plan. If the revisions are deemed to be inadequate, the process continues to cycle until majority approval is obtained. The date of the examination will be postponed as needed to accommodate majority approval.
4. Under the auspices of the Graduate Chair, the graduate committee seeks agreement among the SRAM core faculty who will serve as the question writers and graders for the core section of the examination to meet any agreed upon examination date.
5. As needed, approved examination question writers and graders will be informed that they are to determine a grade (a letter grade, letter grade range, or a judgment as to failure, pass, or high pass) and to provide comments on how the grade was determined for each question to which they are responsible, and which the student has answered.
6. Following the administration of the examination, the Graduate Chair collects the grades and comments from each of the graders of the core section of the examination, and the Supervisory Committee Chair collects the grades and comments from each of the graders of the specialty section of the examination. The Graduate Chair submits the core section grades and comments to the Supervisory Committee Chair. On the basis of these grades and comments, the Supervisory Committee makes a determination on whether the student has passed the examination.
7. If the Supervisory Committee Chair is the Graduate Chair, the Director serves in the capacity of the Graduate Chair for the purposes of these proceedings.

Dissertation Research (minimum of 12 credit hours). As an original contribution to the knowledge base of Survey Research and Methodology, the dissertation must consist of an empirical study that includes analysis of primary or secondary data sources, or both. For completion of degree requirements, in addition to a written dissertation, students must pass an oral dissertation defense as required by Graduate Studies.

Certificate Program Description

The University approved and certified Certificate in Survey Research and Methodology is designed to meet the needs of people active in the business world who recognize the advantages to be gained through a firm grounding in survey research methods and analysis.

SRAM faculty have backgrounds in Statistics, Survey Science, Sociology, Cognitive Psychology, Marketing, Political Science, Linguistics, and Educational Psychology. We are thus ideally situated to meet the needs of students from a wide range of public and private sector organizations.

The time needed to complete the 18 credit Certificate program depends on the number of courses per semester a student completes. Assuming a 9 credit per semester workload, the 18-credit, and 6-course program can be completed in nine months, beginning end of August and finishing early May.

Five courses from the MS program are required courses for the Certificate qualification. Certificate students choose their sixth elective course from among the SRAM MS core curriculum offerings (excepting intermediate statistics courses).

Certificate Curriculum

- SRAM 816 – Principles of Survey Analysis
- SRAM 819 – Applied Sampling
Minoring in Survey Research and Methodology

Students from other departments at UNL can choose to minor in survey research and methodology at either the MS or PhD level. The courses expected for each minor are required below. Contact the SRAM Graduate Chair for more information.

**MS minor in Survey Research and Methodology**

12 credits from SRAM MS core curriculum as approved by a minor advisor who must be a member of the SRAM core faculty. The minor would likely include courses in Instrument Design and Evaluation, Data Collection Methods, and Sampling. SRAM core faculty consist of Graduate Faculty with at least a .5 FTE in the SRAM program.

**PhD minor in Survey Research and Methodology**

- SRAM 819 – Applied Sampling
- SRAM/PSYC 947 – Questionnaire Design
- SRAM 921 – Total Survey Error
- SRAM 818 – Data Collection Methods
- An Intermediate or Advanced Statistics course from the SRAM MS core curriculum
- One elective from SRAM MS core curriculum with the exception of an Intermediate Statistics course

Electives must be taken with the approval of a minor advisor who must be a member of the SRAM core faculty. SRAM core faculty consists of Graduate Faculty with at least a .5 FTE in the SRAM program.

**Advising**

All students majoring in Survey Research and Methodology and students enrolled in the Certificate program are assigned an SRAM advisor. MS students must also select a minor areas advisor.

Retrieved from "http://bulletin.unl.edu/graduate/Survey_Research_and_Methodology"
An international cultural experience in the local community by providing field-based learning experiences in community centers, schools, and human services agencies in the local community. The course will study immigrant families in the U.S. through observing and participating in community activities and through readings, discussions, and reflective journaling that integrate lessons from the field with theory and research.

**International Experience in Communities, Schools, and Families**  
[Link](http://bulletin.unl.edu/courses/CEHS/494)

**Course Delivery:** Classroom, Web

**Credit Hours:** 1–6
**Max credits per semester:** 3
**Max credits per degree:** 6
**Course Format:** Field 2
**Course Delivery:** Classroom

**Lecture and discussion will be required as part of the field experience. Field hours will be assigned at the rate of two hours per week per student credit hour.**

Instructor–guided experiences of a culture in another nation in order to critically examine individual and cross-cultural differences in values, lifestyles, education, history and culture of international families, schools, and communities.

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### Courses for EDAD (EDAD)

**Foundations of Human Resource Development**  
[Link](http://bulletin.unl.edu/courses/EDAD/421)

**Credit Hours:** 3
**Course Delivery:** Classroom

Lays the foundation for further study of Human Resource Development (HRD) by examining the knowledge of HRD professionals, the roles they play, and the organizational settings in which HRD occurs. The design and development of education and training programs, how change occurs in organizations, how career development can optimize the match between individual and organizational goals and needs, and how to improve performance in organizations by analyzing performance opportunities and designing employee training to address these opportunities.

**Instructional Design in Human Resource Development**  
[Link](http://bulletin.unl.edu/courses/EDAD/422)

**Credit Hours:** 3
**Course Delivery:** Classroom

Examines the role of instruction for enhancing human learning and performance in organizations. The analysis of performance problems/opportunities and design of interventions for learning and performance improvement. The essential components of instruction, selecting 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.

**Cross–Cultural Leadership Studies**  
[Link](http://bulletin.unl.edu/courses/EDAD/801)

**Prereqs:** Permission

For those interested in exploring leadership and leadership issues from a cross-cultural perspective. Students construct their 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 through the comparison of cultural viewpoints. Native American understanding of leadership.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereq</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDAD 811</td>
<td>Practicum in Educational Administration and Supervision</td>
<td>Permission</td>
<td>3-4</td>
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<td>Classroom</td>
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<td></td>
<td>May be repeated for credit. Rating and supervision of teachers; principles and procedures in the development of school policies; selection and promotion of teachers; courses of study and professional ethics.</td>
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<tr>
<td>EDAD 813</td>
<td>Administration in Physical Education and Athletics</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Organization and administration of physical education and athletic programs in colleges and school systems. Practices and policies as they relate to various situations and problems and in the theoretical base for these practices and policies.</td>
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<tr>
<td>EDAD 814</td>
<td>Risk Management for Sport Facilities</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Legal and risk management aspects of construction, supervision, and management of sport, athletic, and recreation indoor and outdoor facilities.</td>
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<tr>
<td>EDAD 830</td>
<td>Administrative Theory in Educational Organizations</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Introduction to classic and contemporary administrative theory as applied to educational organizations. The theoretical nature of the course content is relevant to those with an interest in a broad variety of educational institutions. General organizational theory, organizational models, historical schools of administrative theory, authority, power, motivation, and leadership. Frequently students are involved in studying problems of practice as a means of testing theory.</td>
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<tr>
<td>EDAD 833</td>
<td>Educational Finance</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>EDAD 835</td>
<td>Business Management of Schools</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Allocation and management of fiscal resources including aspects of financial planning and reporting, budgeting and accounting procedures, purchasing, risk management and insurance, investing and bond issues, and auxiliary service.</td>
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<tr>
<td>EDAD 836</td>
<td>Planning for Change</td>
<td></td>
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<td></td>
<td>Classroom</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Hours</td>
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<tr>
<td>836</td>
<td>Rationale for planning in a changing environment will be explored; the theoretical base for planning presented; strategic, futuristic planning and operational planning explored; the development of planning strategies, techniques and procedures; the process of evaluation, feedback and revisions explored; and the management of the change process analyzed.</td>
<td>2–3</td>
<td>Classroom</td>
<td></td>
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<tr>
<td>837</td>
<td>Education Law</td>
<td>1–4</td>
<td>Classroom</td>
<td></td>
<td></td>
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<tr>
<td>838</td>
<td>Educational Surveys</td>
<td>2–3</td>
<td>Classroom</td>
<td></td>
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<tr>
<td>839</td>
<td>Educational Facilities</td>
<td>2–3</td>
<td>Classroom</td>
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<tr>
<td>842</td>
<td>College Students in America</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>843</td>
<td>Counseling Principles for Educational Administrators</td>
<td>3</td>
<td>Classroom</td>
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<tr>
<td>851</td>
<td>Faculty and Staff Appraisal</td>
<td>3</td>
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</tr>
</tbody>
</table>
EDAD 852  School Culture and Student Behavior  
Course Delivery: Classroom

School culture and student behavior in P-12 schools. Personalized teaching and learning environments that address student diversity, needs and interests.

EDAD 855  Teaching Learners to Learn  
Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855  
Course Delivery: Classroom

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

EDAD 856  Supervising Special Education  
Crosslisted as SPED 856  
Course Delivery: Classroom

For principals or other administrators who have special education programs in their buildings. Overview of disabilities, related law, special education programs, personnel issues, etc., and instructional methods and administrative support for effective integration of disabled students into regular programs.

EDAD 857  Special Education Administration  
Crosslisted as SPED 857  
Course Delivery: Classroom

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, financing, personnel, as well as current controversial topics which are affecting these programs in the schools.

EDAD 858  Special Education Law  
Crosslisted as SPED 858  
Course Delivery: Classroom

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 states and school districts that are grounded in state and federal law.

EDAD 870  Constitutional Law I  
Crosslisted as LAW 609G  
Course Delivery: Classroom

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.
**Constitutional Law II**
Crosslisted as LAW 732G

Emphasizes protected individual civil liberties. The origin and modern applicability of the state action concept in constitutional litigation; the scope of congressional power to enforce the post Civil War amendments; freedom of speech, association, and press; and constitutional principles enforcing the first amendment's command that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof."

**Introduction to Law, Legal Process, and Legislation**

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.

**Torts I**
Crosslisted as LAW 503G

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

**Torts II**

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

**Designing Instructional Technology K–12**

Legal protection afforded in civil proceedings against interference with the security of one’s person, property, relations, and other intangible interests. 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.

**Workshop Seminar**

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.
### Independent Study (EDAD 896)

- **Prereqs:** Permission
- **Credit Hours:** 1–6
- **Campus:**
- **Course Delivery:** Classroom

Selected topic with the direction and guidance of a staff member.

### Masters Thesis (EDAD 899)

- **Prereqs:** Admission to masters degree program and permission of major adviser
- **Credit Hours:** 6–10
- **Campus:**
- **Course Delivery:** Classroom

### System-Level School Improvement (EDAD 901)

This course is a prerequisite for EDAD 902.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Knowledge and skills required for system-level leaders to bring about school improvement and enhance student achievement. Creating systems that engage the public, performing in complex political environments, and delivering needed services to schools and classrooms.

### Data for Action Planning (EDAD 902)

- **Prereqs:** EDAD 901
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

Assessment theory and types of assessments used to measure student performance relative to a school improvement goal. Relationships between profile data and baseline data, locally developed classroom assessments, and post data pertaining to school improvement goals and action plans.

### Issues in Community Relations (EDAD 903)

This course is a prerequisite for EDAD 904.

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

Principles of community relations and public relations; development of school and community understanding; collaboration of educators and community agents and agencies; communication tools and evaluation.

### Analysis in Continuous Improvement (EDAD 904)

- **Credit Hours:** 3
- **Campus:**
- **Course Delivery:** Classroom

This course is a prerequisite for EDAD 904.

Principles of community relations and public relations; development of school and community understanding; collaboration of educators and community agents and agencies; communication tools and evaluation.
EDAD 904

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

Prereqs: EDAD 903 (http://bulletin.unl.edu/courses/EDAD/903).

EDAD 904 (http://bulletin.unl.edu/courses/EDAD/904) requires generating recommendations for proceeding into the next cycle of school improvement and conducting a personal self-analysis of improvement process skills and obtain information from supervisors and/or colleagues regarding abilities as a)

Analyze how staff attitudes and behaviors are impacted through the improvement process.

EDAD 905

Issues in Governance of Educational Institutions

Credit Hours: 1–3
Max credits per degree: 3
Campus:
Course Delivery: Classroom

Issues in the governance of K–12 schools including administrator–school board roles and relationships.

EDAD 906

Issues in System Level Administration

Credit Hours: 3
Course Format: Lecture 3
Campus:
Course Delivery: Classroom

Prereqs: Masters degree or equivalent.

Selected system level issues faced by pre-K to grade 12 school administrators.

EDAD 907

Issues in Educational Politics and Policies

Credit Hours: 3
Campus:
Course Delivery: Classroom

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 institutional structures with competing interests; understand people as the actors in roles they occupy in the political system.

EDAD 908/929

Seminar in Adult and Continuing Education

Crosslisted as EDPS 929

Credit Hours: 1–6
Campus:
Course Delivery: Classroom

EDAD 909

Seminar in Human Resource Development

Credit Hours: 1–3
Campus:
Course Delivery: Classroom

Prereqs: EDAD 821 (http://bulletin.unl.edu/courses/EDAD/821) or 822 (http://bulletin.unl.edu/courses/EDAD/822)
Current research and theory within the field of human resource development, broadly defined. Stresses key problems affecting the training, development, and education of human resources within organizational settings.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>EDAD 910</td>
<td>The Higher Education Environment</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Universities are adaptive, living systems interacting with their environment. Equips participants with the skills required to analyze and assess the environment of higher education institutions. Environment concepts, components and structures are studied together with analysis techniques and methodological approaches to future study.</td>
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<tr>
<td>EDAD 912A</td>
<td>Educational Leadership in Higher Education</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Strategic thinking, application of leadership theories in the educational setting. Develop a clear personal philosophy of leadership and engage in collaborative active-learning. Multi-media simulations and/or scenarios and role playing to examine options, consequences, and leadership effectiveness in decision-making.</td>
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<tr>
<td>EDAD 912B</td>
<td>Educational Leadership in Community Colleges</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Issues facing community college leaders and the knowledge, skills, and competencies necessary to provide effective leadership in the community college setting. Case studies of community colleges, combined with the literature on community college leadership, and active learning opportunities to examine current practices and develop a personal philosophy of leadership.</td>
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<tr>
<td>EDAD 921</td>
<td>Administrative Issues in Higher Education</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td></td>
<td>Introduction to contemporary issues in the administration of higher education with a focus on the scholarly literature, a comparative analysis of administration in types of institutions, leadership and planning, institutional and environmental issues, and selected topics.</td>
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<td>EDAD 922</td>
<td>Finance in Higher Education</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<td>Federal and state government funding, institutional planning, technological and community influences, human resources finance, budgeting, and sources of financial support as they relate to higher education institutions and agencies.</td>
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<td>EDAD 923</td>
<td>The Community/Junior College</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Designed particularly for those interested in upper secondary and college</td>
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</table>

LINK (http://bulletin.unl.edu/courses/EDAD/910)

LINK (http://bulletin.unl.edu/courses/EDAD/912A)

LINK (http://bulletin.unl.edu/courses/EDAD/912B)

LINK (http://bulletin.unl.edu/courses/EDAD/921)

LINK (http://bulletin.unl.edu/courses/EDAD/922)

LINK (http://bulletin.unl.edu/courses/EDAD/923)
levels. Junior college movement; relationship of movement to provisions 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.

**EDAD 924 Administration of Higher Education Instructional Programs**

Administration of higher education instructional programs. Exploration of curricular issues including an assessment of program quality and reputation, program reallocations, retrenchments, and expansions.

**EDAD 925 Law and Higher Education**

Examination of legal principles applicable to higher education institutions. Overview of the legal system, higher education institutions as legal entities, authority for governance and administration, faculty rights and responsibilities, student rights and responsibilities, institutional and personal liability, and other selected issues.

**EDAD 926 The American Professoriate: An Administrative Perspective**

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.

**EDAD 931 Higher Education Information Systems**

Foundation in management information systems. Issues in information systems, current research and writings, key terms, and how information systems impacts organizational culture, business processes, work-flow, and overall operations of an institution. The roles in the application, analysis, and management of higher education administration technology.

**EDAD 932 Global Issues in Higher Education**

Selected issues affecting global educational policies and practices.

**EDAD 933 Strategic Planning**

EDAD 933 requires the student to analyze their respective institution's planning process and plan, and to participate in a simulation activity that reinforces the principles and

**Teaching and Learning in the Community College**

Develop comprehensive understanding of five aspects of the community college: Curricular missions in general education, transfer education, career education, remedial/developmental education and community education; faculty and student populations; exemplary teaching and assessment of student learning outcomes; program and curriculum development; and human resources aspects related to instructional programs in hiring faculty and providing faculty development programs.

**Workforce, Economic, and Community Development**

Workforce, economic and community development role of higher education within the broader context of recent economic, social, and technological changes in communities, society, and the economy. Applicable to higher education in general with an emphasis on the example of two-year community colleges.

**Instructional Leadership: Emerging Trends and Practices**

Crosslisted as TEAC 948

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

**Employment Law Seminar**

Crosslisted as LAW 759G

Selected current national and state legal issues pertaining to private and public employment.

**Law and Educational Administration**

Crosslisted as LAW 695G

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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.

**Public Employment Law**

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 discipline; application of criminal and juvenile provisions; 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; confidentiality; accrediting agencies; and similar current legal matters.
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
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<tbody>
<tr>
<td>960</td>
<td>Legal issues relating to public employment with particular emphasis on public schools and colleges; collective bargaining by public employees, impasse, and 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, wage and hour laws, retirement plans, and public records.</td>
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<tr>
<td>961</td>
<td><strong>Trial Advocacy</strong></td>
<td>Prereqs: LAW 646G</td>
<td>Students perform weekly exercises which are videotaped and critiqued and will try a case. Fundamentals of trial practice. Emphasis on questioning witnesses, selecting and addressing the jury, and admitting items into evidence.</td>
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<tr>
<td>963</td>
<td><strong>Legislation Seminar</strong></td>
<td>Crosslisted as LAW 777G</td>
<td>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.</td>
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<tr>
<td>964</td>
<td><strong>Local Government Law</strong></td>
<td>Crosslisted as LAW 788G</td>
<td>Law of local government units with emphasis on current problems in the operation and administration of local government, models and theories of local government.</td>
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<tr>
<td>966</td>
<td><strong>Seminar in Educational Administration</strong></td>
<td>Prereqs: Permission</td>
<td>Education administration problems with an analysis of research and literature pertaining to these problems.</td>
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<tr>
<td>968</td>
<td><strong>Education Law Seminar</strong></td>
<td>Crosslisted as LAW 621G</td>
<td>Selected current national and state legal issues pertaining to education.</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>EDAD 970</td>
<td>Criminal Law</td>
<td>LAW 508G</td>
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<td>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.</td>
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<td>EDAD 971</td>
<td>Evidence</td>
<td>LAW 646G</td>
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<td>Relevancy and admission of evidence, including hearsay, opinions, privileges, other exclusionary rules, examination of witnesses, judicial notice, and physical evidence.</td>
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<td>EDAD 973</td>
<td>Jurisprudence</td>
<td>LAW 672G</td>
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<td>What is good and what is bad about law; the judicial process; principal schools of jurists; theories of the nature of law and the legal order; the American social system and the law; obligations to obey or to disobey the law; and ideas of justice.</td>
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<td>EDAD 976</td>
<td>Legal Control of Discrimination</td>
<td>LAW 680G</td>
<td>1-4</td>
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<tr>
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<td>Selected legal issues pertaining to the legal control of discrimination.</td>
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<tr>
<td>EDAD 977</td>
<td>Constitutional History</td>
<td>LAW 619/619G</td>
<td>1-4</td>
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<td>American constitutional history with a focus on &quot;transformative&quot; moments at which the Constitution and the nature of American politics and government changed. American Revolution and the framing of the Constitution and Bill of Rights, Civil War and Reconstruction, and the New Deal. Exploration of the courts and how they stood on history and original intent when they interpret the Constitution.</td>
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<tr>
<td>EDAD 978</td>
<td>Mass Communications Law</td>
<td>LAW 649G</td>
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<td>In-depth focus on the first amendment. Includes legal distinctions between the print and broadcast media, free press and fair trial, access to media, and licit and illicit ideas.</td>
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<tr>
<td>EDAD 979</td>
<td>Seminar in College Student Personnel Work</td>
<td>EDPS 979</td>
<td>2-3</td>
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<td>Current professional issues related to the organization and administration of student personnel within higher education. Exploration of research</td>
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</table>
**Introduction to Research**

**EDAD 981**

A written report is required. Investigation and analysis of current problems in education administration and supervision.

**Dissertation Proposal Development**

**EDAD 988**

**Prereqs:**
Admission to a doctoral program

Intended for students who are working on the development of their dissertation proposal. Component parts of the dissertation proposal. Students from all areas of Teachers College and the University of Nebraska who are in the process of developing their proposal will find this course to be of use. Typically the course should be taken after the research tools have been completed.

**Survey of Administrative Research**

**EDAD 989**

Intended primarily for students of education who are candidates for doctoral degrees. Readings, discussions, and an analysis of educational problems and research.

**Workshop Seminar**

**EDAD 990**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

**Field Studies in Education**

**EDAD 991**

Crosslisted as NUTR 991, TEAC 991

**Prereqs:**
Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.

**Workshop Seminar**

**EDAD 993**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.
**Doctoral Seminar**

Prereqs: Permission

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. Intended primarily for doctoral students, although non-doctoral graduate students may be admitted with special permission of the instructor.

**Seminar: Internship in Educational Administration**

Prereqs: Permission

Opportunity for educational administrators to gain an understanding of administering changes or innovations, and to obtain supervised field experience. Consideration will be given antecedents of change, change models, the role of government, forces that restrict or stimulate change, tools to implement change, and evaluation.

**Doctoral Dissertation**

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

**Historical Methods in Educational Research**

Crosslisted as EDAD 900J

Prereqs: EDPS *800 or equivalent; EDPS 459

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

**Seminar in College Student Development**

Crosslisted as EDAD 980

Special field experiences and research projects are available to students for additional credit.

Current knowledge, theories, and practices, and related issues in the area of college student development.

**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereq(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 425/825</td>
<td>Coordination in Occupational Training Programs</td>
<td>EDPS 859 or parallel; EDPS 859 or equivalent</td>
<td>Foundation and scope of current and projected vocational cooperative education programs and general education work experience. Coordination techniques, selection and placement, instructional procedures, youth leadership activities, organization and administration, and evaluation of cooperative occupational education.</td>
</tr>
<tr>
<td>ANTH 478/878</td>
<td>Pro-seminar in Latin American Studies</td>
<td>Junior standing and permission.</td>
<td>An interdisciplinary analysis of topical issues in Latin American Studies.</td>
</tr>
<tr>
<td>EDAD 855</td>
<td>Teaching Learners to Learn</td>
<td>EDPS 855, NUTR 855, SPED 855, TEAC 855</td>
<td>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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.</td>
</tr>
<tr>
<td>EDAD 908/929</td>
<td>Seminar in Adult and Continuing Education</td>
<td>EDPS 929</td>
<td></td>
</tr>
<tr>
<td>EDAD 979</td>
<td>Seminar in College Student Personnel Work</td>
<td>EDPS 979</td>
<td>Current professional issues related to the organization and administration of student personnel within higher education. Exploration of research</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Link</td>
<td>Credit Hours</td>
</tr>
<tr>
<td>------------</td>
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</tr>
<tr>
<td>EDPS 451/851</td>
<td>Psychology of Adolescence</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/451">LINK</a></td>
<td>3</td>
</tr>
<tr>
<td>EDPS 454/854</td>
<td>Human Cognition and Instruction</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/454">LINK</a></td>
<td>3</td>
</tr>
<tr>
<td>EDPS 459/859</td>
<td>Statistical Methods</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/459">LINK</a></td>
<td>3</td>
</tr>
<tr>
<td>EDPS 462/862</td>
<td>Psychology of Disability</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/462">LINK</a></td>
<td>3</td>
</tr>
<tr>
<td>EDPS 463/863</td>
<td>Introduction to Applied Behavior Analysis</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/463">LINK</a></td>
<td>3</td>
</tr>
<tr>
<td>EDPS 465/865</td>
<td>Practices in Counseling and Personnel Services</td>
<td><a href="http://bulletin.unl.edu/courses/EDPS/465">LINK</a></td>
<td>1-8</td>
</tr>
</tbody>
</table>

**Psychology of Adolescence**
Mental, social, and emotional development of boys and girls during the adolescent period.

**Human Cognition and Instruction**
Cognitive psychology and its applications in instruction. Memory, problem solving, cognitive process in reading, research approaches, and applications to teaching.

**Statistical Methods**
Computation and interpretation of measures of central position, variability, and correlation; introduction to sampling, probability, and tests of significance.

**Psychology of Disability**
Research and theoretical literature related to the relationship between various disabling conditions and the psychological functioning of the person with disability.

**Introduction to Applied Behavior Analysis**
Research methods and findings, concepts, and principles of operant conditioning as related to the experimental analysis of human behavioral events and to the development of behavior engineering technologies.

EDPS 469/869
Psychopathological Disorders of Childhood and Adolescence

Investigation of the genesis, course, classification, and treatment of function and organic pathologies found in children and adolescents.

EDPS 470/870
Introduction to Educational and Psychological Measurement

Prereqs:
EDPS 459 (http://bulletin.unl.edu/courses/EDPS/459)/859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent.

Introduction to the construction, 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.

EDPS 496/896
Directed Field Experience

Prereqs:
Permission.

EDPS 498/898
Special Topics

Prereqs:
Permission.

Seminar on current issues or topics in educational psychology. Topics vary.

EDPS 800
Foundations of Educational Research

Prereqs:
EDPS 459 (http://bulletin.unl.edu/courses/EDPS/459)/859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent or parallel EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)

Purposes 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.

EDPS 845  Computer-Assisted Research Data Analysis

Prereqs:
One statistics course beyond EDPS 859
(https://bulletin.unl.edu/courses/EDPS/859)

Pass/No Pass only.

Statistical software packages for both mainframe and microcomputers. How
to develop and manage data files; how to transfer data files between
computers; and principles of data transformation and selection.

EDPS 846  Foundations of Health Behavior

Crosslisted as NUTR 846

The epidemiological, developmental and cognitive foundation of health-
related behaviors and identifies opportunities for health promotion and
education.

EDPS 847  Theoretical Models of Health Behavior Change

Crosslisted as NUTR 847

Application of widely used theoretical models of health behavior change.
Specification of behaviors and development and evaluation of theory-based
interventions to reduce health-related risks.

EDPS 850  Child Psychology

This course is a prerequisite for:
EDPS 960 (https://bulletin.unl.edu/courses/EDPS/960),
EDPS 961 (https://bulletin.unl.edu/courses/EDPS/961), EDPS 962
(https://bulletin.unl.edu/courses/EDPS/962), EDPS 963
(https://bulletin.unl.edu/courses/EDPS/963)

Advanced study of the behavior and development of preschool and
elementary school children.

EDPS 853  Psychological Assessment I

Prereqs:
EDPS 870 (https://bulletin.unl.edu/courses/EDPS/870) or equivalent

This course is a prerequisite for: EDPS 956 (https://bulletin.unl.edu/courses/EDPS/956)

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.

EDPS 860  Applications of Selected Advanced Statistics

LINK (https://bulletin.unl.edu/courses/EDPS/860)
Prereqs: 
EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)

Variety of parametric and nonparametric 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. Appropriate mainframe and microcomputer statistical packages utilized to assist in the numerical analysis of data.

EDPS 866 Counseling Pre-Practicum

Counseling skills required for basic, entry-level clinical work. Practicing skills, receiving peer/instructor performance feedback, and role-playing clinical situations.

EDPS 867 Roles and Functions in School Psychological Services

Foundations, models, and practices of contemporary school psychology and an exploration of transitions and future developments in the profession. Investigations of the major legal and ethical systems affecting specialists in the schools and the application of standards for ethical professional practice.

EDPS 868 Multicultural Counseling

Prereqs: 
EDPS *866 or comparable course or permission

Ethnic subcultures in the US, cross-cultural communication systems, and change strategies. Cultural cues and barriers in counseling, personal assumptions and values, and active experiencing of cultural diversity in the counseling relationship.

EDPS 890 Workshop Seminar

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

EDPS 893 Workshop Seminar

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDPS 897J</td>
<td>Gifted/Talented</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td></td>
<td>6-10</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 899</td>
<td>Masters Thesis</td>
<td></td>
<td></td>
<td>6-10</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 900A</td>
<td>Correlational and Experimental Methods in Education Research</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 900B</td>
<td>Single Case/Small N Methods in Educational Research</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>EDPS 900D</td>
<td>Survey Methods in Educational Research</td>
<td></td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Historical Methods in Educational Research</td>
<td>Crosslisted as EDAD 900J</td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
### Qualitative Approaches to Educational Research
**Prereqs:**
- EDPS *800 or equivalent
- EDPS 459
- EDPS 859 or equivalent

Connections in the general study of history to the study of the history of education. Concepts employed in educational historical research and the methods used by historical researchers. The methodology of historical research.

### Research and Evaluation Literature on Health Promotion
**Crosslisted as NUTR 905**

Philosophical and empirical review and critique of contemporary literature on school, community, work place and health care–based health promotion and education programs.

### Seminar in Qualitative Research
**Crosslisted as TEAC 935**

Seminar intended for doctoral–level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

### Mixed Methods Research

**Prereqs:**
- EDUC 800 or equivalent
- EDUC 900K
- EDPS 936

EDPS 936 is for students already familiar with quantitative and qualitative research. An introduction to mixed methods research as a distinct methodology in social science research. Topics include the value and use of this approach, philosophical assumptions, various types of design, and approaches to designing and conducting mixed methods research.
Crosslisted as SRAM 941

**941**

**Intermediate Statistics: Correllational Methods**

Crosslisted as SRAM 942

Credit Hours: 3
Campus: Classroom

Prereqs: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859)

Computation, interpretation, and application of analysis of variance techniques, including factorial and mixed model designs. Computer and microcomputer software accessed.

**942**

**Multicultural Issues in School Psychological Service Delivery**

Credit Hours: 3
Campus: Classroom

Prereqs: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859) or equivalent

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.

**948**

**Cognitive and Behavioral Therapy with Children and Adolescents**

Credit Hours: 3
Campus: Classroom

Prereqs: Permission

This course is a prerequisite for EDPS 955 (http://bulletin.unl.edu/courses/EDPS/955)

Cognitive and behavioral techniques. Theoretical issues, application and evaluation of major empirically–validated therapeutic treatments that represent best practices in child and adolescent therapy.

**950**

**Intellectual Assessment**

Credit Hours: 1–4
Campus: Classroom

Prereqs: or coreq: EDPS 859 (http://bulletin.unl.edu/courses/EDPS/859), 870 (http://bulletin.unl.edu/courses/EDPS/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.

**951**

**Academic and Behavioral Assessment**

Credit Hours: 1–4
Campus: Classroom

Prereqs:

This course is a prerequisite for EDPS 951 (http://bulletin.unl.edu/courses/EDPS/951)
Advanced study of the theory and practice in the assessment of educational and psychological problems of children and youth to include assessment of systems that impact on the behavior of children and youth. Assessment techniques include environmental observation, interviewing, standardized assessment procedures for academic skills, adaptive behavior, social and emotional problems, curriculum based assessment, and functional analysis and assessment. Ecological–behavioral basis of assessment is explored. A complete psychological and educational evaluation is conducted in a school or other relevant setting.

**EDPS 952**

**Systems of Consultation in School Psychology**

Prereqs:  
EDPS 863

Intensive analysis of the theory and practice of various systems of mental health consultation in the schools with special emphasis and practicum with mental health service models other than conventional clinical, psychometric, and direct psychoeducational remediation models.

**EDPS 953**

**Psychological Assessment II**

Prereqs:  
EDPS *853 or equivalent

This course is a prerequisite for:  
EDPS 956

Advanced assessment and testing skills. Selection, administration and interpretation of a battery of psychological tests and integration and synthesis of relevant test and non-test data into an accessible report writing format. Development of effective consultation and test interpretation feedback skills.

**EDPS 954**

**Interventions in School Psychology**

Prereqs:  
EDPS 463, EDPS 863, EDPS 951 or parallel; and permission

This course is a prerequisite for:  
EDPS 956

Prepares school psychologists to plan and provide evidence–based psychoeducational interventions for children, youth, families and schools. Application of ecobehavioral theory, models of school mental health, the scientist–practitioner model, the practice of psychotherapy, and empirical evidence of the effectiveness of interventions for culturally and linguistically diverse students.

**EDPS 955**

**Child Therapy**

Prereqs:  
EDPS 949

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.

**EDPS 956 Projective Psychological Assessment**

**Prereqs:**
EDPS 853 (http://bulletin.unl.edu/courses/EDPS/853), and EDPS 953 (http://bulletin.unl.edu/courses/EDPS/953). Permission may be granted by Instructor to take Psychological Assessment II after Projective Psychological Assessment.

The primary goal of this course is to assist doctoral students in developing their ability to utilize projective assessment techniques to integrate information from a variety of sources about a person (an adult or older adolescent) into an integrated, useful psychological report. The broad array of data will include not only the results of formal tests (e.g., the Rorschach), but also personal and family history, and behavioral observations.

**EDPS 958B Practicum in School Psychology Consultation Techniques**

**Prereqs:**
EDPS 863 (http://bulletin.unl.edu/courses/EDPS/863), 952 (http://bulletin.unl.edu/courses/EDPS/952), 997D (http://bulletin.unl.edu/courses/EDPS/997D) or equivalent, and permission

Practicum experience in ecological/behavioral, mental health, and organizational consultation techniques within a school or related setting. Supplemented by individual and small group supervisory/feedback sessions each week.

**EDPS 960 Problem Solving and Concept Learning in Humans**

**Prereqs:**
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851 (http://bulletin.unl.edu/courses/EDPS/851) and 854 (http://bulletin.unl.edu/courses/EDPS/854)

Critical examination of the non-Piagetean research literature and theory which examines higher mental processes in humans through the lifespan.

**EDPS 961 Cognitive Development**

**Prereqs:**
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851 (http://bulletin.unl.edu/courses/EDPS/851) and permission

Critical examination of theories and research on cognitive development throughout the lifespan, including Piagetean and alternative perspectives.

**EDPS 962 Research Literature in Personality and Social Development**

**Prereqs:**
EDPS 850 (http://bulletin.unl.edu/courses/EDPS/850) or 851

Critical examination of theories and research on personality and social development throughout the lifespan, including Piagetean and alternative perspectives.
<table>
<thead>
<tr>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developmental Psychobiology (EDPS 963)</strong></td>
</tr>
<tr>
<td><strong>Prereqs:</strong> EDPS 850 or 851 and permission</td>
</tr>
<tr>
<td><strong>Credit Hours:</strong> 3</td>
</tr>
<tr>
<td><strong>Campus:</strong> Classroom</td>
</tr>
<tr>
<td><strong>Description:</strong> Biological foundations of human psychological development, including anatomical, physiological, and evolutionary considerations.</td>
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</table>

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td><strong>Counseling Theories and Intervention Techniques (EDPS 964)</strong></td>
</tr>
<tr>
<td><strong>Prereqs:</strong> EDPS 866</td>
</tr>
<tr>
<td><strong>Parallel:</strong> EDPS 997A and permission of counseling area.</td>
</tr>
<tr>
<td><strong>Credit Hours:</strong> 3</td>
</tr>
<tr>
<td><strong>Campus:</strong> Classroom</td>
</tr>
<tr>
<td><strong>Description:</strong> Overview of theoretical approaches to counseling. Close examination of selected theories and intervention procedures.</td>
</tr>
</tbody>
</table>

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Group Counseling: Social Psychological Aspects (EDPS 965A)</strong></td>
</tr>
<tr>
<td><strong>Prereqs:</strong> EDPS 866</td>
</tr>
<tr>
<td><strong>Parallel:</strong> EDPS 964 and 997A.</td>
</tr>
<tr>
<td><strong>Credit Hours:</strong> 3</td>
</tr>
<tr>
<td><strong>Campus:</strong> Classroom</td>
</tr>
<tr>
<td><strong>Description:</strong> Develops student competencies in analyzing organizational contexts, designing group counseling experiences, and evaluating group experiences.</td>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Psychology of Learning (EDPS 966)</strong></td>
</tr>
<tr>
<td><strong>Prereqs:</strong> EDPS 854 and 870</td>
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<tr>
<td><strong>Credit Hours:</strong> 3</td>
</tr>
<tr>
<td><strong>Campus:</strong> Classroom</td>
</tr>
<tr>
<td><strong>Description:</strong> Theories of learning and experimental investigation in the field of animal and human behavior and their application to the classroom.</td>
</tr>
</tbody>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Psychology of Motivation in Education (EDPS 967)</strong></td>
</tr>
<tr>
<td><strong>Prereqs:</strong> Graduate standing EDPS 854</td>
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<tr>
<td><strong>Credit Hours:</strong> 3</td>
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<tr>
<td><strong>Campus:</strong> Classroom</td>
</tr>
<tr>
<td><strong>Description:</strong> Psychology of Motivation focuses on understanding and impacting students' motivation to learn. Theories discussed in this class are applicable to a wide array of achievement settings (e.g., math, science, writing, health education) as well as more general motivational concerns (e.g., studying, addiction, video games). Content covered includes drive theory, behaviorism as</td>
</tr>
</tbody>
</table>
motivation, achievement motivation, goal theory, self-determination theory, social cognitive theory, and ecological theories of motivation.

**Gender and Counseling Psychology**

**Prereqs:** Admitted as a graduate student in the Counseling Psychology program.

The major purpose of this course is for students to learn about gender issues within the field of counseling psychology from a multicultural and feminist perspective and to gain the essential knowledge and techniques in working with gender issues in diverse settings.

**Nonparametric Statistical Methods**

**Prereqs:** EDPS 859 or equivalent

Presentation of statistical procedures that do not require fundamental assumptions about the distribution property of the variables to be analyzed. Chi Square tests, rank tests of location (Wilcoxon, Mann Whitney, Kruskal-Wallis, Friedman), tests of goodness of fit (Chi Square, Kolmogorov-Smirnoff), tests of randomness (Runs).

**College Major Forum**

This course is a prerequisite for EDPS 973B, EDPS 978, EDPS 979. 97 is Pass/No Pass only.

This is an eight week seminar course for first semester students in the General Studies Learning Community. Students will complete activities to identify interests, research majors that match their interests and complete a "Guided Professional Shadowing" experience to gain first-hand knowledge about a career of their choice.

**Theory and Methods of Educational Measurement**

**Prereqs:** EDPS 859 and 870; EDPS/SRAM 941; or equivalent

Presentation of various measurement theories and concepts, including classical true-score theory, reliability and validity, test construction, item response theory, test equating, test bias, and criterion-referenced tests.

**Structural Equation Modeling**

**Prereqs:** EDPS/SRAM 942 and 970; or equivalent

Introduction to the techniques of path analysis, confirmatory factor analysis,
and structural equation modeling with emphasis on the set-up and interpretation of different models using the LISREL program. Model testing and evaluation, goodness-of-fit indices, violations of assumptions, specification searches, and power analyses.

**EDPS 972**

**Multivariate Analysis**

Crosslisted as SRAM 972

**Prereqs:**
EDPS/SRAM 941 and 942

Techniques of multivariate analyses, including multivariate analysis of variance and covariance, multivariate multiple regression, multigroup discriminant analysis, canonical analysis, repeated measures (Multivariate model), and time series. Mathematical models presented and analyzed. Instruction complemented by appropriate statistical software packages.

**EDPS 973A**

**Evaluation Theory and Practice**

**Prereqs:**
EDPS 973A or permission

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.

**EDPS 973B**

**Evaluation Practicum**

Prereqs:
EDPS 973A or permission

Actual supervised evaluation of a program or project.

**EDPS 974**

**Guidance and Counseling in Schools**


**EDPS 975**

**Occupations and Vocational Psychology**

Evaluation and uses of occupational and educational information; job analysis; psychological and behavioral attributes relating to work and lifestyles; occupational taxonomies; career—development theories; impact of accelerating changes on personal and social planning; investigations of value-oriented expectations as sources of work satisfaction and dissatisfaction; critical assessment of the concept of vocational choice. For counselors and educators.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
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</thead>
<tbody>
<tr>
<td>EDPS 976</td>
<td>Advanced Counseling Psychology I: Counseling Theory and Practice</td>
<td>Doctoral level counseling students and others by permission</td>
<td>3</td>
<td>6</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>This course is a prerequisite for: EDPS 978</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>Counseling methodology in relationship to personality theory and research. Consideration of various theories and research in relation to counseling practice.</td>
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<tr>
<td>EDPS 977</td>
<td>Seminar in College Student Development</td>
<td>Crosslisted as EDAD 980</td>
<td>2-3</td>
<td>6</td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Special field experiences and research projects are available to students for additional credit.</td>
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<tr>
<td></td>
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<td>Current knowledge, theories, and practices, and related issues in the area of college student development.</td>
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<tr>
<td>EDPS 978</td>
<td>Advanced Counseling Psychology II: Research in Counseling</td>
<td>EDPS 976; EDUC 900A and either EDUC 900B or 900K</td>
<td>3</td>
<td>8</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Research strategies appropriate for counseling psychology. Identification of researchable problem and completion of research proposal including literature review, design, and proposed data analysis procedures.</td>
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<tr>
<td>EDPS 980</td>
<td>Item Response Theory</td>
<td>EDPS 870 and 970; or permission</td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Principles of item response theory (IRT) and its application to a variety of issues in educational and psychological measurement. Theoretical foundations of IRT discussed along with its assumptions and varied applications. Experience using IRT calibration and scoring computer software.</td>
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<tr>
<td>EDPS 981</td>
<td>School Practice in School Psychology</td>
<td>by permission of course instructor</td>
<td>2-4</td>
<td>8</td>
<td>Field, Lab, Lecture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supervised practice in local school districts related to academic, social, behavioral and emotional disorders of children and adolescents.</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
### Clinical Practice in School Psychology

**Prereqs:**
- by permission of course instructor

Supervised clinical practice related to academic, social, behavioral and emotional disorders of children and adolescents. Parent and family treatment and behavior interventions emphasized.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>2–4</th>
</tr>
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<tbody>
<tr>
<td>Max credits per semester:</td>
<td>4</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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### Community Practice in School Psychology

**Prereqs:**
- 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.

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<thead>
<tr>
<th>Credit Hours:</th>
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<tbody>
<tr>
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<td>Field, Lab, Lecture</td>
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<td>Course Delivery:</td>
<td>Classroom</td>
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### Ethics and Ethical Decision Making in Counseling and Education

Ethical principles in the practice of counseling. Application of ethical guidelines and development of ethical decision-making models relevant to school and mental health contents.

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<tr>
<th>Credit Hours:</th>
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<tbody>
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<td>Course Delivery:</td>
<td>Classroom</td>
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</table>

### Couple and Family Counseling

**Prereqs:**
- EDPS *866 or equivalent

Couple and family systems and change strategies. Active, brief forms of couple and family counseling and enrichment formats.

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<thead>
<tr>
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<tbody>
<tr>
<td>Course Format:</td>
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### Developmental Perspectives on Gender and Sexuality in Counseling


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<tr>
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<td>Course Delivery:</td>
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</table>

### Psychology of Reading

**Prereqs:**
- TEAC *811 or 841 or SPED 886**

Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and
models of reading, especially of the comprehensive process, applied to all
levels of reading from beginning reading through mature reading.

**EDPS 990**
Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of
this bulletin.

**EDPS 991**
Seminar in Educational Psychology and Measurements

**Prereqs:**
Permission

**Credit Hours:** 1–12
**Max credits per degree:** 12
**Course Format:** Lecture
**Campus:**
**Course Delivery:** Classroom

**EDPS 993**
Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of
this bulletin.

**EDPS 995**
Doctoral Seminar

**Prereqs:**
Permission

**EDPS 996A**
Research Other Than Thesis

Independent operational research under faculty supervision.

**EDPS 996B**
Readings in Educational Psychology

**Prereqs:**
Permission

Readings on selected problems in educational psychology.
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<td>Practicum in Counseling</td>
<td>Masters admission in educational psychology or permission of counseling area, EDPS *866</td>
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<td>EDPS 997B</td>
<td>Field Placement in Counseling</td>
<td>EDPS 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>)</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Supervised field experiences in school counseling, college student personnel, and community social service agencies.</td>
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<tr>
<td>EDPS 997D</td>
<td>Practicum in Behavior Management Technologies</td>
<td>EDPS 863 (<a href="http://bulletin.unl.edu/courses/EDPS/863">http://bulletin.unl.edu/courses/EDPS/863</a>) and permission</td>
<td>3</td>
<td>6</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Supervised practicum in the design, implementation, evaluation, and reporting of various behavior modification technologies for individuals and groups; social systems engineering.</td>
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<tr>
<td>EDPS 997E</td>
<td>Practicum in Counselor Supervision and Consultation</td>
<td>EDPS 997G (<a href="http://bulletin.unl.edu/courses/EDPS/997G">http://bulletin.unl.edu/courses/EDPS/997G</a>) or equivalent</td>
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<td></td>
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<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Supervised counseling supervision and consultation experience emphasizing process methods and evaluation.</td>
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<tr>
<td>EDPS 997G</td>
<td>Advanced Practicum in Counseling</td>
<td>EDPS 997A (<a href="http://bulletin.unl.edu/courses/EDPS/997A">http://bulletin.unl.edu/courses/EDPS/997A</a>) and permission</td>
<td>2–4</td>
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<td>Classroom</td>
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<td></td>
<td></td>
<td>Supervised counseling experience in university, schools, and community agencies.</td>
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<tr>
<td>EDPS 997J</td>
<td>Advanced Practicum in Gifted Education</td>
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EDPS 977K  
**Supervision in School Psychology**

**Prereqs:**
Doctoral standing in professional psychology program and permission.

Supervised experience in supervising graduate students in practicum settings. Refinement of consultation, assessment, diagnosis, and treatment skills.

**Credit Hours:** 3-4
**Max credits per semester:** 8
**Max credits per degree:** 8
**Course Format:** Field, Lab, Lecture
**Course Delivery:** Classroom

EDPS 999  
**Doctoral Dissertation**

**Prereqs:**
Admission to doctoral degree program and permission of supervisory committee chair

**Credit Hours:** 1-24
**Max credits per degree:** 55

PSYC 471/871  
**Human Sexuality and Society**

Crosslisted as SOCI 471/871, EDPS 471/871, CYAF 471/871

**Prereqs:**
Junior standing and 12 hrs in one of the departments in which the course is listed.

Open to advanced students planning careers 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 the study of human sexuality in terms of the psychological, social, cultural, anthropological, legal, historical, and physical characteristics of individual sexuality and sex in society.

**Credit Hours:** 3
**Course Delivery:** Classroom

SPED 892  
**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

**Prereqs:**
[EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or parallel; [EDPS 859](http://bulletin.unl.edu/courses/EDPS/859) or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Credit Hours:** 1-3
**Max credits per degree:** 12
**Course Format:** Lecture
**Course Delivery:** Classroom

TEAC 930  
**Sociological/Anthropological Research Methods in Education**

Crosslisted as EDPS 930, CYAF 930, NUTR 930

Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community

**Credit Hours:** 1-3
**Max credits per degree:** 15
### Courses for SPED (SPED)

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<td>EDAD 855</td>
<td>Teaching Learners to Learn</td>
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<td></td>
<td>Effective teachers facilitate student learning.</td>
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<td>Facilitating student learning depends on</td>
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<td>understanding learning principles and on</td>
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<td>designing instruction that is compatible with</td>
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<td>learning principles. Instructors can provide</td>
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<td>learning-compatible instruction that helps</td>
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<td>students learn more effectively and ultimately</td>
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<td>teaches them how to learn. Assists teachers to</td>
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<td></td>
<td>teach in learning-compatible ways and helps</td>
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<td></td>
<td>them embed within their curriculum a program</td>
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<td></td>
<td>for teaching learners to learn.</td>
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<td>For principals or other administrators who have</td>
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<td>special education programs in their buildings.</td>
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<td>Overview of disabilities, related law, special</td>
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<td>education programs, personnel issues, etc., and</td>
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<td>instructional methods and administrative support</td>
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<td>for effective integration of disabled students</td>
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<td>into regular programs.</td>
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<tbody>
<tr>
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<td>Special Education Administration</td>
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<td>Crosslisted as SPED 857</td>
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<td>Intensive preparation for special educators who</td>
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<td></td>
<td>intend to administer special education programs</td>
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<td>in the public schools. Information about best</td>
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<td></td>
<td>practices in special education, including</td>
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<td>programming, supervision, legal/regulatory</td>
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<td>issues, financing, personnel, as well as current</td>
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<td>controversial topics which are affecting these</td>
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<td>programs in the schools.</td>
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<tbody>
<tr>
<td>EDAD 858</td>
<td>Special Education Law</td>
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<td>Body of law that pertains to the organization,</td>
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<td>administration, and implementation of special</td>
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<td>education programs in PreK–12 schools. Substantive</td>
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<td>and procedural rights of disabled students, and</td>
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<td>the authority and responsibility of states and</td>
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<td>school districts that are grounded in state and</td>
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<td>federal law.</td>
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<tr>
<td>EDPS 997J</td>
<td>Advanced Practicum in Gifted Education</td>
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<td>Prereqs: Permission</td>
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</table>
# Course Descriptions

**Course Delivery:** Classroom

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### Speech and Language Development of the Hearing Impaired

Crosslisted as **SPED 884**

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 skills.

**Credit Hours:** 3

**Course Format:** Lecture 3

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### Language Study of Teachers of Deaf and Hard of Hearing (DHH)

Crosslisted as **SPED 956**


**Credit Hours:** 3

**Course Format:** Lecture 3

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### Characteristics of Exceptional Persons

Crosslisted as **SPED 400/800**

This course is a prerequisite for: **SPED 406**; **SPED 406A**; **SPED 809**

Etiology, growth and development, and characteristics of children and youth who deviate from the norm.

**Credit Hours:** 3

**Course Delivery:** Classroom

---

### Accommodating Exceptional Learners in the Elementary School Classroom

Crosslisted as **SPED 401A/801A**

**Prereqs:**
- Admission to the Teacher Education Program: **EDPS 362**
- **TEAC 195**

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.

**Credit Hours:** 3

**Course Delivery:** Classroom

---

### Accommodating Exceptional Learners in the Secondary School Classroom

Crosslisted as **SPED 401B/801B**

**Prereqs:**
- Admission to the Teacher Education Program: **EDPS 362**
- **TEAC 195**

Legal and ethical requirements for educating exceptional learners;

**Credit Hours:** 3

**Course Delivery:** Classroom
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.

**405/805**
**Code-based Reading Instruction**

**Prereqs:**
Parallel SPED 405A (http://bulletin.unl.edu/courses/SPED/405A) / 805A
(http://bulletin.unl.edu/courses/SPED/805A).

**Direct, systematic, multi-sensory techniques for teaching reading, writing
and spelling to students who have severe reading problems.**

**405A/805A**
**Reading Center Practicum I**

**Prereqs:**
Permission.

**Teaching and/or tutoring experience evaluating and instructing students
with reading problems in a Reading Center. Assessment, lesson planning
and teaching using direct instruction, code-based instructional strategies.**

**406/806**
**Reading and Writing Disabilities: Adolescents**
Crosslisted as TEAC 806

**Prereqs:**
SPED 400 (http://bulletin.unl.edu/courses/SPED/400) / 800,
SPED 412 (http://bulletin.unl.edu/courses/SPED/412) / 812,
and (TEAC 441 (http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate
students only). Parallel SPED 406A (http://bulletin.unl.edu/courses/SPED/406A) / 806A
(http://bulletin.unl.edu/courses/SPED/806A).

**Theory and techniques for assessing and teaching word identification,
vocabulary, comprehension and writing skills in grades 7 to 12.**

**406A/806A**
**Reading Center Practicum II**
Crosslisted as TEAC 806A

**Prereqs:**
SPED 400 (http://bulletin.unl.edu/courses/SPED/400) / 800,
SPED 412 (http://bulletin.unl.edu/courses/SPED/412) / 812,
and (TEAC 441 (http://bulletin.unl.edu/courses/TEAC/441) required for undergraduate
students only). Taken parallel with SPED 406 (http://bulletin.unl.edu/courses/SPED/406) / 806
(http://bulletin.unl.edu/courses/SPED/806).
This course is a prerequisite for: [SPED 406](http://bulletin.unl.edu/courses/SPED/406), [SPED 406A](http://bulletin.unl.edu/courses/SPED/406A)/[806A](http://bulletin.unl.edu/courses/SPED/806A) requires two hours per week in a Reading Center.

Teaching and/or tutoring experience evaluating and instructing students with reading problems in a Reading Center. Assessment, instructional planning, delivery of instruction, writing diagnostic reports and parent communication.

### SPED 407/807

**Teaching Students with Disabilities in the Secondary School**

**Prereqs:**
- [SPED 201](http://bulletin.unl.edu/courses/SPED/201) or [400](http://bulletin.unl.edu/courses/SPED/400)/[800](http://bulletin.unl.edu/courses/SPED/800).

This course is a prerequisite for: [SPED 408](http://bulletin.unl.edu/courses/SPED/408).

Information about the mildly/moderately disabled secondary-level student; including characteristics, assessment, models for programs, social skill training, behavior management, working with parents, and curriculum modification.

### SPED 408/808

**Issues in Secondary Programs for Students with Mild Disabilities**

**Prereqs:**
- Special Education Professional Semester and [SPED 407](http://bulletin.unl.edu/courses/SPED/407).

Issues in secondary education for students with mild disabilities based on current literature and needs of individual students.

### SPED 412/812

**Assessment Techniques for Diverse Learners**

**Prereqs:**
- Sophomore standing; [SPED 201](http://bulletin.unl.edu/courses/SPED/201) and [303](http://bulletin.unl.edu/courses/SPED/303).

This course is a prerequisite for: [SPED 406](http://bulletin.unl.edu/courses/SPED/406), [SPED 415](http://bulletin.unl.edu/courses/SPED/415).

The role of general education teachers in the primary purposes of assessment of learners with diverse needs. Knowledge and experience with interpreting norm-referenced test information as related to planning educational programs. Use of assessment information for instructional planning and evaluation. Testing accommodations and classroom grading.

### SPED 414/814

**Instructional Methods for Students with Diverse Needs**

**Prereqs:**
- Sophomore standing; [SPED 201](http://bulletin.unl.edu/courses/SPED/201) and [303](http://bulletin.unl.edu/courses/SPED/303).

This course is a prerequisite for: [SPED 415](http://bulletin.unl.edu/courses/SPED/415).
Instructional methods and accommodations for special education and general education teachers necessary to work successfully with students with disabilities or who are at-risk for academic failure. Curriculum modification, classroom management, strategy instruction, and instructional modifications for content areas.

**Reading and Writing Disabilities: Elementary Students**

**SPED 415/815**

**Prereqs:**
- SPED 201
- TEAC 311
- TEAC 313
- SPED 201
- SPED 412
- SPED 414

**Credit Hours:** 2

**Course Format:** Lecture 2

**Course Delivery:** Classroom

This course is a prerequisite for SPED 415.

Theory and techniques for assessing and teaching early literacy skills in small groups and one-on-one for children who struggle with literacy.

**Career Education for the Special Needs Student**

**SPED 436/836**

**Prereqs:**
- SPED 434
- SPED 834 or permission.

**Credit Hours:** 3

**Course Delivery:** Classroom

Philosophical and practical base of career education as it relates to special needs students. Career education units developed for infusion into subject areas.

**Medically Fragile infants**

**SPED 463/863**

**Prereqs:**
- Major in Special Education, Speech-Language Pathology or Child Youth and Family Studies. Senior status or permission of instructor.

**Credit Hours:** 3

**Course Format:** Lecture

**Course Delivery:** Web

Unique needs, family-coping strategies, specialized medical staff and various health care settings for chronically ill infants, toddlers and preschool age children. Overview of etiology, characteristics and developmental implications of selected medical conditions related to developmental disabilities.

**Psychology and Sociology of Deafness**

**SPED 472/872**

**Credit Hours:** 3

**Course Delivery:** Classroom

Education of the hearing impaired including history of, professional roles in, and educational programming within this field. Social/psychological theories as related to the hearing impaired. Patterns of social/emotional development, psychological characteristics, issues of family stress and social adaptation and discussion of counseling techniques.

**Educating Students with Intellectual Impairments & Developmental Disabilities**

**SPED 480**

**Credit Hours:**

**Course Delivery:**
**480/880**  
This course is a prerequisite for [SPED 881](http://bulletin.unl.edu/courses/SPED/881)

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<tr>
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</table>

Concepts related to history, definitions, identification, etiology, and assessment of students with intellectual impairments and developmental disabilities. Examine attitudes, assumptions, and stereotypes concerning persons with intellectual impairments and other developmental disabilities. Instructional methods, adaptations and teaming to provide individualized interventions and include students in least restrictive environments/general education settings. Applied assignments will be conducted in field experience and student teaching.

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**SPED 495/895**  
**Independent Study in Special Education**

**Prereqs:**  
Prior arrangements with faculty member and permission.

Special research or reading project under direction of a staff member in the department.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

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**SPED 496/896**  
**Directed Field Experience**

**Prereqs:**  
Permission.

Pass/No Pass only for SPED 496 ([link](http://bulletin.unl.edu/courses/SPED/496)) section. SPED 896 ([link](http://bulletin.unl.edu/courses/SPED/896)) is graded.

- E. Field Experience: General Special Education (1-6 cr, max 12)
- M. Field Experience: Mild/Moderate (1-6 cr, max 12)
- Y. Field Experience: Inclusion (1-6 cr, max 12)

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max credits per semester:</td>
<td>12</td>
</tr>
<tr>
<td>Course Format:</td>
<td>Field</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

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**SPED 496Y/896Y**  
**Directed Field Experience: Inclusion**

**Prereqs:**  
Permission.

Pass/No Pass only for SPED 496 ([link](http://bulletin.unl.edu/courses/SPED/496)) section. SPED 896 ([link](http://bulletin.unl.edu/courses/SPED/896)) is graded.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>1-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max credits per semester:</td>
<td>12</td>
</tr>
<tr>
<td>Course Format:</td>
<td>Field</td>
</tr>
<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

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**SPED 802**  
**Advanced Assessment Techniques**

**Prereqs:**  
SPED 800 ([link](http://bulletin.unl.edu/courses/SPED/800)) or equivalent; or permission

Comprehensive study of criterion-referenced and normative-referenced assessment instruments used by school resource personnel.

<table>
<thead>
<tr>
<th>Credit Hours:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus:</td>
<td></td>
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<tr>
<td>Course Delivery:</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

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**SPED 803**  
**Effective Instruction for Learners with Special Needs**

[link](http://bulletin.unl.edu/courses/SPED/803)
### Managing Challenging Behavior

**Prereqs:**
- SPED 800 [Link](http://bulletin.unl.edu/courses/SPED/800) and *802; or permission
- SPED 804 [Linked](http://bulletin.unl.edu/courses/SPED/804)

**Credit Hours:** 3  
**Campus:**  
**Course Delivery:** Classroom

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.

### Autism Spectrum Disorders (ASDs): Effective Assessment and Intervention

**Prereqs:**
- SPED 400 [Link](http://bulletin.unl.edu/courses/SPED/400) or equivalent  
- SPED 804 [Link](http://bulletin.unl.edu/courses/SPED/804) or equivalent

**SPED 809**

Functional approaches that can be used by teachers and mental health practitioners for assessing, preventing, and managing children's challenging behavior. Basics of applied behavior analysis, functional analyses of behavior, individual- and group-oriented interventions, self-management training, and strategies for promoting generalization.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

**SPED 810**

- Designed for educators of children and youth with Autism Spectrum Disorders (ASDs) in school settings. Assessment strategies to identify characteristics of ASDs focused on individual needs and strengths-based outcomes. Knowledge and skills regarding evidence-based practices and individualized educational programs.

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom

### Mathematics Instruction for Diverse Learners

**Prereqs:**
- SPED 201 [Link](http://bulletin.unl.edu/courses/SPED/201) or 400 [Link](http://bulletin.unl.edu/courses/SPED/400) or 800 [Link](http://bulletin.unl.edu/courses/SPED/800)

**SPED 820**

- SPED *820 and associated practicum is designed to meet professional standards (i.e., Council for Exceptional Children, Teacher Education

**Credit Hours:** 3  
**Course Format:** Lecture 3  
**Campus:**  
**Course Delivery:** Classroom
Accreditation Council) for teachers in the area of instruction for diverse learners.

Supplemental basic skills and concepts instruction for diverse learners within a response to intervention models and on mathematics instruction. Selection, delivery, and evaluation of standard protocol and individualized interventions to diverse learners.

**Functional Behavioral Assessment**

**SPED 824**  
**Prereqs:** SPED 303 (http://bulletin.unl.edu/courses/SPED/303) or equivalent. Parallel SPED 824A (http://bulletin.unl.edu/courses/SPED/824A).  
This course is a prerequisite for SPED 824 (http://bulletin.unl.edu/courses/SPED/824) and SPED 824A (http://bulletin.unl.edu/courses/SPED/824A).

- **Credit Hours:** 3  
- **Course Format:** Lecture 3  
- **Campus:**  
- **Course Delivery:** Classroom

Functional behavioral assessments (FBAs) and development of behavior intervention plans (BIPs) based on the assessments. Contextual and curriculum manipulations, and replacement behavior training.

**Practicum in Functional Behavioral Assessment**

**SPED 824A**  
**Prereqs:** SPED 303 (http://bulletin.unl.edu/courses/SPED/303) or approved equivalent. Parallel SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

This course is a prerequisite for SPED 824 (http://bulletin.unl.edu/courses/SPED/824).

- **Credit Hours:** 2  
- **Course Format:** Field  
- **Campus:**  
- **Course Delivery:** Classroom

Opportunities to engage in the activities and practice the skills associated with SPED 824 (http://bulletin.unl.edu/courses/SPED/824). Culmination of the practicum is performing a complete functional behavioral assessment and developing a behavior intervention plan for a student who displays challenging behaviors.

**Behavioral Systems and Interventions**

**SPED 833**  
**Prereqs:** SPED 813 (http://bulletin.unl.edu/courses/SPED/813) or equivalent

- **Credit Hours:** 3  
- **Course Format:** Lecture 3  
- **Campus:**  
- **Course Delivery:** Classroom

Three-tier models for encouraging and maintaining students' appropriate behaviors. Evaluation and implementation of interventions at the school-wide, classroom and/or small group, and individual levels. Presentation of different models i.e., Response to Intervention (RtI) and School-Wide Positive Behavior Support (SWPBS).

**Introduction to Special Vocational Needs**

**SPED 834**  
**Foundational course emphasizing the characteristics and identification of special needs learners in vocational settings. Determines needs, interests, and abilities of these students.**

- **Credit Hours:** 3  
- **Campus:**  
- **Course Delivery:** Classroom

**Emotional and Behavioral Disorders**

**SPED 841**  
**LINK (http://bulletin.unl.edu/courses/SPED/841)**

- **Credit Hours:** 3  
- **Campus:**  
- **Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 843</td>
<td>Characteristics of Emotional and Learning Disorders</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/800">SPED 800</a> or permission</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Learning, academic, behavioral, social–emotional and language characteristics of students who are classified as having disabilities for purposes of special education. Definitions, classification systems, assessment and verification criteria, and medications for students with learning and emotional disabilities.</td>
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<tr>
<td>SPED 846</td>
<td>Foundations of Visual Impairment: Programs and Services for Individuals with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/400">SPED 400</a> / SPED 800</td>
<td>3</td>
<td>Lecture 3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Admission to visually impaired program; hold or concurrently earn subject/field endorsement</td>
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<td></td>
<td>Current educational programs and services for children with visual impairments, as well as children with multiple disabilities. History of educational services, developmental characteristics, psycho–social aspects, history of legislation, and grade I Braille.</td>
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<tr>
<td>SPED 847</td>
<td>Introduction to Eye Anatomy of Students with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/849">SPED *846 or permission</a></td>
<td>3</td>
<td></td>
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<td>Classroom</td>
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<td></td>
<td>Structure and function of the visual system, conditions that affect visual ability, and the functional and environmental implications of low vision. Strategies for enhancing visual ability in children with visual impairments and children who have additional disabilities.</td>
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<tr>
<td>SPED 849</td>
<td>Braille Codes and Material Adaptations for Students with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/849">SPED *846 and *847, or permission</a></td>
<td>3</td>
<td></td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Basic skills in literary Braille transcription and codes. Acquire competence in reading and writing Braille and using the Perkins braillewriter and slate/stylus.</td>
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<tr>
<td>SPED 851</td>
<td>Intermediate Braille Codes and Instructional Material Adaptations for Students with Visual Impairments</td>
<td><a href="http://bulletin.unl.edu/courses/SPED/851">SPED *846, *847, and *849</a></td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
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</tbody>
</table>
Advanced skills in Nemeth (mathematics code) and/or Literary code. Basic activities in braille formatting, foreign language, music and identification of braille technology devices and resources.

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**Instructional Methods for Teachers of Students with Visual Impairments**

**Prereqs:**
SPED *846, *847, *849, and *851

Methods and materials for educating children who are totally blind or have low vision, including students with multiple impairments. Practical skills in selecting, designing, and/or modifying materials for content area subjects: mathematics, science, social studies, creative arts, foreign language, and other subjects.

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**Applied Technology Methods for Students with Visual Impairments**

**Prereqs:**
SPED *846 and *847, or equivalents

Theory and skill development in the selection and use of technology for students with visual impairments. Technology assessments, data collection, equipment feature, source of equipment, funding sources, writing technology instructional plans, and demonstration of using various equipment and technology.

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**Applied Instructional Methods to Teach Students with Visual Impairments**

**Prereqs:**
SPED *846, *847, *849, *851, and *852; or equivalents

Practice using appropriate instructional methods and materials for educating the blind and low vision child.

---

**Orientation and Mobility Skills for Students with Visual Impairments**

**Prereqs:**
SPED *846, *847, *849, *851, and *852

Theory and applied practice in basic orientation and mobility techniques for use with students with visual impairments. Practical methods for work in concept development, orientation skills, travel skills and techniques, personal safety and independent travel. Needs of specific populations such as people with low vision and individuals with additional disabilities. Vision simulators and occluders. An introduction to the history and development of the profession.

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**Issues in Early Childhood Special Education**

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, transitions, service delivery systems, teamwork and assessment for young children.
**Infants with Disabilities and Home Visiting**

*SPED 861*

**Prereqs:**
*SPED 960* and permission.

*SPED 861* requires a practicum in home visiting.

Assessment and intervention strategies for developing appropriate early intervention programs for infants and toddlers with disabilities. Rationale and principles for conducting home-based, family-centered, and transdisciplinary services.

**Prereqs:**
*SPED 960* and permission.

*SPED 960* requires a practicum in home visiting.

**Credit Hours:** 3
**Course Format:** Lecture 3
**Campus:**
**Course Delivery:** Classroom

**Preschool Children with Disabilities in a Classroom**

*SPED 862*

**Prereqs:**
An assessment and behavior management course; and permission.

*SPED 862* requires an applied experience.

Selection, design and implementation of developmentally appropriate, activity-based interventions for preschool-age children with disabilities. Ecological assessments. Instructional factors, such as classroom environments, activity planning, selection, use and modification of strategies, home-school communications, and consulting to staff in inclusive settings.

**Sped 873 (http://bulletin.unl.edu/courses/SPED/873)** is for all students in the hearing impaired program.

Methods for teaching content areas (science, math, and social studies) to hearing impaired students from preschool through grade 12. Adapting curricula and materials from these areas for the hearing impaired students.

**Language Arts and Literacy for the Hearing Impaired**

*SPED 874*

Assessment instruments, curricula and instructional methods for developing language and literacy in classrooms for hearing impaired children, preschool through grade 12. Methods for coordinating speech and/or language and/or auditory training program in the classroom with that in the speech and/or language therapy program.

**Itinerant Teaching Methods for Students who are Deaf or Hard of Hearing**

*SPED 875*

Methods for providing services for students with hearing loss, using itinerant and consultative models. Professional and parent in-service development, team-based problem solving, curriculum based pull-out services. Ecological assessment and management of deafness related technology in inclusive settings. Supervision of interpreters and paraprofessionals.
Language Development for Teachers

Introduction to the foundations of normal speech and language development and potential difficulties in both early stages and in the classroom. Analysis of child language samples. Strategies for explaining language development to parents and professional colleagues.

Methods for Students with Intellectual and Severe Disabilities

Prereqs:
SPED 480 or SPED 880
SPED 881 requires observations in schools and applied assignments.

Planning, implementing, and evaluating effective longitudinal education for individuals with intellectual impairments and severe disabilities. Knowledge and skills regarding best practices within inclusive education settings for these learners emphasizing an ecological and functional model that addresses useful skills in current and future environments.

Specialized Instruction for Students with Severe and Multiple Disabilities

Prereqs:
SPED *881 for the Severely/Multihandicapped endorsement program or SPED *862 for Preschool Handicapped endorsement program; and permission. Majors in severe disabilities must parallel with SPED 896P (1 cr).

This course is a prerequisite for: SPED 891
SPED *882 requires observations in schools and applied assignments.

Selection, design, and implementation of best practice instruction for students with severe disabilities, multiple disabilities, or deaf-blindness.

Assessment, Evaluation, and Instruction of

Crosslisted as TEAC 886

This course is a prerequisite for: EDPS 899
TEAC/SPED *886 includes case study and planning for special student populations.

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.
A. Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.
B. Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)

Workshop Seminar

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

Special Topics in Education

Crosslisted as EDA92, EDPS 892, CYAF 892, EDUC 892, TEAC 892
### Workshop Seminar (893)

**Prereqs:**
EDPS 859 or parallel; EDPS 859 or equivalent

Aspects of education not covered elsewhere in the curriculum.

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/SPED/893](http://bulletin.unl.edu/courses/SPED/893)

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### Student Teaching: Exceptional Learners (897)

**Prereqs:**
Permission

Laboratory and teaching experience in the area(s) of specialization.

A. Mainstream (1–12 cr)
B. Behavior Disorders
D. Deaf/Hard of Hearing
E. General Special Education
J. Gifted/Talented (EDPS 897)
L. Learning Disabilities
M. Mildly/Moderate Disabilities
P. Severe Disabilities
Q. Early Childhood Special Education
V. Visual Impairments
Y. Inclusion
Z. Multicultural Education

**Credit Hours:** 1–9

**Max credits per degree:** 15

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/SPED/897](http://bulletin.unl.edu/courses/SPED/897)

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### Masters Thesis (899)

**Prereqs:**
Admission to masters degree program and permission of major adviser

**Credit Hours:** 1–10

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/SPED/899](http://bulletin.unl.edu/courses/SPED/899)

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### Seminar in Special Education (907)

**Prereqs:**
Permission

B. Behavior Disorders
D. Deaf/Hard of Hearing
E. General Special Education
J. Gifted/Talented
L. Learning Disabilities
M. Mildly/Moderate Disabilities
P. Severe Disabilities
Q. Early Childhood Special Education
V. Visual Impairments

**Credit Hours:** 1–3

**Max credits per degree:** 12

**Campus:**

**Course Delivery:** Classroom

**Link:** [http://bulletin.unl.edu/courses/SPED/907](http://bulletin.unl.edu/courses/SPED/907)
Resource Consultation Services

Resource Consultation Services

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs:
SPED 800 and one of the following: 831, 851, 861, 881; or permission

Roles and functions of school resource personnel in serving as educational consultants to regular school staff.

Cognitive Strategy Instruction

Cognitive Strategy Instruction

Credit Hours: 3
Campus: 
Course Delivery: Classroom

Prereqs:
SPED 800, 803, and 831 or permission

How to implement cognitive strategy instruction with students learning difficulties. Practical model which allows students to successfully teach cognitive strategies. Metacognition, attribution training, and attention deficit disorders.

Strategic Approaches for EBD

Strategic Approaches for EBD

Credit Hours: 1–3 Max credits per degree: 6
Campus: 
Course Delivery: Classroom

Prereqs:
SPED 800, 804, and 841; or permission

Strategic therapy techniques for assessment and treatment of EBD.
A. Special Topics in EBD (1–3 cr)

Family and School Collaboration in Special Education

Family and School Collaboration in Special Education

Credit Hours: 3
Course Format: Lecture 3
Campus: 
Course Delivery: Classroom

Prereqs:
Professional experience or completion of one practicum and/or field experience with young children (birth to age 5) or other individuals ages 5 to 21 years who have disabilities

This course is a prerequisite for SPED 861

Functions and interactions of both family and education systems. Impact of having a child with a disability on the normal and stressed family system. Promote family-professional partnerships in assessment and intervention for the child and/or student with an IFSP/IEP. Communication skills are reviewed and practiced for effective teaming among educators and for interviewing, consulting, collaborating and coaching with family members and other community team members.

Assessment of Students with Severe, Sensory, and Developmental Disabilities

Assessment of Students with Severe, Sensory, and Developmental Disabilities

Credit Hours: 2
Course Format: Lecture 2
Campus: 
Course Delivery: Classroom

Prereqs:
SPED 881 and 882; and permission

This course is a prerequisite for SPED 987

Designed to meet the needs of educators who conduct assessment of students with low incidence disabilities in school settings. Strategies emphasize assessing capabilities and needs in relationship to valued life outcomes. Processes of instructional outcomes. Some assessment conducted
Functional Assessment and Behavioral Support for Students with Severe Developmental Disabilities

Prereqs: SPED 882 and permission. Majors in severe disabilities must parallel with SPED 896P (1 cr).

SPED 981 requires observation in schools and applied assignments.

Assessment and intervention strategies for developing positive behavior support for students with severe disabilities or developmental disabilities who have challenging behavior. Rationale and principles for using an educative approach, functional behavior analysis, and a variety of individualized ecological and curricular interventions. Process of assessment conducted in school settings.

Seminar in Special Education

Prereqs: SPED 980 and 981

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

Workshop Seminar

Doctoral Seminar

Prereqs: 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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

Research Other Than Thesis

(1-12, max 12) Independent operational research under faculty supervision.

Readings in Special Education
### Resource Teacher Externship

**Course Code:** 997E  
**Prereqs:** SPED *802, *803  
**Description:** Extensive practicum experience in school settings for individuals preparing to serve as school resource teachers and consultants.

### Doctoral Dissertation

**Course Code:** 999  
**Prereqs:** Admission to doctoral degree program and permission of supervisory committee chair  
**Description:** Extensive practicum experience in school settings for individuals preparing to serve as school resource teachers and consultants.

### Courses for SLPA (SLPA)

#### Special Topics in Human Sciences

**Course Code:** CYAF 891  
**Crosslisted as:** HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891  
**Description:** Aspects of human sciences not covered elsewhere in the curriculum.

#### Audiology for Educators of the Deaf or Hard of Hearing

**Course Code:** SLPA 450/850  
**Description:** Anatomy and physiology of hearing; components of adequate evaluation for placement and educational planning; diagnosis using audiogram, functional and communication assessment; stimulation and utilization of residual hearing; and management of assistive and/or augmentative devices.

#### Normal Language Development During School Years

**Course Code:** SLPA 452/852  
**Description:** Normal syntactic, semantic, and pragmatic language development in school-age children and youth. Complex syntax, semantic development, pragmatic development, using language to learn, language-literacy relations, and abstract language development.

#### Research Methodology in Speech-Language Pathology and Audiology

**Course Code:** SLPA 454  
**Description:** Research methodology in speech-language pathology and audiology.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>454/854</td>
<td></td>
<td>Prereqs: Speech-language pathology and audiology major.</td>
<td>3</td>
<td>Classroom</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>Introduction to research principles, methods, and design. Survey and</td>
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<tr>
<td></td>
<td></td>
<td>critique of research in special education and communication disorders.</td>
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<tr>
<td>SLPA 461/861</td>
<td><strong>Language Disorders: Preschool Level</strong></td>
<td>Prereqs: Parallel SLPA 461L (<a href="http://bulletin.unl.edu/courses/SLPA/461L">http://bulletin.unl.edu/courses/SLPA/461L</a>)</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
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<tr>
<td></td>
<td></td>
<td>This course is a prerequisite for: SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461">http://bulletin.unl.edu/courses/SLPA/461</a>), SLPA 461L (<a href="http://bulletin.unl.edu/courses/SLPA/461L">http://bulletin.unl.edu/courses/SLPA/461L</a>).</td>
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<td></td>
<td>Characteristics of language impaired preschool children and the nature of their disorders. Introduction to principles of assessment and treatment.</td>
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<tr>
<td>SLPA 461L/861L</td>
<td><strong>Language Disorders: Preschool Level Lab</strong></td>
<td>Prereqs: Parallel with SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461">http://bulletin.unl.edu/courses/SLPA/461</a>)</td>
<td>1</td>
<td>Lab</td>
<td>Classroom</td>
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<td></td>
<td></td>
<td>This course is a prerequisite for: SLPA 461 (<a href="http://bulletin.unl.edu/courses/SLPA/461">http://bulletin.unl.edu/courses/SLPA/461</a>)</td>
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<tr>
<td></td>
<td></td>
<td>Practical application of language assessment and intervention in preschool children with language disorders.</td>
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<tr>
<td>SLPA 486/886</td>
<td><strong>Augmentative Communication</strong></td>
<td>Speech pathology students must register for 3 cr only; specil education students may rights for 2-3</td>
<td>2-3</td>
<td>Classroom</td>
<td>Classroom</td>
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<tr>
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<td>Introduction to the augmentative communication options for persons unable to speak or write because of physical, language, or cognitive disability.</td>
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<tr>
<td>SLPA 488/888</td>
<td><strong>Linguistic Needs of Bilingual and Culturally Different Students</strong></td>
<td>Prereqs: SLPA 250 (<a href="http://bulletin.unl.edu/courses/SLPA/250">http://bulletin.unl.edu/courses/SLPA/250</a>) and 251 (<a href="http://bulletin.unl.edu/courses/SLPA/251">http://bulletin.unl.edu/courses/SLPA/251</a>) or permission.</td>
<td>3</td>
<td>Classroom</td>
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<td></td>
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<td>Theoretical and applied information about situational factors which have an impact on spoken and written language; addresses how individual differences due to gender, handicapping conditions, socio–economic status, and cultural-ethnic background contribute to diversity in communication patterns and often act as a barrier to successful interactions in learning and social settings.</td>
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<tr>
<td>SLPA 496/896</td>
<td><strong>Readings and Research in Speech-Language Pathology and Audiology</strong></td>
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<tr>
<td>Course Code</td>
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<td>Credit Hours</td>
<td>Prereqs</td>
<td>Course Delivery</td>
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<tr>
<td>SLPA 851</td>
<td>Clinical Phonology: Assessment and Management</td>
<td>1-3</td>
<td>Permission. Permission. SLPA 250 and 464 or permission</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Theoretical foundations; applied clinical phonology.</td>
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<tr>
<td>SLPA 853</td>
<td>Neurological Foundations of Speech and Language</td>
<td>3</td>
<td>SLPA 250, SLPA 464 or permission</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Basic concepts of neurology, protection and blood supply of the Central</td>
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<td></td>
<td>Nervous System (CNS), anatomical structures of the CNS, neuromotor control</td>
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<td></td>
<td>of speech, cranial nerves for speech production and neuron motor disorders.</td>
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<tr>
<td>SLPA 862</td>
<td>Language Disorders in Special Populations</td>
<td>2-3</td>
<td>SLPA 455</td>
<td>Classroom</td>
<td></td>
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<tr>
<td></td>
<td>Advanced information about language disorders, assessment, and intervention</td>
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<td></td>
<td>in various populations.</td>
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<td></td>
<td>A. Birth to Three: Communication Assessment and Intervention</td>
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<td></td>
<td>E. Preadolescents and Adolescents</td>
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<td></td>
<td>J. Severe Disabilities and Autism: Communication Assessment and Intervention</td>
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<td></td>
<td>K. Special Topics in Language Disorders</td>
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<tr>
<td>SLPA 863</td>
<td>Language Disorders in Elementary School-aged Population</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Advanced information about language disorders, assessment, and intervention</td>
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<td></td>
<td>in elementary school-aged children.</td>
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<tr>
<td>SLPA 865</td>
<td>Voice Disorders</td>
<td>2</td>
<td>SLPA 455</td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Etiology and symptoms of voice disorders, procedures used in clinical</td>
<td></td>
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<tr>
<td></td>
<td>evaluation, and methods and procedures used in therapy.</td>
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<tr>
<td>SLPA 884</td>
<td>Speech and Language Development of the Hearing Impaired</td>
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<td></td>
<td>Crosslisted as SPED 884</td>
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<td></td>
<td>Theories of speech and language development as they apply to hearing</td>
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<tr>
<td></td>
<td>impaired children. Evaluation and intervention of speech and language with</td>
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<tr>
<td></td>
<td>emphasis on maintenance of communicative skills.</td>
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</tbody>
</table>

SLPA courses are offered with a focus on theoretical and applied clinical phonology, neurological foundations, language disorders, and voice disorders, among other topics. Each course includes prerequisites, credit hours, campus information, and course delivery methods. The courses are designed to provide comprehensive knowledge and practical skills in the field of speech-language pathology.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisites</th>
<th>Course Description</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLPA 885</td>
<td>Fluency Disorders</td>
<td></td>
<td>Research related to the nature, diagnosis and clinical management of stuttering is considered. Therapy models are presented along with data bearing on the efficacy of particular approaches. Specific rehabilitation procedures.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SLPA 887</td>
<td>Language and Learning Disorders</td>
<td>Prereqs: For non-SLPA majors only</td>
<td>Review of prominent theories relating language to cognitive development and learning; student interaction on how varying styles and abnormal skills influence normal learning; how modifications can be made in materials content and classrooms to accommodate a child that has a language and learning disorder.</td>
<td>3</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SLPA 890</td>
<td>Workshop Seminar</td>
<td></td>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
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<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SLPA 892</td>
<td>Counseling and Behavior Issues in Speech Language Pathology</td>
<td></td>
<td>Basic skills in counseling and behavior management as applied to the field of communication disorders. Practical, direct application to students’ clinical work with individuals with a variety of communication disorders.</td>
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<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SLPA 893</td>
<td>Clinical Decision Making</td>
<td></td>
<td>Critical Thinking skills necessary for decision-making during the assessment and treatment of individuals with communication disorders. Understanding and applying clinical processes related to the practice of speech-language pathology.</td>
<td>1</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td>SLPA 897</td>
<td>Advanced Practicum</td>
<td>Prereqs: Completion of the undergraduate preprofessional program</td>
<td>Supervised practicum experiences provided with difficult speech, language and/or hearing problems in a variety of clinical, medical, geriatric,</td>
<td>1-3</td>
<td></td>
<td>Field</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Campus</td>
<td>Prereqs</td>
<td>Credit Hours</td>
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<tr>
<td>SLPA 898</td>
<td>Special Topics in Speech Pathology and Audiology</td>
<td></td>
<td>Permission Special topics in speech pathology and audiology.</td>
<td>1-24</td>
<td>Classroom</td>
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</tr>
<tr>
<td>SLPA 899</td>
<td>Masters Thesis</td>
<td></td>
<td>Permission Admission to masters degree program and permission of major adviser</td>
<td>1-10</td>
<td>Classroom</td>
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</tr>
<tr>
<td>SLPA 902</td>
<td>Advanced Clinical Evaluation</td>
<td></td>
<td></td>
<td>3</td>
<td>Classroom</td>
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</tr>
<tr>
<td>SLPA 904</td>
<td>Basic Instrumentation</td>
<td></td>
<td></td>
<td>3</td>
<td>Lab, Lecture</td>
<td></td>
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<tr>
<td>SLPA 906</td>
<td>Advanced Clinical Assessment II</td>
<td></td>
<td></td>
<td>3</td>
<td>Classroom</td>
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</tr>
<tr>
<td>SLPA 908</td>
<td>Physiological Acoustics</td>
<td></td>
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</tr>
</tbody>
</table>
### Auditory Signal Processing

**SLPA 910**

Principles of signal processing relevant to tests of hearing and to theories of functioning of the auditory system. Introduction of concepts in mathematics, vibration and acoustics. Time- and frequency-domain representations of signals, digital filtering, analysis of lumped-element circuits, linear and nonlinear signal analyses, modulation theory, and the effect of noise on measurements. Applications relevant to audiology including hearing aid performance and measurements, middle-ear transmission, cochlear mechanics, and auditory-nerve firing patterns. Application of these models to understanding physiological sources of conductive and sensorineural hearing loss.

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

### Psychoacoustics

**SLPA 912**

Psychoacoustic aspects of audition, including psychoacoustic instrumentation, masking level differences, psychoacoustical scaling, difference limen 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.

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

### Medical Aspects of Audiology

**SLPA 916**

Effects of, and principles of, medical management of disorders of the cochlea, retrocochlear region, and central auditory mechanism. Anatomy and physiology of the inner ear and central auditory pathways, function and physiology of the vestibule and labyrinth, and histology and biochemistry of the inner ear and ascending auditory tracts.

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

### Auditory Assessment of Infants and Children

**SLPA 918**

Prereqs: [SLPA 271](http://bulletin.unl.edu/courses/SLPA/271) or equivalent

Development of the auditory system in infants and young children. Techniques used in differential diagnosis, and screening of auditory disorders in the pediatric population.

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

### Electrophysiological Assessment of Hearing

**SLPA 920**

Instrumentation and procedures for electrophysiologic evaluation of the auditory system. Procedures and special tests include Electrocochleography, Auditory Brainstem Response, Middle Latency Response, Late Cortical Response, and others.

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

### Pharmacology for Audiology

**SLPA 922**

**Course Delivery:** Classroom  
**Credit Hours:** 3  
**Campus:**

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*Courses listed with links are accessible through the provided URL.*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>SLPA 924</td>
<td>Sensory Technology and Rehabilitation for the Hearing Impaired</td>
<td>Introduction to pharmacological chemistry, drugs, and drug interactions. Ototoxic drugs and other drugs frequently seen in patients in audiology practice settings. <a href="http://bulletin.unl.edu/courses/SLPA/924">Link</a></td>
</tr>
<tr>
<td>SLPA 926</td>
<td>Sensory Technology and Rehabilitation for the Hearing Impaired</td>
<td>Prereqs: SLPA 271 or equivalent Students will initiate and carry out directed laboratory assignments. Conventional analog hearing aids which includes: the design and operation of hearing aids, electroacoustic measurements and accompanying instrumentation, earmold and plumbing acoustics, evaluation and selection procedures (adults), orientation <a href="http://bulletin.unl.edu/courses/SLPA/926">Link</a></td>
</tr>
<tr>
<td>SLPA 928</td>
<td>Hearing Conservation and Industrial Audiology</td>
<td>Theories and basic resources for participation in industrial, government, or community hearing conservation programs. <a href="http://bulletin.unl.edu/courses/SLPA/928">Link</a></td>
</tr>
<tr>
<td>SLPA 930</td>
<td>Genetics of Hearing Loss</td>
<td>The genetic basis for hearing loss. <a href="http://bulletin.unl.edu/courses/SLPA/930">Link</a></td>
</tr>
<tr>
<td>SLPA 932</td>
<td>Vestibular Assessment I</td>
<td>Students will initiate and carry out directed laboratory assignments. The first of a two-course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Normal anatomy and physiology of the balance and oculomotor systems, contrasted with a wide range of pathological conditions. Electronystagmography (video-nystagmography two- and three-dimensional recordings) and assessment of the otolith organs. <a href="http://bulletin.unl.edu/courses/SLPA/932">Link</a></td>
</tr>
</tbody>
</table>
Vestibular Assessment II

The second of a two-course series on the normal and pathophysiology of the human balance system and tools for its investigation and treatment. Advanced techniques for patient assessment using rotational chair and posturography protocols. Techniques for full assessment in an office situation without extensive equipment. Options for treatment and management of this group of patients. Vestibular and balance rehabilitation therapy program development.

Implantable Prosthetics

Design, operation, candidacy, assessment, surgical procedures, fitting, verification, and rehabilitation procedures related to implantable prosthetic devices for individuals who are deaf and hard of hearing. Cochlear implants, bone anchored hearing aids, implantable middle ear devices, and auditory brainstem implants.

Private Practice and/or Clinic Management

Principles and procedures for starting and surviving as an independent practitioner in audiology. Practice management strategies for use in any audiological setting.

Aural Rehabilitation Across the Lifespan

Habilitation (for pre-lingual deaf and hard of hearing infants and toddlers) and rehabilitation efforts for individuals of all ages who are deaf or hard of hearing.

Seminar in Audiology

Research and clinical procedures; findings and implications in audiology and hearing science.

Language Study of Teachers of Deaf and Hard of Hearing (DHH)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>SLPA 964</td>
<td>Speech Perception and Processing</td>
<td>SLPA 250 and 456 (or permission)</td>
<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>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.</td>
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<tr>
<td>SLPA 966</td>
<td>Swallowing Disorders</td>
<td>SLPA 464 or equivalent</td>
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<td>Classroom</td>
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<tr>
<td>SLPA 967</td>
<td>Cleft Palate</td>
<td>SLPA 455 and 456 (or equivalent)</td>
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<td>Classroom</td>
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<td>Communication, dental, medical, and associated problems related to cleft palate.</td>
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<tr>
<td>SLPA 968</td>
<td>Motor Speech Disorders</td>
<td>SLPA *853</td>
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<td>Classroom</td>
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<td>Motor speech disorders resulting from neuropathology of the central and peripheral nervous systems as found in cerebral palsy, Parkinsonism, and other developmental and acquired neuromotor problems of children and adults.</td>
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<tr>
<td>SLPA 980A</td>
<td>Seminar in Speech Physiology</td>
<td>SLPA 455 and 456 (or equivalent)</td>
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<td>Classroom</td>
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<td></td>
<td>Research procedures, findings, and implications in speech and hearing science (experimental phonetics) in the areas of physiology, acoustics, and psychoacoustics.</td>
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<tr>
<td>SLPA 980B</td>
<td>Seminar in Speech Acoustics</td>
<td>SLPA 455 and 456 (or equivalent)</td>
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<td>Classroom</td>
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<tr>
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<td></td>
<td>Research procedures, findings, and implications in speech and hearing</td>
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</tbody>
</table>
Seminar in Speech Pathology

**Prereqs:**
SLPA *851, *865, 967, and/or 968

Research procedures, findings and clinical implications in the following areas:
B. Fluency Disorders (1-3 cr)
D. Voice Disorders (1-3 cr)
E. Motor Speech Disorder (1-3 cr)

Seminar in Language

**Prereqs:**
SLPA 251 or 852

Research procedures, findings and implications in language pathology and treatment in the areas of development, evaluation and habilitation.
A. Child Language Development and Disorders (1-3 cr)
B. Adolescent/Adult Language Development and Disorders (1-3 cr)
E. Augmentative/Alternative Communication (1-3 cr)

Seminar in Augmentative Communication

**Prereqs:**
SLPA 886

Advanced seminar on research literature in the augmentative communication field.

Traumatic Brain Injury

**Prereqs:**
SLPA *853

Assessment and treatment of child and adult cognitive and communication disorders resulting from traumatic brain injury.

Aphasia in Adults

**Prereqs:**
SLPA *853

Adult language disorders resulting from stroke or other acquired central nervous system insult. Includes historical/theoretical development of understanding, cerebral dominance for language, classifications, rationale for diagnostic and therapeutic management, prognostic factors, agnosias and apraxia.
Workshop Seminar

Refer to Workshop Seminars in Education under the "Education" section of this bulletin.

SLPA 990

Doctoral Capstone Thesis

Selection of the topic for this project should take place no later than the summer of the third year by consultation with the project adviser. Enrollment in SLPA 994 (http://bulletin.unl.edu/courses/SLPA/994) is required during each semester that the project is underway. Capstone experience prepared in the form of a research project paper containing a significant treatment of some aspect of audiology.

SLPA 994

Doctoral Seminar

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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.

SLPA 995

Research Problems Other Than Thesis

Credit in this course will not count towards a graduate degree in chemistry or biochemistry or biological sciences. Course taught via World Wide Web. Chemistry content for high school teachers organized according to the

SLPA 996

Doctoral Dissertation

Courses for TEAC (TEAC)

Chemistry for Secondary School Classrooms

Crosslisted as BIOS 883, CHEM 869, TEAC 869

SLPA 999

BIOC 869

Credit Hours: 1
Max credits per degree: 12
National Science Education Standards. Individual course coverage includes:
content, integration with other sciences and mathematics, graphing
calculators, probe-experiments, simulations, at-home experiments,
teaching materials, and industrial applications related to the title
description.
A. Structure and Properties of Matter: Water and Solutions (1 cr)
B. Structure and Properties of Matter: Periodicity (1 cr)
D. Structure and Properties of Matter: Bonding and Structure (1 cr)
E. Structure and Properties of Matter: Carbon Chemistry and Polymers (1 cr)
J. Structure and Properties of Matter: Gases and the Atmosphere (1 cr)
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: Acids and Bases (1 cr)
T. Chemical Reactions: Kinetics (1 cr)
U. Chemical Reactions: Oxidation, Reduction and Electrochemistry (1 cr)
W. Conservation of Energy and the Increase in Disorder: Thermodynamics (1
cr)
Y. Inquiry and the Nature of Science: Analysis and Instrumentation (1 cr)
Z. Structure of Atoms: Nuclear Chemistry (1 cr)

**Topics in Chemical Pedagogy**

Crosslisted as TEAC 874

A maximum combined total of 12 hours from TEAC *869 and/or *874 may
be counted toward a masters degree. Credit in this course will not count
towards a graduate degree in chemistry. Courses are Web–based. Topical
chemistry content for high school teachers organized according to the
National Science Education Standards.
A. Green Chemistry (2–3 cr)
D. Demonstrations for High School Chemistry (1–3 cr)
E. Experiments for High School Chemistry (1–3 cr)
J. Developing a Safety Culture (1 cr)
K. Chemistry of Life Processes: Biomolecules (1–3 cr)
L. Addressing Misconceptions (1–3 cr)
M. Mathematics Integration ([MATH 874M](http://bulletin.unl.edu/courses/MATH/874M)) (2–3 cr) May be counted
towards the MAT and MScT degrees in mathematics and statistics, not the
MA, MS, or PhD.
N. Inquiry Strategies (1–3 cr)
P. Chemistry in the Workplace (1–3 cr)
Y. Graphing Calculator Activities (2–3 cr)

**Chemical Pedagogy in the High School Laboratory**

Crosslisted as TEAC 875

Credit 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.
A. Small–scale Experiments (1–3 cr)
B. Technology Integration (3–6 cr)
E. Inquiry Experiments (1–3 cr)
K. At-home Experiments (1–3 cr)
P. Probe Experiments (1–3 cr)
T. Traditional Experiments (1–3 cr)

**Instructional Communication**

Crosslisted as TEAC 429/829

Credit Hours: 3
Prereqs:
Evaluation in Career and Technical Education

Crosslisted as TEAC 814

Two aspects of evaluation in the classroom: 1) selection and use of evaluation in assessing learning, and 2) consideration of conceptual and methodological issues in conducting evaluation to determine and account for the effectiveness of programs.

Special Topics in Human Sciences

Crosslisted as HUMS 891, NUTR 891, SLPA 891, TEAC 891, TMFD 891

Aspects of human sciences not covered elsewhere in the curriculum.

Teaching Learners to Learn

Crosslisted as EDPS 855, NUTR 855, SPED 855, TEAC 855

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. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.

Instructional Leadership: Emerging Trends and Practices

Crosslisted as TEAC 948

Changing roles for persons engaged in instructional and curricular leadership in educational institutions. Literature on staff development, assessment and evaluation, and effective schools serve as the basis for studying and applying this information to a variety of educational settings. Issues such as teacher empowerment and site-based management, along with cooperative learning provide the focus of the activities.

Field Studies in Education

Crosslisted as NUTR 991, TEAC 991

Prereqs:
Permission

Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.
Seminar in Qualitative Research  
Crosslisted as TEAC 935  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs:  
EDUC 900K or permission  
Seminar intended for doctoral-level students who have completed an initial qualitative research methodology course and who want to increase their skills in qualitative research. Data collection and analysis strategies and the application of those strategies to research problems.

Psychology of Reading  
Crosslisted as TEAC 989  
Credit Hours: 3  
Campus:  
Course Delivery: Classroom  
Prereqs:  
TEAC *811 or 841 or SPED 886  
Relationship of psychological processes of attention, perception, memory and problem solving to reading and reading comprehension. Theories and models of reading, especially of the comprehensive process, applied to all levels of reading from beginning reading through mature reading.

Nebraska Writing Project Internship  
Crosslisted as TEAC 895A  
Credit Hours: 1–3  
Course Format: Lecture  
Campus:  
Course Delivery: Classroom  
Prereqs:  
Permission  
Theory and practice of teaching writing, literature, and rhetoric in connection with local place, region, and community.

American Cultural Perspectives through Popular Music and Guitar  
Crosslisted as MUNM 450, TEAC 450/850  
Credit Hours: 1–6  
Max credits per degree: 6  
Course Format: Lecture  
Campus:  
Course Delivery: Classroom
Exploration of the historical, social and cultural context of late 19th and 20th century America through learning to play jazz and popular music on the guitar to provide an authentic, performance-based encounter in music.

**MUED 473/873**
**Approaches to Middle School General Music**
Crosslisted as TEAC 873
Crosslisted as [MUED 473](http://bulletin.unl.edu/courses/MUED/473)

**Prereqs:**
MUED 344 or permission.

For prospective new and experienced general music/middle school teachers. Characteristics of middle school students, materials, methodology, guitar and recorder techniques, and curriculum development.

**MUED 845**
**Historical and Philosophical Foundations of American Music Education**
Crosslisted as TEAC 845
Crosslisted as [MUED 845](http://bulletin.unl.edu/courses/MUED/845)

**Prereqs:**
Undergraduate degree in MUED. MUED 845 is required for a graduate degree in music education.

Historical overview of American music education practices from the Singing School tradition to today. Major philosophical influences in American music education, writings regarding aesthetic education, equity, ethical practice, gender, meaning, and profundity. The writings of Stubley, Reimer, Mark, Gary, Hylton, Richmond and others are considered.

**SPED 406/806**
**Reading and Writing Disabilities: Adolescents**
Crosslisted as TEAC 806
Crosslisted as [SPED 406](http://bulletin.unl.edu/courses/SPED/406)

**Prereqs:**
SPED 400, 412, 812, and TEAC 441 required for undergraduate students only. Parallel SPED 406A and [SPED 406A](http://bulletin.unl.edu/courses/SPED/406A).

This course is a prerequisite for SPED 406A and [SPED 406A](http://bulletin.unl.edu/courses/SPED/406A).

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.

**SPED 406A/806A**
**Reading Center Practicum II**
Crosslisted as TEAC 806A
Crosslisted as [SPED 406A](http://bulletin.unl.edu/courses/SPED/406A)

**Prereqs:**
SPED 400, 412, 812, and TEAC 441

Theory and techniques for assessing and teaching word identification, vocabulary, comprehension and writing skills in grades 7 to 12.
SPED 886  
**Assessment, Evaluation, and Instruction of**

Crosslisted as TEAC 886

This course is a prerequisite for: EDPS 899

TEAC/SPED *886 includes case study and planning for special student populations.

Analysis and use of informal and formal assessment and instructional strategies in clinic and classroom settings.

A. Special Topics in Literacy Assessment (SPED *886A) (1–3 cr) Lec.
B. Internship in Literacy Assessment and Instruction (SPED *886B) (1–3 cr)

SPED 892  
**Special Topics in Education**

Crosslisted as EDAD 892, EDPS 892, CYAF 892, EDUC 892, TEAC 892

Prereqs: EDPS 859 or parallel; EDPS 859 or equivalent

Aspects of education not covered elsewhere in the curriculum.

TEAC 402/802  
**Contemporary Children's Literature: Principles and Practices**

Prereqs: TEAC 302 and successful completion of student teaching or permission.

Contemporary literature for children, all forms and genres; development of meaningful and creative learning activities for children; professional readings and research related to children's literature.

TEAC 408/808  
**Improvement of Instruction in School Mathematics**


TEAC 411  
**Reading Processes and Practices**
### TEAC 411/811
Overview of reading processes and programs with attention to strategies for comprehension and word identification, approaches, and materials. A. Teaching Reading (3 cr) B. Special Topics in Reading (1-6 cr)

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Delivery</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### TEAC 413/813
Preparation for teaching K–12 learners whose language of nurture is not English. A. ESL: Acquisition (1–3 cr) B. ESL: Teaching and Curriculum (1–3 cr) D. ESL: Assessment (1–3 cr) E. Special Topics in Teaching ESL (1–6 cr)

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>1–15</th>
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</thead>
<tbody>
<tr>
<td>Max credits per degree</td>
<td>15</td>
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<tr>
<td>Course Delivery</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### TEAC 413M/813M
Theory and pedagogy in the teaching of English Language Learners (ELLs) in course content areas at all levels of K–12 education. Identify and design linguistically and culturally responsive instruction for English learners in the disciplines (e.g. language arts, science, mathematics, social sciences).

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Format</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>Course Delivery</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

### TEAC 413P/413X/813P
Methodologies for teaching English to speakers of other languages (TESOL) in international settings.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Course Format</td>
<td>Lecture 3</td>
</tr>
<tr>
<td>Course Delivery</td>
<td>Classroom, Web</td>
</tr>
</tbody>
</table>

### TEAC 416/816
The creation and practice of developmentally appropriate instruction in curricular areas for K to 3rd grades. Role of the teacher and/or facilitator in relationship to the primary curriculum and learning environment. A. Literacy Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel TEAC 397D. B. Social Studies and Science Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel TEAC 397D. D. Mathematics Methods for the Primary Student: K to 3rd (3 cr) Prereq: Parallel Math 200.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Max credits per semester</td>
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</tr>
<tr>
<td>Course Format</td>
<td>Lecture</td>
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<tr>
<td>Course Delivery</td>
<td>Classroom</td>
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</tbody>
</table>

### TEAC 418/818
Learning and teaching of writing with consideration given to developmental factors of children and adolescents.

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>3</th>
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</thead>
<tbody>
<tr>
<td>Course Delivery</td>
<td>Classroom</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
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<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TEAC 420/820</td>
<td><strong>Teaching Foreign Language in the Elementary School</strong></td>
</tr>
<tr>
<td></td>
<td>Theory, research and practice of most recent foreign language models and</td>
</tr>
<tr>
<td></td>
<td>strategies.</td>
</tr>
<tr>
<td>TEAC 425/825</td>
<td><strong>Coordination in Occupational Training Programs</strong></td>
</tr>
<tr>
<td></td>
<td>Crosslisted as <strong>EDAD 825</strong></td>
</tr>
<tr>
<td></td>
<td>Foundation and scope of current and projected vocational cooperative</td>
</tr>
<tr>
<td></td>
<td>education programs and general education work experience. Coordination</td>
</tr>
<tr>
<td></td>
<td>techniques, selection and placement, instructional procedures, youth</td>
</tr>
<tr>
<td></td>
<td>leadership activities, organization and administration, and evaluation of</td>
</tr>
<tr>
<td></td>
<td>cooperative occupational education.</td>
</tr>
<tr>
<td>TEAC 430/830</td>
<td><strong>Introduction to Philosophy of Education</strong></td>
</tr>
<tr>
<td></td>
<td>Open to advanced undergraduates and graduate students</td>
</tr>
<tr>
<td></td>
<td>Fundamental ideas and skills that students can use to begin to form</td>
</tr>
<tr>
<td></td>
<td>personal philosophical perspectives on education that can be justified</td>
</tr>
<tr>
<td></td>
<td>intellectually, practically, and ethically. Using case studies of realistic</td>
</tr>
<tr>
<td></td>
<td>school situations and the theoretical work of a range of writers in education,</td>
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<tr>
<td></td>
<td>students explore conceptions of teaching, learning, curriculum, and the</td>
</tr>
<tr>
<td></td>
<td>relationship between school and society.</td>
</tr>
<tr>
<td>TEAC 431/831</td>
<td><strong>Studies in the Foundations of Education</strong></td>
</tr>
<tr>
<td></td>
<td>Social and cultural analyses of curriculum, teaching, and education policy</td>
</tr>
<tr>
<td></td>
<td>from disciplinary perspectives. A. The Anthropology of Education (3 cr) B.</td>
</tr>
<tr>
<td></td>
<td>The History of Education (3 cr) E. The Sociology of Education (3 cr) J. Special</td>
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<tr>
<td></td>
<td>Topics (3 cr)</td>
</tr>
<tr>
<td>TEAC 432/832</td>
<td><strong>Higher Education in America</strong></td>
</tr>
<tr>
<td></td>
<td>History and development of America's colleges and universities and recent</td>
</tr>
<tr>
<td></td>
<td>trends and problems in higher education.</td>
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<tr>
<td>TEAC 433/833</td>
<td><strong>Comparative Education</strong></td>
</tr>
<tr>
<td></td>
<td>Foundations, trends, and problems of selected national systems of education</td>
</tr>
<tr>
<td></td>
<td>as seen in cultural perspective.</td>
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</tbody>
</table>
Comparative Education investigates origins, goals, organization, challenges, and accomplishments of various countries’ school systems with intentional comparisons to American practices. The ‘A’ format is a survey course that considers examples from all over the world. The ‘B’ format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

Comparative Education: Special Topics/Travel Study

This course could be taken more than once for additional credits assuming the student uses it for travel-study to different places. For example, a student could not visit South Korea twice with the same professor teaching the same syllabus, but could visit South Korea once (as one 3-hour course) and South Africa (as another 3-hour course).

Course investigates origins, goals, organization, challenges, and accomplishments of various countries' school systems with intentional comparisons to American practices. The 'B' format focuses on a single country (plus the U.S. for comparative purposes) and includes overseas travel-study (e.g., to South Korea, South Africa, or Chile) and visits to schools in the visited countries.

Ethics and Education

Open to advanced undergraduates and graduate students

Basic issues in ethics and education. Using theoretical material and case studies, students consider such ideas and issues as the nature of moral judgment, equality, justice, caring, and respect for persons, and discuss how educators might respond in ethically justifiable ways to difficult situations they may encounter.

Latin American Education

Prereqs: 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.

Linguistics for the Classroom School Teacher

Prereqs: Admission to the Teacher Education Program.

Analysis of various aspects of linguistic study including dialects, usage, modern grammar, semantics, lexicography, etc., and their application in the K–12 school English classroom. Investigation and clarification of language concepts and the development of teaching materials that can be used in the
### Literature for Adolescents

<table>
<thead>
<tr>
<th>TEAC 439/839</th>
<th><strong>Literature for Adolescents</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong> Admission to a Teacher Education Program.</td>
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<tr>
<td><strong>Credit Hours:</strong> 3</td>
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<tr>
<td><strong>Course Delivery:</strong> Classroom</td>
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</tbody>
</table>

Wide range of young adult literature available for use in schools. Critical and rhetorical tools for responding to a variety of literary texts and techniques for eliciting a wider range of responses to literature; consideration for readers aged 11-16.

### Content Area Reading, Grades 4–12

<table>
<thead>
<tr>
<th>TEAC 441/841</th>
<th><strong>Content Area Reading, Grades 4–12</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This course is a prerequisite for:</strong> SPED 406 or SPED 406A</td>
<td></td>
</tr>
<tr>
<td><strong>Simultaneous teaching of academic content and functional teaching of reading in the content areas; assessment of comprehension, vocabulary/concept attainment; analyses of text; improvement of content area learning through reading/writing development.</strong></td>
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</tr>
<tr>
<td><strong>Credit Hours:</strong> 3</td>
<td></td>
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<tr>
<td><strong>Course Delivery:</strong> Classroom</td>
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</tbody>
</table>

### Learning and Teaching Principles and Practices

<table>
<thead>
<tr>
<th>TEAC 451/851</th>
<th><strong>Learning and Teaching Principles and Practices</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prereqs:</strong> Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.</td>
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</tr>
<tr>
<td><strong>Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 or 406. Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline-based art education. Planning and incorporation of innovative approaches embracing the diversity of students.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Credit Hours:</strong> 3-4</td>
<td></td>
</tr>
<tr>
<td><strong>Course Delivery:</strong> Classroom</td>
<td></td>
</tr>
</tbody>
</table>

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 or 406. Investigates topics/issues impacting the teaching of art, including the theory and practice of discipline-based art education. Planning and incorporation of innovative approaches embracing the diversity of students. K. Career and Technical Education Prereq: As listed above. Procedures for writing, selecting and organizing subject matter for instruction. L. Methods of Teaching Information Technology (3 cr) Prereq: As listed above and TEAC 259 or parallel TEAC 397L or 894L. Objectives, teaching materials, and methods of presentation emphasizing the organization and management of computer science instruction. [IS]N. Secondary Language Arts (3 or 4 cr) Prereq: As listed above, including ENGL 357 or 377; and TEAC 438 or 838; and grade average of "B" (3.0) or better in subject-area. Theoretical issues in the teaching and learning of writing, language, and literature. *O. Marketing Education Prereq: As listed above and TEAC 452K. Objectives, teaching materials, selection, and organization of subject matter, and methods of instruction and evaluation in marketing. [IS]P. Secondary Mathematics Prereq: As listed above. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners. [IS]R. Secondary Modern Languages Prereq: As listed above. Investigates issues in second language learning and teaching from the perspective of proficiency: contextualized practice in reading, writing, speaking, listening, and culture. Methodological approaches, review of research, testing guidelines, accuracy, the affective and cognitive needs of students, and the incorporation of authentic materials/language. [IS]V. Secondary Science Prereq: As listed above and parallel with TEAC 397.
(http://bulletin.unl.edu/courses/TEAC/397). Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners. [ISW]. Secondary Social Science Prereq: As listed above. Theoretical issues in teaching and learning in the individual and integrated social sciences.

**TEAC**

**Learning and Teaching Principles and Practices: Career and Technical Education**

(http://bulletin.unl.edu/courses/TEAC/451K)

**451K/851K**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Procedures for writing, selecting and organizing subject matter for instruction.

**Learning and Teaching Principles and Practices: Secondary Mathematics**

(http://bulletin.unl.edu/courses/TEAC/451P)

**451P/851P**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better.

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Innovative methodology and planning, teaching, and evaluating math lessons for diverse learners.

**Learning and Teaching Principles and Practices:**

(http://bulletin.unl.edu/courses/TEAC/451V)

**451V/851V**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with a 2.5 GPA or better. Parallel with TEAC 397V (http://bulletin.unl.edu/courses/TEAC/397V).

Theoretical issues in the area of teaching and learning as applied to the individual disciplines. Investigates issues in secondary science learning and teaching with emphasis on contextualized practice in each field as well as interdisciplinary approaches to planning, research, testing, laboratory safety, and the affective and cognitive needs of diverse learners.

**Curriculum Principles and Practices**

(http://bulletin.unl.edu/courses/TEAC/452)

**452/852**

**Prereqs:**
Admission to the Teacher Education Program; completion of 80 percent of subject-area course work with 2.5 GPA or better.

Focus on practical issues in the area of teaching and learning as applied to the individual disciplines. I. Secondary Art Prereq: As listed above and TEAC 306 (http://bulletin.unl.edu/courses/TEAC/306) or 406 (http://bulletin.unl.edu/courses/TEAC/406/806). Theory and research into curriculum incorporating technology, interdisciplinary approaches, active learning, and course content designed to enhance art understanding by students of diversity. J. Business Education Prereq: As listed above and TEAC 451K (http://bulletin.unl.edu/courses/TEAC/451K) and parallel with TEAC 397J (http://bulletin.unl.edu/courses/TEAC/397J). Objectives, teaching materials, selection and organization of subject matter, and methods of
instruction and evaluation in business subjects. M. Industrial Education
Prereq: As listed above and TEAC 451K
(http://bulletin.unl.edu/courses/TEAC/451K) and parallel TEAC 397M
(http://bulletin.unl.edu/courses/TEAC/397M). Objectives, curricula,
methodology, evaluation, planning, classroom management and course
organization. [IS]N. Secondary Language Arts Prereq: As listed above and
parallel with TEAC 397 (http://bulletin.unl.edu/courses/TEAC/397).
Planning, teaching, and evaluating language arts lessons for diverse
learners. P. Secondary Mathematics Prereq: As listed above and "TEAC 451P
(http://bulletin.unl.edu/courses/TEAC/451P) with a grade of "C+" or better.
Conceptualizing the 7–12 curriculum through multimedia and active,
discovery learning. [IS]R. Secondary Modern Languages Prereq: As listed
above. Second-language acquisition and learning theory and their
relationship to curriculum planning and development. Practice in creative
language–use activities designed to build second language reading, writing,
speaking, listening, and culture skills. Development of teacher as observer,
reflector, and recorder of individual student needs. [IS]V. Secondary Science
Prereq: As listed above and TEAC 451V
(http://bulletin.unl.edu/courses/TEAC/451V) with a grade of "C+" or better.
Curricular materials, including the application of technology, as they relate to classroom instruction with
diverse populations. [IS]W. Secondary Social Science 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.

**TEAC**

### The Middle Level Professional Methods

**453/853**

**Prereqs:**
Admission to the Teacher Education Program.

Development of competence in planning, teaching, classroom management
and assessment. Covers the scope, content, and organization of curriculum
and instructional materials. I. Art (2 cr) N. Language Arts (2 cr) P.
Mathematics (2 cr) T. Reading (2 cr) V. Science (2 cr) W. Social Science (2 cr)

### Literature in Education

**454/854**

Comparative analyses of literature and the role of the reader as meaning
maker in educational settings. A. Literary Response and Analysis (3 cr) B.
Multietnic Literature for Children and Adolescents (3 cr) E. Special Topics (3

### Teaching with Technology

**480/880**

Survey and analysis of the application of technology to improve teaching.
Research and related literature on learning, teaching and curriculum, and the
critical application of technology and the development of teaching
strategies. A. Survey of Instructional Technology (1–3 cr) B. Designing
Instructional Technology K–12 (1–3 cr) E. Instructional Technology in
Mathematics (1–3 cr) J. Instructional Technology in Language Arts (1–3 cr) K.
Instructional Technology in Science (1–3 cr) L. Instructional Technology in
Social Sciences (1–3 cr) M. Technology Supported Assessment and Evaluation
(1–3 cr) N. Web Teaching (1–3 cr) P. Special Topics (1–3 cr)

### Instructional Applications of Computers–Practicum

**482/882**
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 495/895</td>
<td><strong>Independent Study</strong></td>
<td>Permission.</td>
<td>1-6</td>
<td>Concurrently</td>
<td>Classroom</td>
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<tr>
<td>TEAC 496/896</td>
<td><strong>Problems in Secondary Education</strong></td>
<td>Permission.</td>
<td>1-6</td>
<td>Concurrently</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 498/898</td>
<td><strong>Problems in Elementary Education</strong></td>
<td>Permission.</td>
<td>2-3</td>
<td>Concurrently</td>
<td>Classroom</td>
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<tr>
<td>TEAC 800</td>
<td><strong>Inquiry into Teaching and Learning</strong></td>
<td></td>
<td>3</td>
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<tr>
<td>TEAC 801</td>
<td><strong>Curriculum Inquiry</strong></td>
<td></td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td>TEAC 803</td>
<td><strong>Student Teaching Internship Seminar</strong></td>
<td>Parallel TEAC 897</td>
<td>1-2</td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>
### Advanced Teaching Strategies

**Course Code:** TEAC 805  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Crosslisted as:** ALEC 805, NUTR 806  

This course is a prerequisite for: ALEC 400  

Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs, public schools, and other settings. Students 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.

### Improvement of Instruction in Elementary School Science

**Course Code:** TEAC 812  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  
**Prereqs:** 12 hrs education including TEAC 315  

Techniques, plans, and procedures for improving instruction in elementary school science. Current practices, issues, and trends; evaluation of instructional materials.

### Intercultural Communication

**Course Code:** TEAC 813J  
**Credit Hours:** 3  
**Course Format:** Lecture  
**Course Delivery:** Classroom  

Introduction to intercultural communication and the theoretical and methodological tools needed to understand the tenets and implications of intercultural communication for application in personal and professional practices. Readings will deal with misunderstandings and the impact of cultural factors on the making of meaning, as well as discrimination and the impact of unequal power relations on communication, media impact in a globalized world, language, identity and communication, and intercultural competence.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEAC 817</td>
<td>Emerging Reading and Language</td>
<td>Elementary endorsement</td>
<td>3</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Research, theory and practice associated with literacy development in children from birth to age 8. Language and concept development, emerging reading and writing behaviors, appropriate materials and evaluation within a holistic view teaching and learning.</td>
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<tr>
<td>TEAC 822</td>
<td>Principles and Practices in Social Studies Education</td>
<td></td>
<td>1–3</td>
<td>9</td>
<td></td>
<td>Classroom</td>
</tr>
<tr>
<td></td>
<td>Current issues and trends in the curriculum and teaching of social studies.</td>
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<tr>
<td></td>
<td>A. Special Topics (1–3 cr)</td>
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<tr>
<td>TEAC 828</td>
<td>Improvement of Instruction in Industrial Education</td>
<td></td>
<td>3</td>
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<td>Classroom</td>
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<tr>
<td></td>
<td>Special contemporary curricular and teaching aspects of industrial education. Research, curriculum content, teaching strategies, and the application to the instructional setting.</td>
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<tr>
<td>TEAC 833</td>
<td>Comparative Education</td>
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<td>3</td>
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<td>Classroom</td>
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<td></td>
<td>Foundations, trends, and problems of selected national systems of education as seen in cultural perspective.</td>
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<tr>
<td>TEAC 835</td>
<td>Ethnic Minorities and American Education</td>
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<td>Classroom</td>
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<td></td>
<td>Chronological entry of European immigrant groups into an American society during the formative years of the development of the American public school system. Record of American social and educational history is replete with examples of inter- and intra-group human conflict as each immigrant group attempted to carve out its niche in a New World setting during a period of mass migration from Europe. Historical, sociological, and psychological barriers that became inherent during a dynamic period of nation building.</td>
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<tr>
<td>TEAC 840</td>
<td>Culture and Schooling</td>
<td></td>
<td>1–3</td>
<td>15</td>
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<td>Classroom</td>
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<td></td>
<td>Description and explanation of cultural values as they relate to education.</td>
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<tr>
<td></td>
<td>A. Gender (1–3 cr)</td>
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<td></td>
<td>B. Gender and Science (1–3 cr)</td>
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<td></td>
<td>D. Special Topics (1–6 cr)</td>
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<td></td>
<td>E. Rural Education (1–3 cr)</td>
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</tr>
</tbody>
</table>
Objectives and Methods of Science Teaching


A. Elementary
B. Middle School
D. Secondary and Community College
E. Special Topics (1–6 cr)

Credit Hours: 1–3
Campus: Classroom
Course Delivery: Classroom

School Media Programs

Role of the media specialist as a member of the instructional team.

A. Administration (3 cr)
B. Reference (3 cr)
D. Cataloguing (3 cr)
E. Selection (3 cr)
J. Special Topics in School Media

Credit Hours: 1–3
Campus: Classroom
Course Delivery: Classroom

Studies in Middle Level Schooling

Historical development, philosophy, and current literature of the middle school.

A. Curriculum (1–3 cr, max 3)
B. Leadership (1–3 cr, max 3)
D. Teacher-Based Advisory (1–3 cr, max 3)
E. Special Topics (1–3 cr, max 9)

Credit Hours: 1–9
Max credits per degree: 9
Campus: Classroom
Course Delivery: Classroom

Principles of Business Education


Credit Hours: 3
Campus: Classroom
Course Delivery: Classroom

Introduction to Curriculum Studies

Historical development and philosophy of high school curricula. Review of research on schooling, curriculum trends, and school organizational structures.

A. Elementary Schools
B. Middle Schools
D. Secondary Schools
E. Special Topics in Curriculum (1–6 cr)

Credit Hours: 1–3
Campus: Classroom
Course Delivery: Classroom

Studies in Assessment and Leadership for Learning

Preparation for assessing K–12 learners and leading K–12 Teacher Learning Communities.

Credit Hours: 6
Max credits per degree: 18
### Nebraska Writing Project
**Course Code:** TEAC 857B
**Credit Hours:** 1-3
**Campus:** Classroom
**Course Delivery:** Lecture

**Topics in writing instruction, explored via the National Writing Project Institute model, for K-12 and college teachers of writing in all curricular areas.**

### Utilization of Modern Technology
**Course Code:** TEAC 858
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Lecture

**Strategies of incorporating modern technology into the professional workplace; provides a thorough understanding of the operation and evaluation of integrating technology into the curriculum.**

### Instructional Message Design
**Course Code:** TEAC 859
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Lecture

**Using selected principles from behavior science (perception, memory, attitudes, concepts), students analyze and design instructional messages. Systematic process for instructional development.**

### Production and Utilization of Instructional Materials
**Course Code:** TEAC 860
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Lecture

**This course is meant to be taken after and in sequence with TEAC 859. Unique characteristics and contributions of selected instructional media and technologies to the teaching/learning and communication processes. Students produce materials for specific instructional messages.**

### Education for a Pluralistic Society: Foundation and Issues
**Course Code:** TEAC 861
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Lecture

**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. Critique of curricular materials and resources promoting a multicultural perspective.**

### Music in Early Childhood Education
**Course Code:** TEAC 881
**Credit Hours:** 3
**Campus:** Classroom
**Course Delivery:** Lecture

**Prereqs:**
- MUED 344
- 370
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.

**TEAC 887 Effecting High School Improvement**

The relationships and interactions among the high school student, a teacher, and the curriculum to the issues of school district, higher education, philanthropy, state department of education, and federal involvement in high school improvement efforts. The imperative and challenges for improving high schooling for all students.

- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**

[TEAC 800](http://bulletin.unl.edu/courses/TEAC/800) and [801](http://bulletin.unl.edu/courses/TEAC/801), or permission

**TEAC 888 Teacher as Scholarly Practitioner**

Seminar on the principles of practitioner inquiry and development of a proposal for an inquiry project.

- **Credit Hours:** 1–3
- **Max credits per degree:** 3
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**

- [TEAC 800](http://bulletin.unl.edu/courses/TEAC/800) and [801](http://bulletin.unl.edu/courses/TEAC/801), or permission

**TEAC 889 Masters Seminar**

Working with a faculty mentor on either an individual or small-group basis, the student plans, conducts, and reports a summative work project.

- **Credit Hours:** 1–3
- **Max credits per degree:** 9
- **Campus:**
- **Course Delivery:** Classroom

**Prereqs:**

Permission

**TEAC 890 Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

- **Campus:**
- **Course Delivery:** Classroom

**TEAC 893 Workshop Seminar**

Refer to Workshop Seminars in Education under the “Education” section of this bulletin.

- **Campus:**
- **Course Delivery:** Classroom

**TEAC 894 Professional Practicum Experiences**

Guided observations and/or clinical experiences in schools and/or agencies offering programs for children/youth.

- **Credit Hours:** 1–10
- **Max credits per degree:** 10
- **Course Format:** Field
- **Campus:**
A. Elementary (K–6) (1–10 cr)
B. Elementary Art (1–10 cr)
E. English as a Second Language (1–10 cr)
I. Secondary Art (1–10 cr)
J. Business Education (1–10 cr)
L. Information Technology (1–10 cr, max 10)
M. Industrial Education (1–10 cr)
N. Secondary Language Arts (1–10 cr)
O. Marketing Education (1–10 cr)
P. Secondary Mathematics (1–10 cr)
Q. Middle School (1–10 cr)
R. Secondary Modern Language (1–10 cr)
T. Reading (1–10 cr)
V. Secondary Science (1–10 cr)
W. Secondary Social Science (1–10 cr)
Y. Mainstreaming (1–10 cr)
Z. Multicultural (1–10 cr)

**Student Teaching Internship**

**Prereqs:**
Admission by application only

This course is a prerequisite for [TEAC 803](http://bulletin.unl.edu/courses/TEAC/803)

(See "Admission to Student Teaching" in the UNL Undergraduate Bulletin.)
This course will not count towards the MA or MEd degree. P/N only.
Supervised teaching experience in schools.
A. Elementary (K–6)
B. Elementary Art
E. English as a Second Language
D. Elementary Physical Education
G. Elementary Foreign Language
I. Secondary Art
J. Business Education
K. Health
M. Industrial Education
N. Secondary Language Arts
P. Secondary Mathematics
Q. Middle School
R. Secondary Modern Language
U. Secondary Physical Education
V. Secondary Science
W. Secondary Social Science
Y. Mainstreaming
Z. Multicultural

**Masters Thesis**

**Prereqs:**
Admission to masters degree program and permission of major adviser

For course description, see [ALEC 901](http://bulletin.unl.edu/courses/ALEC/901).

**Supervision and Administration in Vocational Education**

**For course description, see ALEC 901**

**Course Delivery:** Classroom
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Campus</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>TEAC 902</td>
<td>Colloquium in Educational Policy and Practice</td>
<td></td>
<td>1-3</td>
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<tr>
<td></td>
<td>Educational policy and practice and their interconnection. A. Special Topics in Educational Policy and Practice (1-3 cr)</td>
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<tr>
<td>TEAC 903</td>
<td>Current Trends in the Education of Young Children</td>
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<td>2-3</td>
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<td></td>
<td>Participation in special problems of teachers in service. Guidance, evaluations, research.</td>
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<tr>
<td>TEAC 905</td>
<td>Practicum in Postsecondary Teaching</td>
<td>ALEC *805 or permission</td>
<td>1-3</td>
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<td>Crosslisted as ALEC 905</td>
<td>Work with a faculty mentor in a discipline of choice and an instructional supervisor to prepare instruction and teach students in a postsecondary setting. Practicum students are assisted in arranging for the practicum and are provided consultation and feedback during the practicum. Lesson planning and reflective papers are part of the practicum experience.</td>
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<tr>
<td>TEAC 907</td>
<td>Seminar in Elementary School Mathematics</td>
<td>TEAC 808 or equivalent</td>
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<td></td>
<td>Theories, literature, and research procedures relative to elementary mathematics education.</td>
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<tr>
<td>TEAC 908</td>
<td>Seminar in Teacher Education</td>
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<td>1-12</td>
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<td></td>
<td>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)</td>
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<tr>
<td>TEAC 911</td>
<td>Seminar in Elementary School Science</td>
<td>12 hrs laboratory science including courses in both physical and biological fields; TEAC 403 or 804 or equivalent; teaching experience</td>
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<td>Literature which deals with research and experimentation in science for the elementary school. Aspects of the teaching and supervision of elementary</td>
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<td>Course Code</td>
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<tr>
<td>920</td>
<td>Seminar in Curriculum and Teaching of Career and Technical Education</td>
<td>3</td>
<td></td>
<td>Current research and theory within the curriculum and teaching of career and technical education.</td>
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<td>921</td>
<td>Seminar in Literacy Studies</td>
<td>1-3</td>
<td>9</td>
<td>Research in literacy and schooling.</td>
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<td>Lecture</td>
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<tr>
<td>922</td>
<td>Seminar in the Learning and Teaching of Foreign Languages</td>
<td>1-21</td>
<td>21</td>
<td>Prereqs: Undergraduate teaching major in a foreign language and teaching experience in a foreign language. Critical review and evaluation of current literature, research and theory.</td>
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<tr>
<td>923</td>
<td>Seminar in the Curriculum and Teaching of Secondary School Mathematics</td>
<td>3</td>
<td></td>
<td>Prereqs: Undergraduate teaching major and teaching experience in mathematics. Critical evaluation of current literature, yearbooks, research, and experiments in the curriculum and teaching of mathematics.</td>
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<tr>
<td>924</td>
<td>Seminar in the Curriculum and Teaching of Science</td>
<td>1-3</td>
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<td>Prereqs: Undergraduate teaching major and teaching experience in science, and TEAC 842 and EDPS 859. Exploration of current literature, yearbooks, research, and experiments in the curriculum and teaching of science.</td>
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<tr>
<td>TEAC 925</td>
<td>Seminar in the Curriculum and Teaching of Social Sciences</td>
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<td></td>
<td>Current research and literature in social sciences education.</td>
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<td></td>
<td>A. Elementary (1–3 cr)</td>
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<td></td>
<td>B. Middle School (1–3 cr)</td>
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<td>D. Secondary (1–3 cr)</td>
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<td>E. Great Plains Studies (1–3 cr)</td>
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<td>G. Special Topics in Social Sciences (1–3 cr)</td>
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<td>TEAC 929</td>
<td>Seminar in Individualized Instruction for Gifted, Talented, and Creative Students</td>
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<td>Nature of curricular and instructional programs and practices for gifted,</td>
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<td>talented, and creative students in elementary and secondary schools. Range</td>
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<td>of learner outcomes, identification of instructional principles, personalizing</td>
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<td>instruction for this group of learners.</td>
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<td>TEAC 930</td>
<td>Sociological/Anthropological Research Methods in Education</td>
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<tr>
<td></td>
<td>Empirical and theoretical research into the sociocultural problems and the</td>
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<td>lived experiences of people across educational, family and community settings.</td>
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<tr>
<td></td>
<td>A. Ethnographic Methods (1–3 cr, max 3)</td>
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<td>B. Special Topics in Qualitative and/or Quantitative Research Methods (1–3</td>
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<td>D. Discourse Analysis Across School, Home and Community Settings (1–3 cr,</td>
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<td>E. Introduction to Linguistic Analysis of Classroom Interaction (1–3 cr, max</td>
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<td>J. Hermeneutic Traditions in Education (1–3 cr, max 3)</td>
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<td>K. Quantitative Research Traditions in Education (1–3 cr, max 3)</td>
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<tr>
<td>TEAC 931</td>
<td>Research in the History of Education</td>
<td>3</td>
<td></td>
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<tr>
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<td>Historical research methods in education culminating in the research and</td>
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<td>writing of a historical article as publication report.</td>
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<td>TEAC 932</td>
<td>Contract Studies in International Education</td>
<td>1–6</td>
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<td>Classroom</td>
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<td>Prereqs: Permission</td>
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<td>Student proposed course of studies in international education: may include</td>
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<td>field experiences, individual/group research, participation in mini-seminars,</td>
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<td>etc.</td>
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<tr>
<td>TEAC 936</td>
<td>Seminar in College Teaching</td>
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</tbody>
</table>
Overview of teaching in post-secondary settings.

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**Philosophy of Science and Educational Research**

**TEAC 937**

Major themes in philosophy of science and relates these to conceptions of research on human beings and social institutions, particularly as this is applied to schooling. Students consider such fundamental issues as whether educational research is a science, the form and purpose of educational research, and what research might imply for practice.

[LINK](http://bulletin.unl.edu/courses/TEAC/937)

---

**Seminar in Curriculum Studies**

**TEAC 944**

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)

[LINK](http://bulletin.unl.edu/courses/TEAC/944)

---

**Instructional Improvement and Decision Making**

**TEAC 946**

Study and application of teaching models and techniques based on research, theory, and exemplary practice.

A. Instructional Assessment
B. Special Topics in Instruction

[LINK](http://bulletin.unl.edu/courses/TEAC/946)

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**Seminar in Education**

**TEAC 949**

Critical analysis of literature and research on teaching, learning, and schooling.

A. Special Topics in Education (1–3 cr)

[LINK](http://bulletin.unl.edu/courses/TEAC/949)

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**Contextual Research in English/Language Arts**

**TEAC 950**

Uses of qualitative research in English language arts; interpreting, planning, conducting, and reporting contextual research results.

[LINK](http://bulletin.unl.edu/courses/TEAC/950)

---

**Seminar in Reading Education**

**TEAC 951**

Scholarship in reading education, including the nature, results and implications of past and present research and non-research and

[LINK](http://bulletin.unl.edu/courses/TEAC/951)
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Course Delivery</th>
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<tbody>
<tr>
<td>TEAC 952</td>
<td>Language and Learning</td>
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<td>3</td>
<td>Lecture 3</td>
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<tr>
<td>TEAC 953</td>
<td>Seminar on Writing in the Curriculum</td>
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<tr>
<td>TEAC 957B</td>
<td>Nebraska Writing Project</td>
<td>Crosslisted as ENGL 957B</td>
<td>6</td>
<td>Lecture 6</td>
<td>Classroom</td>
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<tr>
<td>TEAC 959</td>
<td>Portfolio in Instructional Technology Competencies</td>
<td></td>
<td>1–12</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 960</td>
<td>Topical Seminar in Instructional Technology</td>
<td></td>
<td>1–3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>TEAC 961</td>
<td>Current Approaches to Elementary Music Education</td>
<td>Crosslisted as MUED 961</td>
<td>3</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
</tbody>
</table>

**Contributions of Historically Significant Scholars in the Field of Reading**

A. Research in Reading Education (3 cr)

B. Special Topics (1–6 cr, 6 max)

Role that language plays in empowering and constraining children as they attempt to make sense of their world. Consideration of application of language scholarship for general instruction.

Writing development, writing instruction, and the use of writing in the content areas. Consideration of application of scholarship in writing for general learning and instruction.

Summer institute for K–12 and college teachers of writing in all curricular areas, taught on the National Writing Project model.

No more than six credits of TEAC 959 (http://bulletin.unl.edu/courses/TEAC/959) may be counted towards a masters degree. Portfolio components represent a significant contribution to the solution of an instructional problem and reflect broadly the major competencies of instructional technology: problem definition, learner analysis, media selection and message design, production, and evaluation.

Critical analysis of research in a delimited problem area within instructional technology (e.g., ITV, CAI, videodisc, simulations, programmed instruction). Empirically testable research questions related to the topic.

Prereqs: Teaching experience
Implementation of current programs, materials, and techniques for the improvement of music instruction in the elementary school.

**Workshop Seminar**

<table>
<thead>
<tr>
<th>TEAC 990</th>
<th><strong>Workshop Seminar</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/990">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–12</td>
<td>Max credits per degree: 12</td>
<td>Campus:</td>
</tr>
<tr>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
<td></td>
<td></td>
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</tbody>
</table>

**Workshop Seminar**

<table>
<thead>
<tr>
<th>TEAC 993</th>
<th><strong>Workshop Seminar</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/993">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–12</td>
<td>Max credits per degree: 12</td>
<td>Campus:</td>
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<tr>
<td>Refer to Workshop Seminars in Education under the “Education” section of this bulletin.</td>
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</table>

**Doctoral Seminar**

<table>
<thead>
<tr>
<th>TEAC 995</th>
<th><strong>Doctoral Seminar</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/995">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 3</td>
<td>Max credits per degree: 18</td>
<td>Campus:</td>
</tr>
<tr>
<td>Prereqs: Permission</td>
<td>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 individualized or small group basis, students develop, execute and report one or more projects addressing the interaction between research and practice.</td>
<td></td>
</tr>
</tbody>
</table>

**Individual Research Projects**

<table>
<thead>
<tr>
<th>TEAC 996</th>
<th><strong>Individual Research Projects</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/996">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–10</td>
<td>Max credits per degree: 10</td>
<td>Campus:</td>
</tr>
<tr>
<td>Prereqs: Permission</td>
<td>Individual research under faculty supervision.</td>
<td></td>
</tr>
</tbody>
</table>

**Minor Research**

<table>
<thead>
<tr>
<th>TEAC 997</th>
<th><strong>Minor Research</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/997">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–6</td>
<td>Campus:</td>
<td>Course Delivery: Classroom</td>
</tr>
<tr>
<td>Individual research on approved topics in Elementary Education.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Doctoral Dissertation**

<table>
<thead>
<tr>
<th>TEAC 999</th>
<th><strong>Doctoral Dissertation</strong></th>
<th><a href="http://bulletin.unl.edu/courses/TEAC/999">LINK</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Hours: 1–24</td>
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</tr>
</tbody>
</table>
In addition to masters and doctoral degrees, the department of education studies offers graduate degree programs through its seven CEHS departments: Child, Youth and Family Studies; Educational Administration; Educational Psychology; Nutrition and Health Sciences; Special Education and Communication Disorders; Teaching, Learning and Teacher Education; and Textiles, Clothing and Design. In addition to graduate degree programs, CEHS offers graduate, non-degree programs leading to certification in areas such as teaching, curriculum leadership and school administration.

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 focused interest but which are not included in other professional education courses. 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. CEHS offers three masters degrees in nine majors and the education specialist degree in three majors. The EdD is offered only in Educational Administration; Special Education and Communication Disorders; and Teaching, Learning, and Teacher Education. The following requirements for the EdD are College requirements. Departmental requirements may exceed these. For information on masters and specialist degree programs, consult the relevant department’s listing in this bulletin.

CEHS offers two doctoral degrees, both the EdD and the PhD, under three majors: educational studies, human sciences, and psychological studies in education. In addition, CEHS participates in two additional doctoral majors.

The Educational Studies major includes six specializations. Instructional Technology; Internet–based Education; and Teaching, Curriculum and Learning are hosted by the Department of Teaching, Learning and Teacher Education. Special Education is sponsored by the Department of Special Education and Communication Disorders. The Department of Educational Administration hosts Educational Leadership and Higher Education and co–hosts, with Architecture, Architecture Education. The Human Sciences major includes five specializations. Communication Disorders is housed in the Department of Special Education and Communication Disorders; Child, Youth and Family Studies is sponsored by the Department of Child, Youth and Family Studies; Nutrition and Health Sciences is hosted by the Department of Nutrition and Health Sciences; Textiles, Clothing and Design is housed in the Department of Textiles, Clothing and Design; and Leadership Studies is housed in the Department of Agricultural Leadership, Education and Communication.

The Psychological Studies in Education major includes four specializations, all hosted by the Department of Educational Psychology: Cognition, Learning and Development; Counseling Psychology; Qualitative and Quantitative Methodologies in Education; and School Psychology. In addition, the Department of Educational Administration— in cooperation with UNO’s Department of Educational Administration—offers a major in Educational Administration, and the Department of Nutrition and Health Sciences participates in the Interdepartmental Nutrition major. Specific program and application information is available under each department’s listing in this bulletin. Up–to–date information is also available on–line at cehs.unl.edu. Inquiries may be directed to cehsgrad@unl.edu or to (402) 472–5333.

Educational Administration

For a brief description of the program, application requirements and contact information, view the graduate program summary.

Interim Department Chair: Brent D. Cejda, Ph.D.
Graduate Committee Chair: Jody Isernhagen, Ph.D.

The Department of Educational Administration offers programs leading to masters (MEd, MA) and doctoral degrees (PhD, EdD) as well as certificates of specialization.

Masters degree programs
The Masters Degree program meets the academic requirements for either a Master of Arts (MA) or a Master of Education (MEd) degree with a major in Educational Administration. The MA degree requires the completion of a thesis. Students enrolled in the Masters Degree program are interested in both K–12 and higher education administration.

The department offers two approved doctoral areas of emphasis: 1) Educational Leadership and Higher Education (ELHE), which leads to either the PhD or EdD degree in education studies, and 2) a jointly operated program with UNO (EDJT) which leads to the EdD in educational administration. All students pursuing a doctorate degree are required to complete a dissertation and students pursuing a PhD are required to complete an on–campus residency.

Certificates of Specialization
In addition to masters and doctoral degrees, the department offers four certificates of specialization.
Individuals who already have a Masters Degree in education can pursue a certificate endorsement program that will satisfy the requirements for a Nebraska Administrative and Supervisory Certificate, a requirement for employment as an administrator in a K–12 school system.

The Certificate of Specialization in Educational Administration is designed to meet the requirements of a Nebraska Professional and Administrative Supervisory Certificate with an endorsement of superintendent.

The School Improvement Certificate Program that focuses on the K–12 school improvement process. The School Improvement Program benefits you—the teacher, by preparing you as a school leader while gaining the specialist credential, allowing you to increase your skills and build career opportunities.

The Community College Leadership Certificate is designed for those already employed in community colleges who aspire to administrative appointments as well as those who are in leadership positions and need or desire additional preparation.

Course Delivery

The Department of Educational Administration has been a campus leader in reaching out to students who need or wish to study from off campus and offers most of the course work for the MEd and EdD online. The primary emphasis in all courses is on the principles, processes, and practical skills necessary for the leadership, organization, and administration of educational institutions.

Further information about graduate degree programs and about certification programs may be located on the department’s Website, located at cehs.unl.edu/edad.

Educational Psychology

For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology)

Department Chair: R. J. De Ayala, Ph.D.
Graduate Committee Chair: Edward Daly, Ph.D.
Website: edpsych.unl.edu

The Department of Educational Psychology consists of four program areas: counseling psychology; cognition, learning and development (CLD); quantitative, qualitative, and psychometric methods (QQPM); and school psychology.

Masters Degree

The master of arts (MA) degree may be obtained with a specialization in cognition, learning and development (CLD program), or with a concentration in counseling psychology, or research and psychometric methods (QQPM program). Individuals in the CLD program may select the general CLD specialization or an option in health behavior or in college learning center. 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, measurement, counseling psychology, and school psychology through the field of educational specialization called psychological studies in education. For further information, see and contact the chair of the Department’s Graduate Committee.

Counseling and School Psychology Clinic

The Counseling and School Psychology Clinic in the Department of Educational Psychology provides two functions: (1) providing training for qualified graduate students and (2) providing services to individuals, public schools, families, and community agencies. Clinic therapists assist adults, families, children and youth experiencing academic, psychological, and behavioral concerns. Additional to therapeutic services, clinic therapists provide psychological testing and consultation for school related concerns. Therapeutic services are also provided for educational and vocational concerns. Service is provided by appointment.

Buros Center for Testing

The Buros Center for Testing comprises two separate institutes dedicated to improving the quality of contemporary assessment practices. Founded by Oscar K. Buros in 1937, the Buros Institute of Mental Measurements (BIMM) publishes critical evaluations of commercially available tests. In addition to its international reputation for providing test reviews, BIMM maintains the largest collection of tests and testing materials in the world. The Buros Institute for Assessment Consultation and Outreach (BIACO) was established in 1994 to expand the range of available assessment services to proprietary testing programs that include credentialing, state educational assessment, employment testing, and assessment literacy. Together, the two Buros Institutes advance the goals of the Department of Educational Psychology and the College of Education and Human Sciences by providing consultation and instructional services to graduate programs, by training and supporting graduate students in current assessment practices, and by serving assessment outreach needs both within and outside the state of Nebraska.

Special Education and Communication Disorders

For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders)

Department Chair: Sherri Jones, Ph.D.
Graduate Committee Chair: Karen Hux, Ph.D.

The Department of Special Education and Communication Disorders offers graduate programs leading to the master of science degree in speech-language pathology and the master of arts and master of education degrees in special education. The department administers a PhD in human sciences with a specialization in communication disorders and the PhD and EdD in educational studies with a specialization in special education. The department also offers the professional doctor of audiology (AuD) degree in audiology and a combined AuD/PhD Program. For more information on doctoral programs in education call (402) 472-2141 or visit our website at www.unl.edu/barkley.

The masters degree program in speech–language pathology and the AuD program in audiology are accredited by the Council on Academic Accreditation in Audiology/Speech–Language Pathology.

For more information regarding graduate and professional programs offered by the Department of Special Education and Communication Disorders, please call (402) 472-2141 or visit our website at www.unl.edu/barkley.

Masters Degree Programs. Students seeking admission into a masters program should: 1) apply on-line to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental application materials from the web site at www.unl.edu/barkley or by emailing the Graduate Secretary at special@unl.edu. Three letters of recommendation, preferably from former college instructors, should be submitted to the departmental Graduate Governance Committee Chair along with the departmental application. Each applicant should also arrange to have a current academic transcript and scores for the General Test of the Graduate Record Examination submitted to the Graduate Studies Office along with the departmental application. Each applicant should also arrange to have a current academic transcript and scores for the General Test of the Graduate Record Examination submitted to the Graduate Studies Office at the University of Nebraska–Lincoln. Early submission of the scores is important because the application file cannot be given consideration until the file is complete.

For a master of science degree in speech–language pathology, completion of an appropriate undergraduate or pre–professional program is required for full graduate standing. Students with strong potential but without an academic background in the major may be admitted on a provisional basis until deficiencies have been met. Completion of the masters degree requires a minimum of 48 hours of approved graduate work, including appropriate clinical practicum experiences for those seeking certification/licensure. The application deadline for fall admission into the M.S. program in Speech–Language Pathology is January 15.

Teacher Certification (licensure) and the Masters Degree. Masters degrees may be obtained with teaching certificate endorsements for special education and speech–language pathology. Candidates must qualify for a Nebraska Teaching Certificate (see the Undergraduate Bulletin) for employment in the public schools.
Distance Education. The Department has several special education masters degrees, an educational specialist degree, and/or teaching endorsement programs that are available in part or fully through distance education. These include Early Childhood Special Education, Deaf and Hard of Hearing, Mild/Moderate Disabilities, Visual Impairments, Autism, Severe Disabilities, and Supervisor of Special Education (joint with Educational Administration) programs. Distance courses are delivered via the Internet with Blackboard and/or Breeze software. Some distance courses may also require some weekend meetings, telephone or Breeze connections to the on-campus course section, and may have scheduled participation requirements. Field experience and practicum courses can be arranged in or near local communities but may require special fees. Where required courses are not currently available via distance delivery, an equivalent course (either on-campus or at a distance) from another institution can be substituted with the approval of the advisor or may be taken on the UNL campus during the summer. See the department website for information about computer requirements for distance on-line courses and distance course availability.

Educational Specialist (EdS) Degree. This program in special education provides opportunities for practitioners in the field to upgrade their skills and/or develop leadership skills as a special educator in a particular area of specialization. Two years successful professional experience as a special educator is a minimum requirement for admission. A minimum of 66 credit hours past the bachelor's degree is required, with at least 24 credits to be taken after admission to UNL's EdS program. These include at least 40 hours of core content courses, 6 credits of electives or practica, and 3 credits of research. Relevant coursework completed as part of a prior masters degree can be used toward this degree. The program also requires a written comprehensive examination. Degree requirements can be used for additional teaching endorsements. Other relevant information and the application form can be found online at: www.unl.edu/barkley/sped/eds.shtml.

Doctor of Audiology (AuD) Degree. The Department of Special Education and Communication Disorders offers a professional audiology degree, the Doctor of Audiology (AuD) degree. The AuD program is a four-year course of study post B.A. or B.S. designed to provide students with academic and clinical practicum experiences that will meet or exceed the requirements of the American Speech-Language-Hearing Association (ASHA) for the Certificate of Clinical Competence in Audiology (CCC–AUD) as well as licensure requirements in most states.

Students seeking admission to the AuD program should download the application from www.unl.edu/barkley. Three letters of recommendation, preferably from former college instructors, should be submitted to the AuD program coordinator along with the departmental application. Students do not apply to the Office of Graduate Studies and submission of the Graduate Record Examination is not required for admission. Students should contact the Graduate Support Staff at special@unl.edu for further application instructions.

PhD/EdD 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. Students seeking admission into one of these programs should: 1) apply online to the Office of Graduate Studies at www.unl.edu/gradstudies and 2) obtain the departmental applications materials from the website at www.unl.edu/barkley or by emailing the Graduate Support Staff at special@unl.edu. Prospective students 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 departmental 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 an applicant meets the qualifications for entrance into the program and whether a student’s interests are in accord with the type of education and direction the department faculty can provide. Final review of an application is made by the appropriate doctoral field graduate committee in special education or communications disorders.

Teaching, Learning and Teacher Education

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).

Interim Department Chair: L. James Walter, Ph.D.

Graduate Committee Chair: Kathleen Wilson, Ph.D.

The Department of Teaching, Learning and Teacher Education (TLTE) provides masters, specialist and doctoral degree courses and programs for teachers, administrators, and other educational leaders and practitioners with a focus on scholarship and practice in curriculum and instruction in schools and non–school educational settings. Graduate endorsements are also offered in Reading Specialist K–12 and ESL.

Masters Degrees.

The aim of the TLTE masters programs is to help educators build on their own experience, achieve a broad and deep understanding of educational practice, develop a professional identity, and engage in informed conversations about important teaching and learning issues towards making wise judgments regarding the many complex issues educators face. All candidates must complete a program which conforms to the requirements listed on the TLTE masters program [web page](http://cehs.unl.edu/tlte/graduate/masters). There are two masters degrees available in TLTE: the MA and MEd. Both degree programs offer a good deal of flexibility to enable the student—in concert with a faculty advisor—to develop a course of study that meets the student’s needs and interests.

If you are interested in earning teacher certification at the elementary level in combination with a master degree, a 14 month full time program (MAet) is available. If instead you see yourself teaching at the middle school or high school level with a specialization in science or mathematics, read about our newest 14 month full time programs (MAmt and MAtl) where you can qualify for teacher certification and earn a Master of Arts degree. A limited number of fellowships are available with the MAst and MAmt programs.

Educational Specialist (EdS) Degree.

This program in curriculum and instruction provides an opportunity for practitioners in the field to upgrade their professional skills. Two years of successful professional experiences is a minimum requirement for admission. Sixty–six hours beyond the bachelor’s degree, research competence, practicum experiences, and a written comprehensive examination are basic requirements for the program. It is recommended that you contact the department Graduate Chair before applying.

Doctoral Programs.

The EdD and PhD degrees are available under the major heading Educational Studies refer to the web page [doctoral programs in education](http://cehs.unl.edu/tlte/graduate/doctoral.shtml). The EdD is recommended for those whose primary interest is in the application of theory and knowledge to improve educational practice. The PhD is designed for students seeking to conduct research in order to generate new knowledge or reform educational theory. The Department of Teaching, Learning and Teacher Education administers three doctoral–level specializations, available for both the EdD and PhD in Educational Studies. Teaching, Curriculum and Learning focuses on teaching and learning processes; Instructional Technology focuses on using technology as a learning tool in various educational settings; and Internet–based Education focuses on using the Internet as a platform for teaching and learning. The most current information on these specializations is kept up–to–date on the web page for [TLTE doctoral programs](http://cehs.unl.edu/tlte/graduate/doctoral.shtml). For additional information, see or of this bulletin. The Graduate Record Examination (GRE) is required for admission to the doctoral programs and foreign students must also submit a TOEFL score.

Faculty

Educational Administration

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalAdministration).

Educational Psychology

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/EducationalPsychology).

Special Education and Communication Disorders
## Theatre Arts

### Courses for THEA (THEA)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per semester</th>
<th>Max credits per degree</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 398/898</td>
<td>Special Topics in Theatre</td>
<td>Permission.</td>
<td>1-24</td>
<td>24</td>
<td>24</td>
<td>Classroom</td>
</tr>
<tr>
<td>THEA 402/802</td>
<td>Advanced Stage Movement</td>
<td>THEA 224, 256, or equivalent and permission.</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>Classroom</td>
</tr>
<tr>
<td>THEA 403/803</td>
<td>Advanced Stage Voice</td>
<td>THEA 224, 254, or equivalent and permission.</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>Classroom</td>
</tr>
<tr>
<td>THEA 406/806</td>
<td>Costume Crafts</td>
<td></td>
<td>3</td>
<td></td>
<td></td>
<td>Studio 6</td>
</tr>
<tr>
<td>THEA 407/807</td>
<td>Auditioning</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td>Classroom</td>
</tr>
</tbody>
</table>

Actor movement training intended for the graduate and advanced undergraduate. Focus on the process of building a physical characterization, tumbling, kinesthetic awareness, movement improvisation, period styles, court dancing, mask, Commedia dell'Arte, and stage combat.

Actor voice training intended for the graduate and advanced undergraduate. Linklater-based training supplemented by Lessac principles, phonetics, verse scansion, and dialects.

The creation of various costume accessories, ornaments and hand properties categorized by the profession as costume crafts.

For faculty list, research interests and department contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/SpecialEdAndCommDisorders). View the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/TeacherEducation).
Advanced Projects in Acting and/or Directing

**Prereqs:**
- Acting: THEA 112G or 114, 204, 401, 801 or equivalent and permission; 
- Directing: THEA 203, 401, 803, 410, 810, 412, 812, 418, 818, and permission.

Selected performance in acting and directing in University Theatre, and Experimental Theatre.

Theatre 409/809

**Prereqs:**
- THEA 410, 412, 810, 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.

Stage Lighting I

**Prereqs:**
- 12 hrs theatre arts, including THEA 201 and 202.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stage Lighting II</strong>&lt;br&gt;411/811</td>
<td>Credit Hours: 3&lt;br&gt;Course Format: Lecture 2, Lab 3&lt;br&gt;Course Delivery: Classroom&lt;br&gt;Prereqs: <a href="http://bulletin.unl.edu/courses/THEA/410">THEA 410</a> or equivalent.&lt;br&gt;This course is a prerequisite for: <a href="http://bulletin.unl.edu/courses/THEA/414">THEA 414</a>&lt;br&gt;Intensive work in designing lighting for theatre, dance, musicals, and opera.</td>
</tr>
<tr>
<td><strong>Scene Design II</strong>&lt;br&gt;413/813</td>
<td>Credit Hours: 3&lt;br&gt;Course Format: Lecture 2, Lab 3&lt;br&gt;Course Delivery: Classroom&lt;br&gt;Prereqs: 12 hrs theatre arts, including <a href="http://bulletin.unl.edu/courses/THEA/201">THEA 201</a> and <a href="http://bulletin.unl.edu/courses/THEA/202">THEA 202</a>, and <a href="http://bulletin.unl.edu/courses/THEA/412">THEA 412</a>.&lt;br&gt;This course is a prerequisite for: <a href="http://bulletin.unl.edu/courses/THEA/415">THEA 415</a>&lt;br&gt;Theory and practice of scene design. Rendering techniques, period research, and multi-set productions.</td>
</tr>
<tr>
<td><strong>Stage Lighting III</strong>&lt;br&gt;414/814</td>
<td>Credit Hours: 3&lt;br&gt;Course Format: Lecture, Lab&lt;br&gt;Course Delivery: Classroom&lt;br&gt;Prereqs: <a href="http://bulletin.unl.edu/courses/THEA/411">THEA 411</a> or equivalent.&lt;br&gt;Advanced lighting design through the rendering of light story boards.</td>
</tr>
<tr>
<td><strong>Production Design for Film and Television</strong>&lt;br&gt;415/815</td>
<td>Credit Hours: 3&lt;br&gt;Course Format: Lecture 3&lt;br&gt;Course Delivery: Classroom&lt;br&gt;Prereqs: <a href="http://bulletin.unl.edu/courses/THEA/413">THEA 413</a> or <a href="http://bulletin.unl.edu/courses/THEA/489">THEA 489</a>.&lt;br&gt;Theory and practice of production design for the camera. Research, design techniques, tools, and aspects specific to film and television.</td>
</tr>
<tr>
<td><strong>Computer Aided Design (CAD) for Theatre</strong>&lt;br&gt;416/816</td>
<td>Credit Hours: 3&lt;br&gt;Course Delivery: Classroom&lt;br&gt;Prereqs: 12 hrs theatre arts, including <a href="http://bulletin.unl.edu/courses/THEA/201">THEA 201</a>, and permission.&lt;br&gt;Computer Aided Design (CAD) as it applies to scenic, costume, and lighting design. Emphasis on two-dimensional drafting, three-dimensional modeling, and computer graphics.</td>
</tr>
</tbody>
</table>
### THEA 418/818
**Credit Hours:** 3
**Course Format:** Lecture 2, Lab 3
**Course Delivery:** Classroom

**Prereqs:**
12 hrs theatre arts, including [THEA 201](http://bulletin.unl.edu/courses/THEA/201) and [202](http://bulletin.unl.edu/courses/THEA/202).

This course is a prerequisite for [THEA 419](http://bulletin.unl.edu/courses/THEA/419).

Theory and practice of stage costume designs. 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.

### THEA 419/819
**Credit Hours:** 3
**Course Format:** Lecture 2, Lab 3
**Course Delivery:** Classroom

**Prereqs:**
[THEA 418](http://bulletin.unl.edu/courses/THEA/418)/[818](http://bulletin.unl.edu/courses/THEA/818).

In-depth costume design in the areas of design conception and techniques of design communication. Application of principles learned in Costume Design I.

### THEA 420/820
**Credit Hours:** 3
**Course Format:** Lecture 2, Lab 3
**Course Delivery:** Classroom

**Prereqs:**
THEA [201](http://bulletin.unl.edu/courses/THEA/201), [410](http://bulletin.unl.edu/courses/THEA/410)/[810](http://bulletin.unl.edu/courses/THEA/810), [412](http://bulletin.unl.edu/courses/THEA/412)/[812](http://bulletin.unl.edu/courses/THEA/812), or equivalent and permission.

In-depth theoretical and practical application of organization, materials, and techniques necessary for the planning, execution, maintenance, and use of stage scenery, and the proper and safe use and maintenance of the stage and shop facilities.

### THEA 421/821
**Credit Hours:** 3
**Course Delivery:** Classroom

Advanced techniques and practice in technical drafting as applied to theatrical scenic construction.

### THEA 422/822
**Credit Hours:** 3
**Course Delivery:** Classroom

Practice in planning of a theatre facility, including program writing, working with consultants and architects, equipment specification, space allocation, codes and regulations.

### THEA 427/827
**Credit Hours:** 3
**Course Delivery:** Classroom

In-depth theoretical and practical application of organization, materials, and techniques necessary for the planning, execution, maintenance, and use of stage scenery, and the proper and safe use and maintenance of the stage and shop facilities.

Advanced techniques and practice in technical drafting as applied to theatrical scenic construction.

Practice in planning of a theatre facility, including program writing, working with consultants and architects, equipment specification, space allocation, codes and regulations.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Prereqs</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 428/828</td>
<td>The American Theatre II</td>
<td>3</td>
<td>12 hrs theatre arts, including THEA 112G, 335, and 336 or equivalent.</td>
</tr>
<tr>
<td>THEA 431/831</td>
<td>Advanced Playwriting</td>
<td>3</td>
<td>12 hrs theatre arts, including THEA 112G or 115, 131 or equivalent, and permission.</td>
</tr>
<tr>
<td>THEA 432/832</td>
<td>Scene Painting</td>
<td>3</td>
<td>12 hrs theatre arts including THEA 201 or permission.</td>
</tr>
<tr>
<td>THEA 438/838</td>
<td>Film: Directing</td>
<td>3</td>
<td>THEA 489.</td>
</tr>
<tr>
<td>THEA 440/840</td>
<td>Continental Drama</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
### Sound Design I

**THEA 450/850**

**Prereqs:**
THEA 201 or permission

This course is a prerequisite for: THEA 451

Theory and practice of sound design for live theatre. Extensive work with recording, mixing, effects, and playback devices.

### Sound Design II

**THEA 451/851**

**Prereqs:**
THEA 450 or permission

Advanced work with recording, editing, and playback devices. Training in digital editing using the ProTools LE platform. Planning and execution of full-length, realized, sound designs for departmental mainstage productions.

### Sound for Film

**THEA 454/854**

**Prereqs:**
THEA 489 or 451

Advanced application of studio and field recording techniques and Digital Audio Workstation (DAW) editing.

### Musical Theatre Techniques

**THEA 455/855**

Crosslisted as MUOP 455/855

Advanced training in the integration of acting, movement, and singing skills for the performance of musical theatre. Training in artistic decision making that generates a character within a musical. Focus on a discipline of preparation and the resulting practice of performance; practical experiences with solos, duets, and ensembles from American Musical Theatre Repertoire.

### Stage Rigging I

**THEA 457/857**

**Prereqs:**
THEA 201 or permission

Theory and practice of rigging for live theatre. Extensive work with fly systems, rope systems, and standard rigging hardware.
Technological Innovations in Film Production

**Prereqs:**
Senior standing and 3.0 GPA.

History of technological innovation in film. Sound, film format, color systems, lenses and lighting that have enhanced the finished product in the film industry.

---

Screenwriting: The Short Script

**Prereqs:**
BRDC 370 or ENGL 252 or 254 or 259 or THEA 331 or permission.

This course is a prerequisite for: THEA 486, THEA 489.

Character development, story structure, and problem solving. Writing for the short film.

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Film Production I

**Prereqs:**
BRDC 269, THEA 114, 201, 202, BRDC 474 or 874, ENGL 252 or 254 or 259 or THEA 131 or permission.

Students must have access to a camcorder.

“Film grammar” and non-sync film production.

---

Advanced Projects in Film Production and/or New Media

**Prereqs:**
THEA 489 or 889.

Projects in screenwriting, film production, digital animation, and new media.

---

Post Production for Film and New Media

**Prereqs:**
THEA 489.


**THEA 486/886  Film: Producing**

**Prereqs:**
- THEA 481
- THEA 489
- THEA 489/889

Advanced studio software and techniques.

**Prereqs:**
- THEA 481
- THEA 489
- THEA 489/889

The budgeting, organizational, managerial and supervisory skills required by a creative film producer – from financing to distribution.

**THEA 487/887  Digital Motion Graphics**

**Prereqs:**
- THEA 489
- or by permission.

Creating moving text and images using compositing and animation software. Also an introduction to basic 3D animation.

**THEA 489/889  Film Production II**

**Prereqs:**
- THEA 481
- THEA 482
- or by permission.

This course is a prerequisite for: MUSC 435, THEA 438, THEA 454, THEA 484, THEA 485, THEA 486, THEA 487, THEA 488, THEA 489.

All projects are produced in film or digital video.


**THEA 491/891  Advanced Projects in Directing, Theatre Management and/or Stage Management**

**Prereqs:**
- THEA 202
- THEA 300
- or 301

Selected projects in directing, theatre management, and/or stage management in University Theatre or Theatrix.

**THEA 494  Internship in Theatre or Film**

**Prereqs:**
- THEA 202
- or 300
- or 301

Internship in Theatre or Film
Structured internships with professional organizations or individuals outside the University of Nebraska–Lincoln campus or with Nebraska Educational Telecommunications.

**Advanced Acting**

**THEA 801**

**Prereqs:**
THEA 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.

**Evolution of Dramatic Theory I**

**THEA 804**

**Prereqs:**
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.

**Evolution of Dramatic Theory II**

**THEA 805**

**Prereqs:**
12 hrs theatre arts and dramatic literature

Dramatic theory continued from Lessing to the present.

**Scene Design I**

**THEA 812**

**Prereqs:**
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.

**Rendering for the Theatre**

**THEA 823**

Advanced practices in scenic rendering for theatre and film.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prereqs</th>
<th>Course Delivery</th>
<th>Credit Hours</th>
<th>Course Format</th>
<th>Max credits per degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>THEA 826</td>
<td>Lighting for Film</td>
<td>Prereqs: THEA 811 or 889, or permission</td>
<td>Classroom</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Advanced application of film lighting concepts and techniques.</td>
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<tr>
<td>THEA 833</td>
<td>Advanced Costume Construction</td>
<td>Prereqs: THEA 811 or 889, or permission</td>
<td>Classroom</td>
<td>3</td>
<td>Studio</td>
<td>6</td>
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<tr>
<td></td>
<td></td>
<td>Advanced costume construction and techniques.</td>
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<tr>
<td>THEA 835</td>
<td>Period Patterning</td>
<td>Prereqs: Permission</td>
<td>Classroom</td>
<td>3</td>
<td>Studio</td>
<td>6</td>
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<td></td>
<td></td>
<td>Systematic approach for analyzing a play based on the four works of Stanislavski.</td>
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<tr>
<td>THEA 836</td>
<td>Costume Rendering</td>
<td>Prereqs: Permission</td>
<td>Classroom</td>
<td>3</td>
<td>Studio</td>
<td>6</td>
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<tr>
<td></td>
<td></td>
<td>Practice in using various media and plate design; rendering techniques and costume plate experimentation to achieve variety in the portfolio, reflecting the mood and texture of each theatrical work.</td>
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<tr>
<td>THEA 837</td>
<td>Costume Design III</td>
<td>Prereqs: Permission</td>
<td>Classroom</td>
<td>3</td>
<td>Studio</td>
<td>6</td>
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<tr>
<td></td>
<td></td>
<td>Advanced costume design techniques in specific types of performance arts.</td>
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<tr>
<td>THEA 860</td>
<td>Script Analysis</td>
<td>Permission</td>
<td>Classroom</td>
<td>3</td>
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<tr>
<td></td>
<td></td>
<td>Systematic approach for analyzing a play based on the four works of Stanislavski.</td>
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<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Prereqs</td>
<td>Credit Hours</td>
<td>Campus</td>
<td>Course Delivery</td>
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<tr>
<td>863</td>
<td></td>
<td>Undergraduate major in theatre</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Projects, planning, and execution of various forms and styles involving the communication process between director and designer.</td>
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<tr>
<td>864</td>
<td>Detailed Scene Work I</td>
<td>12 hrs theatre arts</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<td></td>
<td>Practical work on scenes with actors and directors from selected realistic plays.</td>
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<tr>
<td>865</td>
<td>Detailed Scene Work II</td>
<td>12 hrs theatre arts</td>
<td>3</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Further practical work on scenes with actors and directors, involving classical plays, verse drama, expressionistic pieces, or musical comedy.</td>
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<tr>
<td>870</td>
<td>Introduction to Pedagogy</td>
<td></td>
<td>1</td>
<td></td>
<td>Classroom</td>
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<tr>
<td></td>
<td>Introduces the graduate student to contemporary university level teaching theories and their classroom applications.</td>
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<tr>
<td>899</td>
<td>Masters Thesis</td>
<td>Admission to masters degree program and permission of major adviser</td>
<td>6-10</td>
<td></td>
<td>Classroom</td>
<td></td>
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<tr>
<td></td>
<td>Credit Hours:</td>
<td>6-10</td>
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<td></td>
<td>Classroom</td>
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<tr>
<td>940</td>
<td>Seminar in Theatre Design</td>
<td>Undergraduate major in theatre arts</td>
<td>1-3</td>
<td></td>
<td>Classroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prereq or parallel: THEA 810, 812, 818, 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.</td>
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</tbody>
</table>
Seminar in Theatre History

Prereqs: Undergraduate major in theatre arts including 9 hrs theatre history and evolution of dramatic theory

Specialized topics in theatre history.

Credit Hours: 1-3
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Playwrights

Credit Hours: 
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Acting

Credit Hours: 
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Internship

Prereqs: Permission only

Practical projects related to a professional theatre organization.

Credit Hours: 3–12
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Research Problems Other Than Thesis

Credit Hours: 1–6
Max credits per degree: 12
Campus: 
Course Delivery: Classroom

Doctoral Dissertation

Prereqs: Admission to doctoral degree program and permission of supervisory committee chair

Credit Hours: 1-24
Max credits per degree: 55
Campus: 
Course Delivery: Classroom

Description

Johnny Carson School of Theatre and Film

For a brief description of the program, application requirements and contact information, view the graduate program summary. (http://www.unl.edu/gradstudies/prospective/programs/TheatreArts)

School Director: Paul Steger, M.F.A.
The Johnny Carson School of Theatre and Film offers graduate courses leading to the degree of master of fine arts.

Master of Fine Arts.

The requirements for the degree are as follows: 1) candidates must hold a bachelor's degree with an undergraduate major in theatre from an accredited college or as approved by Graduate Committee; 2) at the time of application, the student must clearly state his/her degree objective, the curriculum in which he/she will work, and the area of specialization. Students applying in design and technical theatre should submit a portfolio of designs, production books, sketches, working drawings, and photographs. Applicants in acting must be auditioned and/or interviewed; 3) the completion of a minimum of 60 semester hours of credit in approved course work; 4) in lieu of a formal thesis, the production (under THEA 899) and submission of a body of original creative work in theatre of sufficient standard and related to the student’s area of major interest; 5) the passing of a final examination, either written or oral, administered by the school, in the student’s area of major interest.

Faculty
For faculty list, research interests and department contact information, view the graduate program summary.

Retrieved from "http://bulletin.unl.edu/graduate/Theatre_Arts"

Veterinary and Biomedical Sciences

Subject Areas
- Integrative Biomedical Sciences (IBMS) (#IBMS)
- Veterinary and Biomedical Sciences (VBMS) (#VBMS)

Courses for IBMS (IBMS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBMS 999</td>
<td>Doctoral Dissertation</td>
<td>Admission to IBMS doctoral degree program and supervisory committee chair</td>
<td>1-24</td>
<td>55</td>
</tr>
</tbody>
</table>

Courses for VBMS (VBMS)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Crosslisted as</th>
<th>Prereqs</th>
<th>Credit Hours</th>
<th>Max credits per degree</th>
<th>Course Format</th>
<th>Course Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCI 442/842</td>
<td>Endocrinology</td>
<td>BIOS 442/842, VBMS 842</td>
<td>A course in vertebrate physiology and/or biochemistry.</td>
<td>3</td>
<td>6</td>
<td>Lecture 3</td>
<td>Classroom</td>
</tr>
<tr>
<td>ASCI 847</td>
<td>Interdisciplinary Concepts in Beef Production</td>
<td>VBMS 847</td>
<td>Degree in veterinary medicine or animal science, or allied agricultural degree, or permission</td>
<td>3</td>
<td>6</td>
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</tr>
</tbody>
</table>
Classroom attendance is required during each of the modules. Between modules distance education technologies (laptop computer, Internet access, a computer operating system with a word processor, spreadsheet, and presentation software, email, etc.) are used and required for discussion and assignments. The contributions and interactions of the major academic disciplines upon the production, performance, health, profitability, and sustainability of beef cow and cattle feeding operations.

A. I (3 cr)
B. II (3 cr) Prereq: VBMS 847A.

**BIOS 420/820 Molecular Genetics**

Crosslisted as VBMS 820

**Prereqs:**
12 hrs BIOS including BIOS 206 or equivalent.

Credit Hours: 3

Course Format: Lecture 3

Course Delivery: Classroom

Molecular basis of genetics. Gene structure and regulation, transposable elements, chromosome structure, DNA replication, and repair mechanisms and recombination.

**BIOS 440/840 Microbial Physiology**

Crosslisted as VBMS 840

**Prereqs:**
BIOS 312 and either 313 or 314, or permission.

Credit Hours: 3

Course Format: Lecture 3

Course Delivery: Classroom

Molecular approaches to the study of prokaryotic cell structure and physiology, including growth, cell division, metabolism, and alternative microbial life styles.

**BIOS 443/843 Immunology**

Crosslisted as VBMS 843

**Prereqs:**
BIOS 206 and one semester organic chemistry.

BIOS 102 recommended.

Credit Hours: 3

Course Format: Lecture 3

Course Delivery: Classroom

Fundamental consideration of cellular and humoral mechanisms of immunity, the structure and function of immunoglobulins, antigen–antibody interactions; hypersensitivity; transplantation and tumor immunity; immune and autoimmune disorders.

**BIOS 816 Computer-Aided Sequence Analysis Primer**

Crosslisted as VBMS 818

**Prereqs:**
BIOC 831 or BIOS 801 or BIOS 820

Credit Hours: 2

Course Delivery: Classroom

Introductory course in biological sequence display, analysis and manipulation with computers. Applied rather than theoretical aspects of different programs are emphasized providing skills to satisfy the analysis demands of molecular biology research. Students completing this course will be able to search, display and analyze the biological information content of macromolecules.
**Animal Biochemistry**
Crosslisted as VBMS 835

Prereqs: 
BIOC 831 or permission

Biochemistry of animal cells and tissues, with integration of major metabolic pathways and aspects of their control mechanism.

**Genetics, Genomics, and Bioinformatics of Prokaryotes**
Crosslisted as VBMS 942

Prereqs: 
BIOS 241 and 312, or permission

Prokaryotic gene regulation, DNA exchange, DNA recombination and repair, comparative prokaryotic genomics and computer-based methods of analysis.

**Medical Molecular Virology**
Crosslisted as VBMS 950

Prereqs: 
BIOS/CHEM/BIOC 431 and 831, and 432; VBMS *852

Offered odd-numbered calendar years. Current topics in molecular virology relevant to the natural history and pathogenesis of viral diseases of humans and animals.

**Signal Transduction**
Crosslisted as VBMS 964

Prereqs: 
BIOS 832, BIOS 820, or equivalent, or permission

Molecular basis of genetics in eukaryotes. Gene structure and regulation, transposable elements, chromosome structure, DNA replication and repair mechanisms and recombination.

**Advanced Viral Pathogenesis**
Crosslisted as VBMS 966

Prereqs: 
BIOS 843; VBMS 852 or equivalent 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.

**Functional Histology**
Crosslisted as BIOS 408/808
Microscopic anatomy of the tissues and organs of major vertebrate species, including humans. Normal cellular arrangements of tissues and organs as related to their macroscopic anatomy and function, with reference to subcellular characteristics and biochemical processes. Functional relationships among cells, tissues, organs and organ systems, contributory to organismal well being. General introduction to pathological processes and principles underlying some diseases.
This course is a prerequisite for: [VBMS 975](http://bulletin.unl.edu/courses/VBMS/975)

Offered odd-numbered calendar years. Designed for students of biological, animal, and veterinary sciences. Introduction to general pathology emphasizing etiology, pathogenesis, morphologic features, and fundamental alterations associated with the fundamental changes of disease.

### Introduction to Veterinary Epidemiology

**Course Code:** VBMS 811

**Prereqs:**
- Permission

Offered summer semester of odd-numbered years. Introduction to concepts of epidemiology including definition and uses of epidemiology. Casual web theory of causation discussed and compared to the Henle-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.

### Interdisciplinary Concepts in Beef Production I

**Course Code:** VBMS 847A

**Prereqs:**
- VBMS 847A

### Interdisciplinary Concepts in Beef Production II

**Course Code:** VBMS 847B

**Prereqs:**
- VBMS 847A

### Introduction to Veterinary Biotechnology

**Course Code:** VBMS 848

**Prereqs:**
- 12 hours of veterinary and biomedical sciences or DVM degree, or equivalent and permission

Information and assignments for VBMS 848 exchanged in the classroom and via Internet. Theoretical basis for emerging cellular, molecular and reproductive technologies, and their potential applications and impacts in the practice of food animal veterinary medicine.

### Molecular Virology and Viral Pathogenesis

**Course Code:** VBMS 852

**Prereqs:**
- BIOS 843

Offered even-numbered calendar years. Introduction to virology with...
emphasis on molecular biology and pathogenesis. Concepts of virus replication strategies, virus-host interactions and virus pathogenesis.

### Masters Thesis (899)

- **Prereqs:** Admission to masters degree program and permission of major adviser
- **Credit Hours:** 6-10
- **Course Delivery:** Classroom

### Diagnostic Techniques (901)

- **Course Delivery:** Classroom
- **Credit Hours:** 1-10

### T Cell Biology: Repertoire and Effector Functions (908)

- **Prereqs:** BIOS 843 or permission
- **Offered even-numbered calendar years.**
- Analysis of the literature of the cellular and molecular biology of T cell recognition and effector functions.
- Subject areas: Scientific Methodologies; Antigen Presentation; T Cell Receptor and Coreceptor; Thymic Structure and Self/Nonself Discrimination; T Cell Regulation; Allergy and Autoimmune Diseases; and T-Cell-Mediated Inflammation and Cytokine Network.
- **Credit Hours:** 3
- **Course Delivery:** Classroom

### Seminar (909)

- **P/N only.**
- **Credit Hours:** 1-4
- **Course Delivery:** Classroom

### Regulation of Eukaryotic Gene Expression (919)

- **Prereqs:** 1) BIOC 818 or 820; 2) BIOC 832; and 3) BIOC 838 or BIOS 837 or related laboratory experience
- **Offered even-numbered calendar years.** Basic mechanisms regulating gene expression in eukaryotes during various physiological states. Emphasis on understanding specific and unique mechanisms in mammalian systems. Techniques used to study gene regulation.
- **Credit Hours:** 3
- **Course Format:** Lecture 3
- **Course Delivery:** Classroom

### Measurement of Animal Disease and Production (920)

- **Course Delivery:** Classroom
- **Credit Hours:** 1-10
**Analytic Observational Studies in Veterinary Epidemiology**  

*Prereqs:* VBMS *811 and 920; or permission  

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. Includes chi-square tests, Cochrane Chi-square tests, and epidemiologic measures of strength of association, effect, and total effect. Design, implementation, analysis and interpretation of field trials taught specifically as they relate to the practitioner.

**Critical Reading of the Epidemiology Literature**  

*Prereqs:* VBMS *811 or 920; or permission  

May be repeated for credit. Analysis of current epidemiology and animal health literature. Critical evaluation of study design, methods of analysis, biases, field applicability, and basis for conclusions.

**Advanced Food Animal Production Medicine**  

*Prereqs:* Permission  

Offered spring semester of even-numbered calendar years. Interrelationships between animal health, disease, and well-being as they relate to the productivity and profitability of food animal production units. Integrates aspects of veterinary medicine, animal science, and agricultural economics. General concepts related to cattle, swine and sheep production systems, followed by specific issues that relate to different species.

**Immunovirology**  

*Prereqs:* Permission; organic chemistry; biochemistry; immunology and/or concepts in virology and virolopathogenesis

Credit Hours: 3  
Course Format: Lecture 3
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 relationship to health and disease. Analysis of the hosts immune response to selected viral infections of the major systems: neural, respiratory, gastrointestinal and immune.

**Concepts in Experimental Immunology**

**Prereqs:**
- BIOS 843 or permission

Recent advances in immunological techniques and review of conventional methods.

**Vaccinology**

**Prereqs:**
- VBMS/BIOS 841; BIOS 843; VBMS 843; VBMS/BIOS 852; or permission

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.

**Advanced Molecular Infectious Diseases**

**Prereqs:**
- BIOC 832 or equivalent; 18 hours of biological, biomedical and/or veterinary sciences, including fundamental microbiology and genetics; or permission

Offered spring semester of even-numbered years. Molecular and cellular aspects of microbial pathogenesis. Key literature, synthesis of scientific problems into research proposals.

**Seminar in Veterinary Histopathology**

**Prereqs:**
- VBMS 805, or equivalent

May be repeated for credit. Descriptive veterinary histopathology covering diseases of all body systems in animal species including domestic, laboratory, wildlife, birds, fishes, reptiles, and amphibians. Source material is worldwide in scope.

**Research on Selected Problems in Veterinary Science**

**Prereqs:**
- VBMS 805, or equivalent

Credit Hours: 2–10
### Special Topics in Veterinary Science

**Code:** VBMS 998  
**Prereqs:** Permission  
**Description:** The subject will be dependent on student demand and availability of staff. Reviews of specialized subject areas.

### Veterinary Anatomy I

**Code:** VMED 630  
**Crosslisted as:** VBMS 830  
**Prereqs:** For VBMS "830: none. For VMED 630: First year standing in the Professional Program in Veterinary Medicine  
**Description:** Comparative and topographic anatomy of the dog, cat, and pig.

### Animal Physiology I

**Code:** VMED 645  
**Crosslisted as:** BIOS 813, ASCI 845, VBMS 845  
**Prereqs:** For ASCI/ VBMS "845/BIOS "813: An undergraduate course in biochemistry or biology or physiology. For VMED 645: First year standing in and admission to VMED.  
**Description:** Primarily for students in animal or biological sciences or veterinary medicine. Mammalian physiology and cellular mechanisms. Physiology of the cell, embryology, and neuro-sensory, neuromuscular, endocrine, and reproductive systems.

### Animal Physiology II

**Code:** VMED 646  
**Crosslisted as:** BIOS 814, ASCI 846, VBMS 846  
**Prereqs:** For ASCI/ VBMS "846/BIOS "814: An undergraduate course in biochemistry or biology or physiology. For VMED 646: First year standing in and admission to VMED.  
**Description:** ASCI/ VBMS "846/BIOS "814/VMED 646 is designed for students in animal or biological sciences or veterinary medicine. Mammalian physiology and cellular mechanisms. Physiology of the digestive, cardiovascular, respiratory, and renal systems.

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**Description**

For a brief description of the program, application requirements and contact information, view the [graduate program summary](http://www.unl.edu/gradstudies/prospective/programs/VeterinaryAndBiomedSciences).
The Department offers master of science and doctor of philosophy degrees with courses of study offered in virology, bacteriology, immunology, molecular biology, neurobiology, redox biology, pathology, epidemiology, and biomedical sciences/biochemistry. The master of science in veterinary science program is offered through Option I, Option II and Option III. The Department administers the interdepartmental doctoral program in Integrative Biomedical Sciences through which it offers the PhD degree. Biochemistry and/or biostatistics courses are required for the MS and PhD degree depending on the student’s field of study with the rest of the program of study tailored to the student’s research interests and career goals, upon approval by the student’s Graduate Supervisory Committee.

There is no generally specified language or research skill required for the PhD, but each student must meet the requirements set by the Graduate College, and approved by the Supervisory Committee, the Department and the Integrative Biomedical Sciences graduate committee.

In addition to the general requirements of the Graduate College, applicants for the MS and PhD degrees must submit scores from the Graduate Record Examination. 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, STAT 801 and 802 or BIOC 831 and 832, or one of each, may be used as part of the course work constituting a major in veterinary science (MS) or Integrative Biomedical Sciences (PhD).

Cooperative Program in Veterinary Science

The University of Nebraska–Lincoln (UNL), College of Agricultural Sciences and Natural Resources is home to Nebraska’s component of the Cooperative Program in Veterinary Medicine with Iowa State University (ISU). Students in this program begin their professional education on the UNL campus and will earn the 4-year doctor of veterinary medicine degree after continued study at ISU, College of Veterinary Medicine. The arrangement maintains tuition at the rate of ISU’s in-state professional tuition rate all four years.

This innovative program, whose inaugural class of 25 Nebraska residents entered the fall semester of 2007, is the first of its kind in the United States. Program planning and development was jointly undertaken by the University of Nebraska as well as Iowa State University and has been reviewed and approved by the American Veterinary Medical Association’s Council on Education. This approval insures that successful students in this program will meet requirements to take the North American Veterinary Licensure Exam (NAVLE) and subsequently attain licensure to practice veterinary medicine.

Though every professional veterinary program must provide a core curriculum, the unique opportunities provided by this program allow students to have more hands-on experience and a broader range of opportunities than some of their counterparts. Faculty at UNL are devoted to student learning and provide a strong basic science curriculum as the foundation for their veterinary students. While UNL’s departments of School of Veterinary and Biomedical Sciences, Animal Science and Entomology form the core of this program, individuals and resources throughout UNL contribute to student success. Located on the University’s East Campus, the Cooperative Program in Veterinary Medicine offers updated facilities, state-of-the-art teaching resources and convenient access to the C.Y. Thompson Library. Other UNL facilities, such as Great Plains Veterinary Educational Center (GPVEC) at Clay Center, NE and the Agricultural Research and Development Center (ARDC) at Mead, NE, provide opportunities for enhanced learning through participation in animal health activities during the first two years of their professional education.

For more information about this program and admission requirements, please refer to http://vetmed.unl.edu or call 402-472-7211.

Faculty

For faculty list, research interests and department contact information, view the graduate program summary.

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Water Resources Planning and Management

Description

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 example, 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, Geography, Geosciences, Mathematics, 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 Resource Sciences serves as chair with one member from each participating department. Approval of individual student program of studies, degree option, and thesis topics (if applicable) will have the concurrence of the student’s major department and the chair of the advisory committee. One member of the student’s examining committee will be appointed from the Water Resources Advisory Committee. This member cannot be from the student’s major department.

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 chair 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 Law+
- 865. Resource & Environmental Economics II

**Offered in the Department of Agronomy/Horticulture**
- 808. Microclimate: The Biological Environment
- 825. Turfgrass Science & Culture
- 850. Climate & Society
- 855. Soil Chemistry & Mineralogy
- 861. Soil Physics (NRES, GEOL 861; SOIL, WATS 461)
- 875. Water Quality Strategy+ (CIVE, CRPL, GEOL, MSYM, NRES, POLS, SOCI 875; SOIL, WATS 475)
- 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 Waste Management
- 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 in Environmental Engineering
- 824. Solid Waste Management Engineering
- 826. Design of Water Treatment Facilities
- 827. Design of Wastewater Treatment & Disposal Facilities
- 828. Quantitative Methods in Environmental Engineering
- 829. Biological Waste Treatment
- 830. Fundamentals of Water Quality Modeling
- 852. Water Resources Development+
- 853. Hydrology+
- 854. Hydraulic Engineering
- 855. Nonpoint Source Pollution Control Engineering (BSEN 855)
- 856. Surface Water Hydrology
- 858. Groundwater Engineering
- 875. Water Quality Strategy+
- 915. Water Resources Engineering

**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
Women's and Gender Studies

Courses for WMNS (WMNS)

**Cross-Cultural Mentoring I**

**Course**: ANTH/WMNS 408/808

Crosslisted as WMNS 408/808

**Link**: [http://bulletin.unl.edu/courses/ANTH/408](http://bulletin.unl.edu/courses/ANTH/408)

**Credit Hours**: 3

**Course Format**: Field

**Course Delivery**: Classroom

**ACE Outcomes**: 8

**Groups**: Cultural Anthropology

**Prereqs**: ANTH/WMNS 408/808 requires weekly meetings with mentee. Pairs UNL student with a refugee and/or immigrant and/or minority K-12 student or adult. Work with a refugee and/or immigrant and/or minority K-12 student or adult to assist them with the culture transition process, the educational process, problem-solving techniques, and community resources.

**Cross-Cultural Mentoring II**

**Course**: ANTH/WMNS 409/809

Crosslisted as WMNS 409/809

**Link**: [http://bulletin.unl.edu/courses/ANTH/409](http://bulletin.unl.edu/courses/ANTH/409)

**Credit Hours**: 3

**Course Format**: Field

**Course Delivery**: Classroom

**Groups**: Cultural

**Prereqs**: ANTH/WMNS 409 requires weekly meetings with
Continuation of work with refugee and/or immigrant and/or minority K-12 student or adult to assist them with the educational process and/or culture transition.

**ANTH 410/810**

**Women and Men: An Anthropological Perspective**

Crosslisted as WMNS 410/810

- **Prereqs:** 9 hrs ANTH.

- Cross-cultural meaning and impact of gender definition, with emphasis on women. Gender as a correlate of biology, language, economic systems, social and political structures, and belief systems.

**CLAS 440/840**

**Gender and Sexuality in the Ancient World**

Crosslisted as WMNS 440/840

- Ancient Greek and Roman evidence pertaining to the fields of women's studies, gender studies, and the study of sexuality.

**CYAF 447/847**

**Working with GLBT Youth in Professional Contexts**

Crosslisted as WMNS 447/847

- To introduce contextual considerations and research-informed guidelines for working with Gay, Lesbian, Bisexual, and Transgender youth in professional settings such as educational, mental health, medical, and community outreach. The systemic context of GLBT youth, including developmental transitions, unique stressors, peer relationships, and familial environments, will be explored. Ways to help GLBT youth thrive will be emphasized.

**ECON 445/845**

**Gender, Economics, and Social Provisioning**

Crosslisted as WMNS 445/845

- **Prereqs:** ECON 211 or ECON 212.

- Introduction to the field of feminist economics. Critiques of economic theory and methodology along with gender and household decision-making, the care economy, international migration, development, globalization, the feminization of labor markets, and macroeconomics.

**ENGL 414/814**

**Women's Literature**

Crosslisted as WMNS 414

- **Prereqs:** Junior standing.

- A particular historical or other groups of literature by and about women, seen in their aesthetic and intellectual context.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisites</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 414B/814B</td>
<td>Modern and Contemporary Women Writers</td>
<td>Junior standing</td>
<td>Selected women writers from the twentieth and twenty-first century.</td>
</tr>
<tr>
<td>ENGL 475A/875A</td>
<td>Rhetorical Theory: Rhetoric of Women Writers</td>
<td>Junior standing</td>
<td>Rhetoric and rhetorical theory of women writers and speakers and its implications for literature, composition, literacy, feminist theory, and women's and gender studies.</td>
</tr>
<tr>
<td>HIST 402/802</td>
<td>Sexuality in Nineteenth and Twentieth Century America</td>
<td>Junior standing</td>
<td>Sexual practices and ideologies in American history from the 1800's to the present.</td>
</tr>
<tr>
<td>HIST 436/836</td>
<td>Saints, Witches, and Madwomen</td>
<td>Junior standing or permission</td>
<td>Pre-1800 content. Image of the madwoman throughout European and American history. Emphasis on how women on the margins have been labelled in different periods as saintly, as witches, or as insane.</td>
</tr>
<tr>
<td>HIST 441/841</td>
<td>Seminar in U.S. Women's and Gender History</td>
<td></td>
<td>In-depth, advanced thematic seminar that cultivates historical research and writing skills.</td>
</tr>
<tr>
<td>HIST 459/859</td>
<td>Women and Gender in African Societies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Gender and Sexuality in Latin America**

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom  
Groups: Latin American, Asian, Middle Eastern or African History

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:** Junior standing.

Explores how the contemporary women’s movement has emerged within Africa and its relationship to social change.

Crosslisted as ETHN 476A, WMNS 476A/876A

**History of Women and Gender**

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Campus:**

A comparative approach, offering readings on a central theme from a variety of periods and/or areas. Themes vary.

Crosslisted as WMNS 951

**Psychology of Gender**

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:** 12 hrs PSYC.

Theory and research on the role of gender in human behavior and attitudes. Diverse theoretical positions on the development of gender and 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).

Crosslisted as WMNS 421/821

**Socio-Psychological Aspects of Clothing**

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:**  
Senior standing; 3 hrs PSYC or SOCI; TMFD 123

Theories and research findings about the social and psychological aspects of clothing and appearance in relation to the self and others.

Crosslisted as WMNS 410A/810A

**Feminist Theories, Feminists' Perspectives**

Credit Hours: 3  
Course Format: Lecture 3  
Course Delivery: Classroom

**Course Format:** Lecture 3  
**Course Delivery:** Classroom

**Prereqs:** WMNS major or minor.

Introduction to feminist and gender theory. Important theoretical frameworks upon which Women's Studies is based and the implications of
# Description

For a brief description of the program and contact information, view the [Women's and Gender Studies](http://www.unl.edu/womenssp/graduate.shtml) web page.

**Director:** Chantal Kalisa

**Associate Director:** Rose Holz

The specialization or minor in Women's and Gender 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 and Gender 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 and gender issues.

Women's and Gender Studies faculty supervise the specialization and minor through the Women’s and Gender Studies Advisory Board chaired by the director and in consultation with the Curriculum Committee as described in Women's and Gender Studies by-laws.

Approval of students’ programs is the shared responsibility of the Women's and Gender Studies Advisory Board and the student’s examination/supervisory

## Internship in Women's and Gender Studies

**WMNS 497/897**

**Prereqs:** Permission.

*WMNS 497* is Pass/No Pass only.

Experiential and service learning designed to deepen understanding of classroom concepts related to study of women and gender in society.

**Credit Hours:** 1–6

**Max credits per degree:** 6

**Course Format:** Field

**Course Delivery:** Classroom

## Special Topics in Women's and Gender Studies

**WMNS 498/898**

Topics vary.

**Credit Hours:** 2–3

**Max credits per degree:** 6

**Course Format:** Lecture

**Course Delivery:** Classroom

## Special Topics in Women's and Gender Studies

**WMNS 891**

Advanced graduate level seminar in Women's and Gender Studies. Topics vary by semester.

**Credit Hours:** 3

**Course Format:** Lecture 3

**Course Delivery:** Classroom

## Independent Study in Women's and Gender Studies

**WMNS 896**

**Prereqs:** Permission

Individual or group study on a topic in Women's and Gender Studies under supervision and evaluation of a Women's and Gender Studies faculty member.

**Credit Hours:** 1–3

**Max credits per degree:** 3

**Course Format:** Independent Study

**Campus:** Classroom

**Course Delivery:** Classroom
committee. Students must apply by letter to their department Graduate Chair and the Director of the Women’s and Gender Studies Program. Advising will be by the students’ designated adviser within the home department in consultation with the Director of Women’s and Gender Studies. Students will submit their proposed program of study to the Director of the Women’s and Gender Studies Program for formal approval of the Advisory Board. This is normally done when completing the Memorandum of Courses for the MA and filing the Program of Studies for the PhD.

Admission to a department with a graduate program at the University of Nebraska–Lincoln is required for participation in the specialization or minor.

**Masters-level Specialization Requirements:**

An intradisciplinary masters-level specialization or minor in Women’s and Gender Studies is available to any student pursuing a masters degree, with approval from the graduate chair in the home department. Each student will be required to complete:

1. Requirements for an MA in a UNL department.

2. Nine credit hours of graduate courses on women and gender outside the student’s major department approved by the Women’s and Gender Studies Advisory Board. Substitutions may be made with the permission of the Advisory Board. Under Graduate College rules, both Options I and II offer possibilities for completing the graduate specialization or minor without adding additional hours of course work.

3. If option I (thesis) is chosen, the thesis must address some issue(s) relevant to Women’s and Gender Studies. The student must deposit a copy of the thesis with Women’s and Gender Studies.

4. Confirmation to the Women’s and Gender Studies office that all requirements for the specialization or minor have been met by the middle of the final semester.

Successful completion of the specialization or the minor will be indicated on the students’ official transcript in parentheses following the name of the students’ academic discipline.

**Doctoral Degree Program Requirements:**

Either an intradisciplinary doctoral-level specialization or minor in Women’s and Gender Studies is available to any student pursuing a PhD degree, with approval of the graduate chair in the home department. Each student will be required to complete:

1. Requirements for a PhD in a UNL department.

2. For the specialization, twelve credit hours of courses on women and gender outside the student’s major department approved by the Women’s and Gender Studies Advisory Board. For the minor, twelve credit hours of courses on women and gender outside the student’s major department approved by the Women’s and Gender Studies Advisory Board, with six hours in courses open exclusively to graduate students. Substitutions may be made with the permission of the Advisory Board. Graduate College rules provide various options within the PhD that allow students to complete the graduate specialization or the graduate minor without adding additional hours, subject to the approval of the supervisory committee. These include supporting courses in a related field, minor field courses, and/or collateral field courses.

3. The dissertation should address some issue(s) relevant to Women’s and Gender Studies. The student must deposit a copy of the dissertation with Women’s and Gender Studies.

4. Confirmation to the Women’s and Gender Studies office that all requirements for the specialization or minor have been met by the middle of the final semester.

Successful completion of the specialization or minor will be indicated on the students’ official transcript in parentheses following the name of the students’ academic discipline.

Women’s and Gender Studies faculty and application procedures, plus other information, may be found at: www.unl.edu/womenssp.

**Additional Courses:**

In addition to the courses listed on the ‘Courses’ tab above, these courses also count toward a specialization or minor in Women’s and Gender Studies. Course descriptions can be found in each department's pages in the Graduate Bulletin. With the approval of the Women’s and Gender Studies Advisory Board, students may also substitute courses or seminars with appropriate subtitles or emphases not on this list.

ANTH 816. Cross–Cultural Perspectives on Aging
ANTH 844. Biology of Human Variation
ANTH 876. Human Rights, Environment & Development
ARCH 581/881. Women in Design
ARCH 556/856. Behavioral & Social Factors in Environmental Design
COMM 850. Seminar in Gender and Communication
COMM 859. Human Communication Theory
CYAF 846. Addiction and Violence in Families
EDPS 987. Developmental Perspectives on Gender Issues in Counseling
ENGL 813. Film: Women Filmmakers (or Women Directors) in Film History
ENGL 844. African American Women’s Literature
ENGL 914. Seminar in Women Writers
ENGL 933B. Cather Seminar
ENGL 962A. Medieval Women Writers
LAW 686G. Gender Issues in the Law
POLS 842. Civil Liberties: Freedoms & Expressions of Conviction
POLS 843. Civil Liberties: Issues of Fairness and Equality
PSYC/EDPS/SOCI 871. Human Sexuality and Society
RUSS 882. Women in Russian Literature
SOCI 890. Sociology of Women
SOCI 907. Seminar in Sex and Gender
SPAN 870. Women Writers of Spanish America
TEAC 840A. Culture and Schooling: Gender
TEAC 840B. Culture and Schooling: Gender and Science
TEAC 840D. Special Topics with the subtitle "Literacy, Gender and Ethnicity in Schools;" OR "Identities in Transition: Family Diversity, Schooling, Culture, and Adoption;" OR "Language and Power"
TEAC 921D. Seminar in Literacy Studies: Language, Culture and Education
TEAC 930A. Ethnographic Methods
TEAC 944A. Seminar in Curriculum Studies: Curriculum as Aesthetic Text
TEAC 944B. Seminar in Curriculum Studies: Curriculum as Gendered Text
TXCD 807. History of Costume
TXCD 808. History of Textiles
TXCD 873. Design Perspectives and Issues

Faculty

- Donna Akers (History and Ethnic Studies)
- Waskar Ari (History and Ethnic Studies)
- Radha Balasubramanian (Modern Languages and Literature)
- Alexandra Basolo (School of Biological Sciences)
- Grace Bauer (English)
- Susan Belasco (English)
- Jennifer Brand (Chemical Engineering)
- Christina Brantner (Modern Languages and Literature)
- Stephen Buhler (English)
- Beth Burks-Reid (College of Law)
- Tom Carr (Modern Languages and Literature)
- Joy Castro (English and Ethnic Studies)
- Sidnie White Crawford (Classics and Religious Studies)
- Dawne Curry (History and Ethnic Studies)
- Meghan Davidson (Educational Psychology)
- Basuli Deb (English and Women's and Gender Studies)
- Jan Deeds (Student Involvement, Women's Center)
- Mary Jo Deegan (Sociology)
- Kwakiutl Dreher (English and Ethnic Studies)
- Anne Duncan (Classics and Religious Studies)
- Christina Falci (Sociology)
- Gwendolyn Foster (English)
- Susan Fritz (Agricultural Leadership, Education and Communication)
- Tom Gannon (English and Ethnic Studies)
- Rhonda Garelick (English and Performing Arts)
- Sarah Gervais (Psychology)
- Iker González–Allende (Modern Languages and Literature)
- Amy Goodburn (English)
- Ruth Heaton (Teaching, Learning and Teacher Education)
- Wendy Hines (Mathematics and Statistics)
- Mary Anne Holmes (Geosciences)
- Rose Holz (History and Women's and Gender Studies)
- Melissa Homestead (English)
- Maureen Honey (English)
- Margaret Jacobs (History)
- Michael James (Textiles, Clothing and Design)
- Jeannette Jones (History and Ethnic Studies)
- Marie–Chantal Kalisa (Modern Languages and Literature and Women's and Gender Studies)
- Alice Kang (Political Science and Ethnic Studies)
- Emily Kazyak (Sociology and Women's and Gender Studies)
- Ann Kleimola (History)
- Kathy Krone (Communication Studies)
- Sharon Baum Kuska (Architecture)
- Steve Lahey (Classics and Religious Studies)
- Margaret MacIntyre Latta (Teaching, Learning and Teacher Education)
- Carole Levin (History)
- Elizabeth Lewis (Teaching, Learning and Teacher Education)
- Karen Lyons (Honors Program)
- Christin Mamiya (Art and Art History)
- Ann Mari May (Economics)
- Jennifer McKitrick (Philosophy)
- Patrice McMahon (Political Science)
- Julia McQuillan (Sociology)
- Amelia Montes (English and Ethnic Studies)
- Helen Moore (Sociology)
- Joy Panigabutra–Roberts (University Libraries)
- Susan Poser (College of Law)
- Linda Pratt (English)
- John Raible (Teaching, Learning and Teacher Education)
- Allison Reisbig (Child, Youth and Family Studies)
• Loukia Sarroub (Teaching, Learning and Teacher Education)
• Julia Schleck (English)
• Anna Shavers (College of Law)
• Victoria Smith (History and Ethnic Studies)
• Shari Stenberg (English)
• Alison Stewart (Art and Art History)
• Pat Tetreault (Student Involvement, LGBTQ Resource Center)
• Isabel Velázquez (Modern Languages and Literature)
• Stacey Waite (English)
• Luann Wandsnider (Anthropology)
• Wendy Weiss (Textiles, Clothing and Design)
• Rachelle Winkle–Wagner Educational Administration)
• Carly Woods (Communication Studies)
• Donna Woudenberg (Adjunct)

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