AGRICULTURAL EDUCATION

Description
A degree in agricultural education is designed to prepare students with the necessary communication and interpersonal skills, leadership training, and knowledge of technical agriculture to be a teacher of agricultural education at the secondary or postsecondary level, or accept employment in agribusiness leading to positions in training and/or development. The degree provides good preparation for work in agricultural extension, positions in foreign service, and agricultural educators in business and industry. Many students graduate with a dual degree in agricultural education and another degree in the College. Agricultural education students may elect to follow the teaching options or the leadership option.

College Requirements

College Admission
Requirements for admission into the College of Agricultural Sciences and Natural Resources (CASN) are consistent with general University admission requirements (one unit equals one high school year): 4 units of English, 4 units of mathematics, 3 units of natural sciences, 3 units of social studies, and 2 units of foreign language. Students must also meet performance requirements (ACT composite of 20 or higher OR combined SAT score of 950 or higher OR rank in the top one-half of graduating class; transfer students must have a 2.0 (on a 4.0 scale) cumulative grade point average and 2.0 on the most recent term of attendance. For students entering the PGA Golf Management degree program, a certified golf handicap of 12 or better (e.g., USGA handicap card) or written ability (MS Word file) equivalent to a 12 or better handicap by a PGA professional or high school golf coach is required. For more information, please visit: http://pgm.unl.edu/requirements.

Admission Deficiencies/Removal of Deficiencies
Students who are admitted to CASNR with core course deficiencies must remove these deficiencies within the first 30 credit hours at UNL, or within the first calendar year at UNL, whichever takes longer, excluding foreign languages. Students have up to 60 credit hours to remove foreign language deficiencies. College-level course work taken to remove deficiencies may be used to meet degree requirements in CASNR.

Deficiencies in the required entrance subjects can be removed by completion of specified courses in the University or by correspondence.

The Office of Admissions, Alexander Building (south entrance), City Campus, provides information to new students on how deficiencies can be removed.

College Degree Requirements

Curriculum Requirements
The curriculum requirements of the College consist of three areas: ACE (Achievement-Centered Education); College of Agricultural Sciences and Natural Resources Core; and Degree Program requirements and electives. All three areas of the College Curriculum Requirements are incorporated within the description of the Major/Degree Program sections of the catalog. The individual major/degree program listings of classes insures that a student will meet the minimum curriculum requirements of the College.

Foreign Languages/Language Requirement
Two units of a foreign language are required. This requirement is usually met with two years of high school language.

Minimum Hours Required for Graduation
The College grants the bachelors degree in programs associated with agricultural sciences, natural resources and related programs. Students working toward a degree must earn at least 120 semester hours of credit. A minimum cumulative grade point average of C (2.0 on a 4.0 scale) must be maintained throughout the course of studies and is required for graduation.

Grade Rules
Removal of C-, D and F Grades
Only the most recent letter grade received in a given course will be used in computing a student’s cumulative grade point average if the student has completed the course more than once and previously received a grade or grades below C in that course.

The previous grade (or grades) will not be used in the computation of the cumulative grade point average, but it will remain a part of the academic record and will appear on any transcript.

A student can remove from his/her cumulative average a course grade of C-, D+, D, D- or F if the student repeats the same course at the University of Nebraska and receives a grade other than P (pass), I (incomplete), N (no pass), W (withdrawn), or NR (no report). If a course is no longer being offered, it is not eligible for the revised grade point average computation process.

For complete procedures and regulations, see the Office of the University Registrar website at http://www.unl.edu/regrec/course-repeats.

Pass/No Pass
Students in CASNR may take any course offered on a Pass/No Pass basis within the 24-hour limitation established by the Faculty Senate. However, a department may specify that the Pass/No Pass status of its courses be limited to non-majors or may choose to offer some courses for letter grades only.

GPA Requirements
A minimum cumulative grade point average of C (2.0 on a 4.0 scale) must be maintained throughout the course of studies and is required for graduation.

Transfer Credit Rules
To be considered for admission, a transfer student, Nebraska resident or nonresident, must have an accumulated average of C (2.0 on a 4.0 scale) and a minimum C average in the last semester of attendance at another college. Transfer students who have completed less than 12 credit hours of college study must submit either ACT or SAT scores.

Ordinarily, credits earned at an accredited college are accepted by the University. The College, however, will evaluate all hours submitted on an application for transfer and reserves the right to accept or reject any of them. Sixty is the maximum number of hours UNL will accept on transfer from a two-year college. Ninety is the maximum number of hours UNL will accept from a four-year college. Transfer credit in the degree program must be approved by the degree program advisor on a Request for Substitution Form to meet specific course requirements, group requirements, or course level requirements in the major. At least 9 hours in the major field, including the capstone course, must be completed at UNL regardless of the number of hours transferred.
The College will accept no more than 10 semester hours of C, D+, D and D- grades from other schools. The C-, D+, D and D- grades can only be applied to free electives. This policy does not apply to the transfer of grades from UNO or UNK to UNL.

Joint Academic Transfer Programs
The College of Agricultural Sciences and Natural Resources has agreements with many institutions to support joint academic programs. The transfer programs include dual degree programs and cooperative degree programs. Dual degree programs offer students the opportunity to receive a degree from a participating institution and also to complete requirements for a bachelor of science degree in CASNR. Cooperative programs result in a single degree from either UNL or the cooperating institution.

Dual Degree Programs
A to B Programs
The A to B Program, a joint academic program offered by the CASNR and participating community colleges, allows students to complete the first two years of a degree program at the participating community college and continue their education and study in a degree program leading toward a bachelor of science degree.

The A to B Program provides a basic knowledge plus specialized course work. Students transfer into CASNR with junior standing.

Depending on the community college, students enrolled in the A to B Program may complete the requirements for an associate of science degree at the community college, transfer to UNL, and work toward a bachelor of science degree.

Participating community colleges include:
- Central Community College
- Metropolitan Community College
- Mid-Plains Community College
- Nebraska College of Technical Agriculture
- Northeast Community College
- Southeast Community College
- Western Nebraska Community College

3+2 Programs
Two specialized degree programs in animal science and veterinary science are offered jointly with an accredited college or school of veterinary medicine. These two programs permit CASNR animal science or veterinary science students to receive a bachelor of science degree from UNL with a degree in animal science or veterinary science after successfully completing two years of the professional curriculum in veterinary medicine at an accredited veterinary school. Students who successfully complete the 3+2 Program, must complete the “Application for Degree” form and provide transcripts to the Credentials Clerk, Office of the University Registrar, 107 Canfield Administration Building, UNL.

Students should consult these degree programs with their academic advisor.

Cooperative Degree Programs
Academic credit from UNL and a cooperating institution is applied towards a four-year degree from either UNL (UNL degree-granting program) or the cooperating institution (non UNL degree-granting program). All have approved programs of study.

UNL Degree-Granting Programs
A UNL degree-granting program is designed to provide students the opportunity to complete a two-year program of study at one of the four-year institutions listed below, transfer to CASNR and complete the requirements for a bachelor of science degree.

Chadron State College. Chadron State College offers a 2+2 program leading to a grassland ecology and management degree program and a transfer program leading to a Bachelor of Science in Agricultural Education in the teaching option.

Wayne State College. Wayne State College offers a 3+1 program leading to a Bachelor of Science in Plant Biology in the ecology and management option.

University of Nebraska at Kearney. Transfer programs are available for students pursuing degree programs leading to a bachelor of science degree.

University of Nebraska at Omaha. The University of Nebraska at Omaha (UNO) cooperates with CASNR in providing four-semester pre-agricultural sciences, pre-natural resources, pre-food science and technology, pre-horticulture and pre-turfgrass and landscape management transfer programs.

A student enrolled in these programs may transfer all satisfactorily completed academic credits identified in the suggested program of study, and enter CASNR to study toward a degree program leading to a bachelor of science degree. The total program would require a minimum of four years or eight semesters (16 credit hours/semester or 120 credit hours).

UNL CASNR faculty teach horticulture and food science and technology courses at UNO to assist an urban population in better understanding the food processing, horticulture, and landscape horticulture industries.

For more information, contact the CASNR Dean’s Office, 800-472-8800, ext. 2541.

Non UNL Degree-Granting Programs
The CASNR cooperates with other institutions to provide course work that is applied towards a degree at the cooperating institution. Pre-professional programs offered by CASNR allow students to complete the first two or three years of a degree program at UNL prior to transferring and completing a degree at the cooperating institution.

Chadron State College—Range Science. The 3+1 Program in range science allows Chadron State College students to pursue a range science degree through Chadron State College. Students complete three years of course work at Chadron State College and one year of specialized range science course work (32 credit hours) at CASNR.

Dordt College (Iowa) – Agricultural Education: Teaching Option. This program allows students to pursue an Agricultural Education Teaching Option degree leading toward a bachelor of science in agricultural education. Students at Dordt College will complete 90 credit hours in the Agricultural Education: Teaching Option Transfer Program.

Residency
Students must complete at least 30 of the total hours for their degree using UNL credits. At least 18 of the 30 credit hours must be in courses offered through CASNR (>299) including the appropriate ACE 10 degree requirement or an approved ACE 10 substitution offered through another UNL college and excluding independent study regardless of the number of hours transferred. Credit earned during education abroad may be used toward the residency requirement if students register through UNL and participate in prior-approved education abroad programs. UNL
open enrollment and summer independent study courses count toward residence.

1 Includes courses taught by CASNR faculty through interdisciplinary prefixes (e.g., LIFE, MQUI, ENV, SCI, EAEQ, HRTM, ENSC) and CASNR crosslisted courses taught by non-CASNR faculty.

Online and Distance Education
There are many opportunities to earn college credit online through the University of Nebraska–Lincoln. Some of these credits may be applicable not only as elective credits, but also toward the fulfillment of the College’s education requirements. Credits earned online may count toward residency. However, certain offerings may not be counted toward scholarship requirements or academic recognition criteria.

For further information, contact:
Office of Online and Distance Education
University of Nebraska–Lincoln
305 Brace Labs
Lincoln, NE 68588-0109
402-472-4681
http://online.unl.edu/

Independent Study Rules
Students wishing to take part in independent studies must obtain permission; complete and sign a contract form; and furnish copies of the contract to the instructor, advisor, departmental office, and the Dean’s Office. The contract should be completed before registration. Forms are available in 103 Agricultural Hall or online at the CASNR website.

Independent study projects include research, literature review or extension of course work under supervision and evaluation of a departmental faculty member.

Students may only count 12 hours of independent study toward their degrees and no more than 6 hours can be counted during their last 36 hours earned, excluding senior thesis, internships, and courses taught under an independent study number.

Other College Degree Requirements
Capstone Course Requirement
A capstone course is required for each CASNR degree program. A capstone course is defined as a course in which students are required to integrate diverse bodies of knowledge to solve a problem or formulate a policy of societal importance.

ACE Requirements
All students must fulfill the Achievement Centered Education (ACE) requirements. Information about the ACE program may be viewed at www.ace.unl.edu.

The minimum requirements of CASNR reflect the common core of courses that apply to students pursuing degrees in the college. Students should work with an advisor to satisfy ACE outcomes 1, 2, 3, 4, 6 and 10 with the college requirements.

Learning Outcomes

Majors in agricultural leadership, education and communication – Skilled Technical Sciences Option will be able to:

1. Understand the central concepts, tools of inquiry, and structures of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
2. Understand how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.
3. Understand how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
4. Understand and use a variety of instructional strategies to encourage student’s development of critical thinking, problem solving, and performance skills.
5. Use an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
6. Use knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration and supportive interaction in the classroom.
7. Plan instruction based upon knowledge of subject matter, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10. Foster relationships with school colleagues, parents and agencies in the larger community to support students learning and well-being.

Majors in agricultural leadership, education and communication – Teaching Option will be able to:

1. Understand the central concepts, tools of inquiry, and structures of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
2. Understand how children learn and develop, and can provide learning opportunities that support their intellectual, social and personal development.
3. Understand how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.
4. Understand and use a variety of instructional strategies to encourage student’s development of critical thinking, problem solving, and performance skills.
5. Use an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.
6. Use knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration and supportive interaction in the classroom.
7. Plan instruction based upon knowledge of subject manner, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10. Foster relationships with school colleagues, parents and agencies in the larger community to support students learning and well-being.

Majors in agricultural leadership, education and communication – Leadership Option will be able to:

1. Apply knowledge of leadership theories, models, and behaviors to solve problems in agricultural and environmental sciences fields and beyond.
2. Develop competence to apply leadership skills at the individual, team and organizational/community levels.
3. Develop critical thinking skills to analyze and evaluate leadership issues in complex and global environments.
4. Develop a level of self-awareness as well as the cognitive and emotional ability to effectively work with and develop people from diverse backgrounds and perspectives.
5. Develop and implement a personal plan for transfer of knowledge, skills, and behaviors gained to career/professional life via a guided capstone internship.

Major Department Admission

Student admission to the teacher education program in the Department of Agricultural Leadership, Education and Communication requires successful completion of ALEC 494 Undergraduate Seminar in Agricultural Education at least six months prior to student teaching. Student teaching is conducted off campus through university-approved agreements with cooperating secondary schools. Plans for student teaching must be made early.

To be admitted into the student teaching program candidates must have:

1. a minimum scholastic grade point average of 2.75 including no grades lower than C within the endorsement area, and no grades lower than C+ within professional education courses;
2. passing scores within PRAXIS I SERIES – Core Academic Skills (reading, writing, and mathematics);
3. 1,000 hours of verified work experience within their intended teaching endorsement area, or 300 hours of supervised employment under the direction of a UNL academic unit.

Student Teaching (ALEC 431 Student Teaching) is available as Pass/No Pass only. Meet with your advisor to plan for your student teaching experience.

Other Admission Requirements

Teaching Certificate

Successful completion of the teaching endorsement requirements, including a passing score on the corresponding PRAXIS II SERIES Content Area Test, and recommendation by the Department of Agricultural Leadership, Education and Communication, warrants recommendation for a Nebraska Secondary Teaching Certificate by the Nebraska Department of Education. Such certification will include a broad field endorsement to teach either secondary agricultural education or industrial technology (6-12). The choice is available to students completing an agricultural education endorsement to complete additional course work qualifying for subject endorsement in biology.

Students in other agricultural degree programs may qualify based upon meeting endorsement and teaching certificate requirements.

Criminal History/Background Check

Effective August 2012, individuals enrolled in any UNL teacher education course requiring a practicum experience in schools or other institutions must have successfully completed a background review prior to any practicum visitations. Two successful reviews will be required during your teacher preparation program; one prior to your initial practicum experience, and a second prior to your student teaching field experience. Background reviews must be completed through One Source, The Background Check Company. See your advisor or practicum course instructor for necessary details to request and complete a background review.

Nebraska State Department of Education Policy Pertaining to Students with Felony or Misdemeanor Convictions

The Nebraska Department of Education policy requires that a person with felony convictions or misdemeanor convictions involving abuse, neglect, or sexual misconduct shall not be allowed to participate in pre-student teaching laboratory and classroom experiences or student teaching without approval by the Board of Education. To comply with this policy, the Department of Agricultural Education will require each student to affirm under oath that he/she does not have any convictions in the above-named areas prior to each field placement. If a student does have any felony or misdemeanor convictions, he/she is required to meet with Dr. Tom Wandzilak, Certification Officer, Student Services Center, 104 Henzlik Hall, 402-472-8626, as soon as possible. Students with questions pertaining to convictions should contact Dr. Wandzilak.

Major Requirements

Teaching Option

College Integrative Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SCIL 101</td>
<td>Science and Decision-Making for a Complex World</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 431</td>
<td>Student Teaching</td>
<td>12</td>
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Credit Hours Subtotal: 15

Mathematics and Statistics (beyond college algebra)

Select 5-6 credits from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>MATH 106</td>
<td>Calculus I</td>
</tr>
<tr>
<td>MATH 103</td>
<td>College Algebra and Trigonometry</td>
</tr>
<tr>
<td>MATH 102</td>
<td>Contemporary Mathematics</td>
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<td>MATH 101</td>
<td>Applied Calculus</td>
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Credit Hours Subtotal: 5-6

Communications

Written Communication (ACE 1)

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENGL 150</td>
<td>Writing and Inquiry</td>
</tr>
<tr>
<td>ENGL 151</td>
<td>Writing and Argument</td>
</tr>
<tr>
<td>ENGL 254</td>
<td>Writing and Communities</td>
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<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>JGEN 200</td>
<td>Technical Communication I</td>
</tr>
<tr>
<td>JGEN 300</td>
<td>Technical Communication II</td>
</tr>
<tr>
<td>COMM 209</td>
<td>Public Speaking</td>
</tr>
<tr>
<td>or COMM 286</td>
<td>Business and Professional Communication</td>
</tr>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
</tr>
<tr>
<td>AGRO 131 / HORT 131 &amp; AGRO 132</td>
<td>Plant Science and Agronomic Plant Science Laboratory</td>
</tr>
<tr>
<td>BIOS 101</td>
<td>General Biology</td>
</tr>
<tr>
<td>&amp; BIOS 101L</td>
<td>and General Biology Laboratory</td>
</tr>
<tr>
<td>BIOS 109</td>
<td>General Botany</td>
</tr>
<tr>
<td>BIOS 112</td>
<td>Introduction to Zoology</td>
</tr>
<tr>
<td>&amp; BIOS 112L</td>
<td>and Introduction to Zoology Lab</td>
</tr>
<tr>
<td>ENTO 115 / BIOS 115 &amp; ENTO 116 / BIOS 116</td>
<td>Insect Biology and Insect Identification</td>
</tr>
<tr>
<td>HORT 131 / AGRO 131 &amp; HORT 133</td>
<td>Plant Science and Horticultural Plant Science Laboratory</td>
</tr>
<tr>
<td>LIFE 120 &amp; LIFE 120L</td>
<td>Fundamentals of Biology I and Fundamentals of Biology I laboratory</td>
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<tr>
<td>CHEM 105</td>
<td>Chemistry in Context I</td>
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<td>Select one of the following:</td>
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<tr>
<td>AGRO 131 / HORT 131 &amp; AGRO 132</td>
<td>Plant Science and Agronomic Plant Science Laboratory</td>
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<tr>
<td>Select one of the following:</td>
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<tr>
<td>PHYS 141</td>
<td>Elementary General Physics I</td>
</tr>
<tr>
<td>PHYS 151</td>
<td>Elements of Physics</td>
</tr>
<tr>
<td>PHYS 211</td>
<td>General Physics I</td>
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<tr>
<td>MSYM 109</td>
<td>Physical Principles in Agriculture and Life Sciences</td>
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Credit Hours Subtotal: 12

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<th>Course Title</th>
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<tr>
<td>AECN 141</td>
<td>Introduction to the Economics of Agriculture (ACE 6)</td>
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Credit Hours Subtotal: 3

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<td>EDPS 457</td>
<td>Learning and Motivation Principles for Secondary Teaching</td>
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Select one of the following: 3

<table>
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<tr>
<th>Course Code</th>
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<tr>
<td>SOCI 217 / ETHN 217</td>
<td>Sociology of Race and Ethnicity (ACE 9)</td>
</tr>
<tr>
<td>TEAC 330 / ETHN 330</td>
<td>Multicultural Education (ACE 9)</td>
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Select one of Humanities and Social Sciences electives course each from ACE outcomes 5, 7, and 8 9

Credit Hours Subtotal: 15

<table>
<thead>
<tr>
<th>Course Code</th>
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<tr>
<td>AGRI 115</td>
<td>Biotechnology: Food, Health and Environment</td>
</tr>
<tr>
<td>AGRO 215 / HORT 215 / TLMT 215</td>
<td>Genetics</td>
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<tr>
<td>AGRO 431</td>
<td>Site-specific Crop Management</td>
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<tr>
<td>FDST 131</td>
<td>The Science of Food</td>
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Policy

Select one of the following: 3

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>AECN 265</td>
<td>Resource and Environmental Economics I</td>
</tr>
<tr>
<td>AECN 276</td>
<td>Rural Sociology</td>
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<tr>
<td>AECN 346</td>
<td>World Food Economics</td>
</tr>
<tr>
<td>AECN 376</td>
<td>Rural Community Economics</td>
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<tr>
<td>NRES 323</td>
<td>Natural Resources Policy</td>
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<tr>
<td>POLS 235</td>
<td>Public Policy: Concepts and Processes</td>
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<td>POLS 236</td>
<td>Public Policy Analysis: Methods and Models</td>
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Management

Select 9 hours of the following: 9

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<tr>
<td>AECN 201</td>
<td>Farm and Ranch Management</td>
</tr>
<tr>
<td>AECN 325</td>
<td>Marketing of Agricultural Commodities</td>
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<tr>
<td>ASCI 250</td>
<td>Animal Management</td>
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<tr>
<td>ASCI 320</td>
<td>Animal Nutrition and Feeding</td>
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<td>ASCI 330</td>
<td>Animal Breeding</td>
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<tr>
<td>ASCI 450</td>
<td>Horse Management</td>
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<td>ASCI 451</td>
<td>Livestock Management on Range and Pasture</td>
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<tr>
<td>ASCI 453</td>
<td>Dairy Management</td>
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<tr>
<td>ASCI 455</td>
<td>Beef Cow-Calf Management</td>
</tr>
<tr>
<td>ASCI 457</td>
<td>Beef Feedlot Management</td>
</tr>
<tr>
<td>AGRO 204</td>
<td>Resource-Efficient Crop Management</td>
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<tr>
<td>AGRO 240</td>
<td>Forage Crop and Pasture Management</td>
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<td>AGRO 405</td>
<td>Crop Management Strategies</td>
</tr>
<tr>
<td>HORT 325</td>
<td>Greenhouse Practices and Management</td>
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Production

Select one of the following: 3

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<tr>
<td>ASCI 100</td>
<td>Fundamentals of Animal Biology and Industry</td>
</tr>
<tr>
<td>ASCI 150</td>
<td>Animal Production Skills</td>
</tr>
<tr>
<td>HORT 131 &amp; HORT 133</td>
<td>Plant Science and Horticultural Plant Science Laboratory</td>
</tr>
<tr>
<td>HORT 221</td>
<td>Plant Propagation</td>
</tr>
<tr>
<td>HORT 325</td>
<td>Greenhouse Practices and Management</td>
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<td>HORT 327</td>
<td>Turfgrass Science and Management</td>
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Natural Resources

Select 6 hours of the following: 6

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AECN 265</td>
<td>Resource and Environmental Economics I</td>
</tr>
<tr>
<td>AGRO 153</td>
<td>Soil Resources</td>
</tr>
<tr>
<td>AGRO 366</td>
<td>Soil Nutrient Relationships</td>
</tr>
<tr>
<td>BIOS 232</td>
<td>Ecological Issues in the Great Plains</td>
</tr>
<tr>
<td>ENTO 109</td>
<td>Beekeeping</td>
</tr>
<tr>
<td>NRES 211</td>
<td>Introduction to Conservation Biology</td>
</tr>
<tr>
<td>NRES 220</td>
<td>Principles of Ecology</td>
</tr>
</tbody>
</table>
Agricultural Education

NRES 311  Wildlife Ecology and Management

Mechanized Systems 4
Select 9 hours of the following: 9
- MSYM 245  Electrical Service Systems (UNL)
- AUTT 1003  Small Engines
- WELD 1060 & WELD 1070  Basic Oxy-Acetylene/Shielded Metal Arc Theory and Lab & Advanced Oxy-Acetylene/Shielded Metal Arc Techniques
- WELD 1080 & WELD 1090  GMAW/GTAW Theory & Lab & GMAW/GTAW Advanced Welding Techniques
- CNST 1101  Basic Woods Manufacturing
- CNST 1201  Construction Basics

Food System
Select one of the following: 3
- AECN 225  Agribusiness Entrepreneurship in Food Products Marketing
- ASCI 210  Animal Products
- FDST 101  Introductory Food Science
- FDST 131  The Science of Food

Credit Hours Subtotal: 36

Professional Education Courses 5
- ALEC 135  Early Field Experience in Agricultural Leadership, Education and Communication 3
- ALEC 234  Planning Leadership and Experience Programs 3
- ALEC 308  Laboratory Instruction and Management 3
- ALEC 405  Methods of Instruction for Secondary Agriscience Education 3
- ALEC 405L  Methods of Instruction Laboratory Education 1
- ALEC 413  Program Development 3
- ALEC 494  Undergraduate Seminar in Agricultural Education 1
- SPED 401B  Accommodating Exceptional Learners in the Secondary School Classroom 3

Credit Hours Subtotal: 20

Free Electives
Select 3-5 hours 3-5

Credit Hours Subtotal: 5

Total Credit Hours 120

1 If MATH 103 College Algebra and Trigonometry is taken, only 2 credit hours can be counted toward this requirement.
2 Students pursuing combined agriculture-biology endorsement must complete CHEM 109 General Chemistry I.
3 A minimum of 15 hours completed at the 200 level or above, and a minimum of 9 hours completed at the 300 level or above. Students must have a course in at least 4 CASNR departments or program areas. A course may be used to fulfill more than one category; however, the hours will only count once toward the 36-hour agricultural science requirement. No grades lower than C within the endorsement area.
4 Courses available through SCC-Lincoln or SCC-Milford. Meet with your advisor to plan for your mechanized systems classes.
5 No grades lower than C+ within professional education courses.

Biology Endorsement Requirements
If the student desires to qualify for both an endorsement in agricultural education and a subject endorsement in biology, the following course work should be integrated into the teaching option.

Supporting Laboratory Based Courses
Chemistry
- CHEM 109  General Chemistry I 4

Credit Hours Subtotal: 4

Physics
Select one of the following: 4-5
- PHYS 141  Elementary General Physics I
- PHYS 151  Elements of Physics
- PHYS 211  General Physics I
- MSYM 109  Physical Principles in Agriculture and Life Sciences

Credit Hours Subtotal: 4-5

Earth Science
- GEOL 101  Dynamic Earth 4

Credit Hours Subtotal: 4

Total Credit Hours 12-13

Biology Courses
Select at least one of the suggested courses from each of the following categories; however, within Fundamentals of Biology I and LIFE 121 Fundamentals of Biology II are required. A minimum of 24 different hours is required. At least 12 hours must be taken at the 200 level or higher. Other course work may be negotiated with your academic advisor.

Select at least one of the suggested courses from each of the following categories: 24

Botany 1
- BIOS 109  General Botany 1
- AGRO 131 / HORT 131 & AGRO 132  Plant Science and Agronomic Plant Science Laboratory
- AGRO 204  Resource-Efficient Crop Management
- AGRO 240 / RNGE 240  Forage Crop and Pasture Management
- HORT 131 / AGRO 131 & HORT 133  Plant Science and Horticultural Plant Science Laboratory

Ecology 1
- NRES 211  Introduction to Conservation Biology
- NRES 220 / BIOS 220 & NRES 222 / BIOS 222  Principles of Ecology and Ecology Laboratory
- BIOS 232  Ecological Issues in the Great Plains
- NRES 311  Wildlife Ecology and Management

Genetics 1
The Skilled and Technical Sciences (STS) certification program at the University of Nebraska–Lincoln (UNL) is designed for students interested in teaching Skilled and Technical Sciences (6-12). To be admitted into the student teaching program candidates must have: 1) a minimum scholastic grade point average of 2.75 including no grades lower than C within the endorsement area, and no grades lower than C+ within professional education courses; 2) passing scores within the Pre-Professional Skills Test (Core Praxis 1); 3) 1,000 hours of verified work experience within the Skilled and Technical Sciences (STS) career cluster, or 300 hours of supervised employment in the STS career cluster under the direction of a UNL academic unit. Student Teaching (ALEC 431) is available as Pass/No Pass only. Meet with your advisor to plan for your student teaching experience.

Teaching Certificate. Successful completion of the teaching endorsement requirements, along with a recommendation by the Department of Agricultural Leadership, Education and Communication, warrants recommendation for a Nebraska Secondary Teaching Certificate by the Department of Education, with an endorsement to teach skilled and technical sciences (6-12).

STS Teaching Option

Students who meet entry requirements in the STS Teaching Option will have completed a variety of course work from their community college. See website http://agedteaching.unl.edu/STS-2-2-programs. Many of the courses within the community college system have direct equivalencies with our ACE program at UNL. Following a comprehensive transfer analysis, students will be provided an accurate degree audit of the remaining ACE courses needed at UNL along with the professional program in agricultural education. The minimum requirements of CASNR reflect the common core of courses that apply to students pursuing degrees in the college. Students should work with an advisor to satisfy ACE outcomes 5, 7, 8, and 10 requirements. ACE requirements 1, 2, 3, 4, 6, and 9 will be completed through their academic programs within the community college system since it is a requirement for an associate of science or an associate of applied science degree at their institutions.

ACE Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 135A</td>
<td>Introduction to Skilled and Technical Sciences Education</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 235</td>
<td>STS Technical Skills and Skills USA</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 308</td>
<td>Laboratory Instruction and Management</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405</td>
<td>Methods of Instruction for Secondary Agriscience Education</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405L</td>
<td>Methods of Instruction Laboratory Education</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 413</td>
<td>Program Development</td>
<td>3</td>
</tr>
</tbody>
</table>

1 To be eligible for the biology endorsement, a student must maintain a minimum grade point average of 2.75 in the course work or its equivalency.

Skilled and Technical Sciences 2+2 Teaching Option

The following is a 2+2 program for students interested in obtaining certification in Skilled and Technical Sciences (STS). This certification will allow an individual to teach Skilled and Technical Sciences in a Nebraska secondary school (grades 6-12). Completion of the 60 credit hour requirement in the Skilled and Technical Sciences 2 + 2 Teaching Option at UNL, along with the completion of an associate of science or an associate of applied science within a post-secondary institution with a 2 + 2 agreement, will allow a student to complete a BS degree in agricultural education from UNL.

The program is an agreement between the College of Agricultural Sciences and Natural Resources (CASNR) and community college systems in Nebraska. The 2+2 program requires a student to complete the first two years at a community college and earn an associate of science or an associate of applied science degree before transferring to the University of Nebraska–Lincoln (UNL).

The transfer policy in CASNR will be in effect for all students interested in the STS 2+2 program. This 2+2 program is for the STS teaching program and will be the only program available for students to become certified at UNL. Students transferring into other UNL programs other than the STS program must follow the requirements set forth through the departments within the specific colleges. Students do have the option of taking ALEC 105 Introduction to Engineering Design (IED) and ALEC 115 Principles of Engineering (POE) on campus at UNL. Once completed, these courses can be reverse transferred to satisfy the STEM requirement at the community college. See your STS faculty advisor for details.

The prerequisite for entry into the STS certification program at UNL is the completion of the Skilled and Technical Sciences Program at a community college with a 2+2 Skilled and Technical Sciences Agreement. Students who transfer into UNL from other programs within the community college system will not be eligible for entry into the 2+2 program in STS at UNL.

To be admitted into the student teaching program candidates must have: 1) a minimum scholastic grade point average of 2.75 including no grades lower than C within the endorsement area, and no grades lower than C+ within professional education courses; 2) passing scores within the Pre-Professional Skills Test (Core Praxis 1); 3) 1,000 hours of verified work experience within the Skilled and Technical Sciences (STS) career cluster, or 300 hours of supervised employment in the STS career cluster under the direction of a UNL academic unit. Student Teaching (ALEC 431) is available as Pass/No Pass only. Meet with your advisor to plan for your student teaching experience.

Teaching Certificate. Successful completion of the teaching endorsement requirements, along with a recommendation by the Department of Agricultural Leadership, Education and Communication, warrants recommendation for a Nebraska Secondary Teaching Certificate by the Department of Education, with an endorsement to teach skilled and technical sciences (6-12).

### ACE Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
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<td>Introduction to Skilled and Technical Sciences Education</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 235</td>
<td>STS Technical Skills and Skills USA</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 308</td>
<td>Laboratory Instruction and Management</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405</td>
<td>Methods of Instruction for Secondary Agriscience Education</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405L</td>
<td>Methods of Instruction Laboratory Education</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 413</td>
<td>Program Development</td>
<td>3</td>
</tr>
</tbody>
</table>

1 To be eligible for the biology endorsement, a student must maintain a minimum grade point average of 2.75 in the course work or its equivalency.

### Skilled and Technical Sciences 2+2 Teaching Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRO 215</td>
<td>Genetics</td>
<td>3</td>
</tr>
<tr>
<td>HORT 215</td>
<td>Insect Biology</td>
<td>3</td>
</tr>
<tr>
<td>TLMT 215</td>
<td>and Insect Identification</td>
<td>3</td>
</tr>
<tr>
<td>ASCI 100</td>
<td>Fundamentals of Animal Biology and Industry</td>
<td>3</td>
</tr>
<tr>
<td>ASCI 240</td>
<td>Anatomy and Physiology of Domestic Animals</td>
<td>3</td>
</tr>
<tr>
<td>ASCI 250</td>
<td>Animal Management</td>
<td>3</td>
</tr>
<tr>
<td>ASCI 271</td>
<td>Companion Animal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>FDST 372</td>
<td>Food Safety and Sanitation</td>
<td>3</td>
</tr>
<tr>
<td>NUTR 372</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 25

### Integrated Laboratory Management

- ALEC 308 Laboratory Instruction and Management
- Science Methods Instruction
- TEAC 451V Learning and Teaching Principles and Practices: Secondary Science
- TEAC 397 Professional Practicum Experience III

### Student Teaching

Students seeking a dual endorsement will be required to complete their student teaching experience in a school where they will spend teaching time in both biology and agriculture.

1 To be eligible for the biology endorsement, a student must maintain a minimum grade point average of 2.75 in the course work or its equivalency.

### Total Credit Hours

25

### Skilled and Technical Sciences 2+2 Teaching Option

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOS 206</td>
<td>General Genetics</td>
<td>3</td>
</tr>
<tr>
<td>AGRO 215</td>
<td>Genetics</td>
<td>3</td>
</tr>
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</tr>
<tr>
<td>NUTR 372</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 25

1 To be eligible for the biology endorsement, a student must maintain a minimum grade point average of 2.75 in the course work or its equivalency.
Agricultural Leadership Option

The Agricultural Leadership Option is recommended for those interested in pursuing a career in the agricultural industry in the areas of leadership development, commodity board advocacy, executive development, youth and leadership development, extension, consulting/training, organizational development, human resources, public policy, rural and community development.

College Integrative Courses

SCIL 101 Science and Decision-Making for a Complex World 3
ALEC 495A Internship in Leadership Development (ACE 10, Capstone Course) 5

Credit Hours Subtotal: 8

Mathematics and Statistics (beyond college algebra)

Select 5-6 credits from the following: 5-6
MATH 106 Calculus I
MATH 103 College Algebra and Trigonometry 1
or MATH 10: Trigonometry
or MATH 10: Applied Calculus
or MATH 20: Contemporary Mathematics
EDPS 459 Statistical Methods
or STAT 218 Introduction to Statistics

Credit Hours Subtotal: 5

Communications

Written Communication
Select one of the following: 3

1 Students should work with an advisor.
2 No grades lower than C+ within professional education courses.

ATS Credit Requirements for BS Degree in Agricultural Education 60
Maximum Credits for Transfer into UNL 1 60
Minimum Credit Hours Required for Graduation 120

1 See website http://agedteaching.unl.edu/ats-2-2-programs.
### Agricultural Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 305</td>
<td>Presentation Strategies for Agricultural Audiences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 422</td>
<td>Facilitation and Project Planning</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>COMM 220</td>
<td>Public Advocacy and Civic Engagement</td>
<td></td>
</tr>
<tr>
<td>CYAF 380</td>
<td>Working with Families in Communities and Schools</td>
<td></td>
</tr>
<tr>
<td>EDPS 250</td>
<td>Fundamentals of Child Development for Education</td>
<td></td>
</tr>
<tr>
<td>EDPS 251</td>
<td>Fundamentals of Adolescent Development for Education</td>
<td></td>
</tr>
<tr>
<td>EDPS 320</td>
<td>Happiness and Well-Being through Positive Psychology</td>
<td></td>
</tr>
<tr>
<td>EDPS 362</td>
<td>Learning in the Classroom (for elementary)</td>
<td></td>
</tr>
<tr>
<td>EDPS 450</td>
<td>Child Psychology</td>
<td></td>
</tr>
<tr>
<td>EDPS 451</td>
<td>Psychology of Adolescence</td>
<td></td>
</tr>
<tr>
<td>EDPS 454</td>
<td>Human Cognition and Instruction</td>
<td></td>
</tr>
<tr>
<td>EDPS 457</td>
<td>Learning and Motivation Principles for Secondary Teaching</td>
<td></td>
</tr>
<tr>
<td>POLS 261 / ANTH 261 / SOCI 261</td>
<td>Conflict and Conflict Resolution</td>
<td></td>
</tr>
<tr>
<td>PSYC 263</td>
<td>Introduction to Cognitive Processes</td>
<td></td>
</tr>
<tr>
<td>PSYC 288</td>
<td>The Psychology of Social Behavior</td>
<td></td>
</tr>
<tr>
<td>PSYC 289</td>
<td>Developmental Psychology</td>
<td></td>
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<tr>
<td>PSYC 368</td>
<td>Learning and Motivation</td>
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</tr>
<tr>
<td>PSYC 387</td>
<td>The Psychology of Personality</td>
<td></td>
</tr>
<tr>
<td>PSYC 446 / GER 446</td>
<td>Psychology of Adult Development and Aging</td>
<td></td>
</tr>
<tr>
<td>PSYC 460</td>
<td>Human Memory</td>
<td></td>
</tr>
<tr>
<td>PSYC 461</td>
<td>Learning Processes</td>
<td></td>
</tr>
<tr>
<td>PSYC 462</td>
<td>Motivation and Emotion</td>
<td></td>
</tr>
<tr>
<td>PSYC 463</td>
<td>Perception</td>
<td></td>
</tr>
<tr>
<td>PSYC 466</td>
<td>Attention and Performance</td>
<td></td>
</tr>
<tr>
<td>PSYC 483</td>
<td>Advanced Social Psychology</td>
<td></td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 9

### Ag/Science Literacy

Select two of the following: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 108</td>
<td>Food in Society</td>
</tr>
<tr>
<td>ALEC 125</td>
<td>Land, Food and People</td>
</tr>
<tr>
<td>ENVR 249</td>
<td>Individual and Cultural Perspectives on the Environment</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 6

### Minor

Suggested minors are: any CASNR minor, CYAF, HRTM, international/global studies, human rights/humanitarian affairs, community and regional planning, business minor, education minor, psychology, sociology, communication studies

**Credit Hours Subtotal:** 12-18

### Free Electives

Select 9-20 hours

**Credit Hours Subtotal:** 9-20

**Total Credit Hours:** 120

1. If MATH 103 College Algebra and Trigonometry is taken, only 2 credit hours can be counted toward this requirement.
2. Prerequisites are noted behind the course.
3. These courses are waived if a CASNR minor or CASNR double degree program is chosen. Add 6 hours to electives.
4. The leadership and communication minor and the leadership and entrepreneurship minor are not permitted.

### Additional Major Requirements

#### Grade Rules

**Pass/No Pass**

The college will permit no more than a total of 24 semester hours of Pass/No Pass grades to be applied toward degree hours. Please note that this total includes ALEC 431 Student Teaching which is 12 hours of Pass/No Pass, therefore, students can only complete 12 credit hours in other courses with a Pass/No Pass grade.

### Requirements for Minor Offered by Department

**Leadership and Communication Minor**

An 18-hour minor in leadership and communication is available through the Department of Agricultural Leadership, Education and Communication. Combining a leadership and communication minor with any CASNR degree strengthens students’ “employability” base by making them competent technical professionals who are also strong leaders and effective communicators.

**Students earning a minor in leadership and communication will be able to:**

- Competently apply leadership knowledge and skills at the individual, team and organizational levels.
- Develop a level of self-awareness as well as the cognitive and emotional ability to effectively work with people from diverse backgrounds and perspectives.
- Develop communication competencies to effectively advocate, negotiate, and/or relate in a variety of contexts.
- Develop and practice using critical thinking skills related to leadership and communication in order to effectively influence others.

The 18-hour minor is comprised of upper and lower division courses as follows:

Select three of the following: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
</tr>
<tr>
<td>ALEC 202</td>
<td>Foundations of Leadership Theory and Practice</td>
</tr>
<tr>
<td>ALEC 302</td>
<td>Dynamics of Effective Leadership in Organizations</td>
</tr>
<tr>
<td>ALEC 305</td>
<td>Presentation Strategies for Agricultural Audiences</td>
</tr>
</tbody>
</table>

Select three of the following: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 337</td>
<td>Instructional Internship in Leadership Development</td>
</tr>
<tr>
<td>ALEC 388 / AECN 388</td>
<td>Ethics in Agriculture and Natural Resources</td>
</tr>
<tr>
<td>ALEC 407</td>
<td>Supervisory Leadership</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 18
Leadership Courses
Select one theory-based course of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 202</td>
<td>Foundations of Leadership Theory and Practice</td>
</tr>
<tr>
<td>ALEC 302</td>
<td>Dynamics of Effective Leadership in Organizations</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>Leadership and Motivation</td>
</tr>
<tr>
<td>ALEC 488</td>
<td>Leadership, Power and Influence</td>
</tr>
</tbody>
</table>

Select one application course of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 407</td>
<td>Supervisory Leadership</td>
</tr>
<tr>
<td>ALEC 410 /</td>
<td>Environmental Leadership</td>
</tr>
<tr>
<td>NRES 413</td>
<td></td>
</tr>
<tr>
<td>ALEC 422</td>
<td>Facilitation and Project Planning</td>
</tr>
</tbody>
</table>

Entrepreneurship Courses
Select one foundational course of the following: 3-4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUS 388</td>
<td>Agribusiness Entrepreneurship</td>
</tr>
<tr>
<td>EAEP 101</td>
<td>and Introductory Seminar on Opportunities in Entrepreneurship</td>
</tr>
<tr>
<td>AGRO 388</td>
<td>Agribusiness Entrepreneurship</td>
</tr>
<tr>
<td>EAEP 101</td>
<td>and Introductory Seminar on Opportunities in Entrepreneurship</td>
</tr>
<tr>
<td>HORT 388</td>
<td>Agribusiness Entrepreneurship</td>
</tr>
<tr>
<td>EAEP 101</td>
<td>and Introductory Seminar on Opportunities in Entrepreneurship</td>
</tr>
<tr>
<td>ENTR 388</td>
<td>Agribusiness Entrepreneurship</td>
</tr>
<tr>
<td>EAEP 101</td>
<td>and Introductory Seminar on Opportunities in Entrepreneurship</td>
</tr>
<tr>
<td>EAEP 275</td>
<td>Agribusiness Entrepreneurial Finance</td>
</tr>
</tbody>
</table>

Select one application course of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AECN 275 /</td>
<td>Agribusiness Entrepreneurial Finance</td>
</tr>
<tr>
<td>AGRO 275 /</td>
<td></td>
</tr>
<tr>
<td>EAEP 275 /</td>
<td></td>
</tr>
<tr>
<td>ENTR 275 /</td>
<td></td>
</tr>
<tr>
<td>HORT 275</td>
<td></td>
</tr>
<tr>
<td>EAEP 488 /</td>
<td></td>
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<td>ABUS 488 /</td>
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<td>ENTR 488 /</td>
<td></td>
</tr>
<tr>
<td>HORT 488</td>
<td></td>
</tr>
<tr>
<td>ENTR 321 /</td>
<td>Entrepreneurship and Innovation in Organizations</td>
</tr>
<tr>
<td>MNGT 321</td>
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</tr>
<tr>
<td>ENTR 421 /</td>
<td>Identifying and Exploring Entrepreneurial Opportunities</td>
</tr>
<tr>
<td>MNGT 421</td>
<td></td>
</tr>
<tr>
<td>EAEP 225 /</td>
<td>Agribusiness Entrepreneurship in Food Products Marketing</td>
</tr>
<tr>
<td>AECN 225 /</td>
<td></td>
</tr>
<tr>
<td>MRKT 225</td>
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Experiential Learning in Leadership and/or Entrepreneurship
Select one of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AGRI 310</td>
<td>Study Tours in International Agriculture</td>
</tr>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
</tr>
<tr>
<td>ALEC 153</td>
<td>Chancellor’s Leadership Class</td>
</tr>
<tr>
<td>ALEC 165</td>
<td>Pepsi Service Scholars</td>
</tr>
<tr>
<td>ALEC 337</td>
<td>Instructional Internship in Leadership Development</td>
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<td>ENTR 322 /</td>
<td>Family Business</td>
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<td>MNGT 322</td>
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<td>ENTR 422A /</td>
<td>Small Business Owner</td>
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<td>MNGT 422A</td>
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<td>or ENTR 422</td>
<td>Managing Rapid Growth and Change in Organizations</td>
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<td>MNGT 422</td>
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<td>MNGT 423</td>
<td>Business Plan Development and Decision</td>
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<td>ENTR 423</td>
<td>Making</td>
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</table>

1. ENGR 100 Interpersonal Skills for Engineering Leaders, ALEC 153 Chancellor’s Leadership Class, or ALEC 165 Pepsi Service Scholars can be used in place of ALEC 102 Interpersonal Skills for Leadership. Not more than 3 credit hours of ALEC 102, ALEC 153, ALEC 165 or ENGR 100 can be applied to meet the minor requirements.

2. For students who have been selected as teaching assistants.

3. May be substituted for Air Force ROTC students only.
Internship in Leadership and/or Entrepreneurship
Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ALEC 496</td>
<td>Independent Study in Leadership Education (Field Experience)</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 395</td>
<td>Agribusiness Entrepreneurship Internship</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

Total Credit Hours: 18-19

1. Junior standing is required for these four courses.
2. With 20-hour service learning project.
3. Credit received for being a teaching assistant.

Students who wish to minor in leadership and communication must first meet with a Department of Agricultural Leadership, Education and Communication (ALEC) faculty member from the leadership program. Students who wish to minor in leadership and entrepreneurship must meet with either an ALEC or Engler Agribusiness Entrepreneurship Program faculty member. A completed Declaration of Minor form, filled out with the assistance of the faculty member, should be signed by the student’s academic advisor and turned into the College of Agricultural Sciences and Natural Resources Dean’s office.

ALEC 101 Mechanical Drafting
**Description:** Develop expertise in the use of drafting equipment, geometric construction, orthographic projections, dimensioning, and the application of American National Standards Institute (ANSI) standards.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC

ALEC 102 Interpersonal Skills for Leadership
**Description:** Introduction to the principles and practices of positive interpersonal relationships for leadership development. Self-awareness, awareness of others, effective interpersonal communication, and the building of trust relationships as a basis for understanding and developing leadership. An experiential approach, field projects and a supervised service project. Open to freshman or sophomores or Agricultural Leadership, Education & Communication degree students or Leadership & Communication minor students or Leadership & Entrepreneurship minor students.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC

**ACE:** ACE 2 Communication Competence

ALEC 103 Computer-Aided Drafting
**Prerequisites:** ALEC 122.
**Description:** Applying computer commands to create two-dimensional engineering and architectural drawings.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC

**ACE:** ACE 6 Social Science

ALEC 104 Wood Technology
**Description:** Fundamental woodworking tools and processes. Hand tool, lathe and machine related projects.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC

ALEC 105 Introduction to Engineering Design (IED)
**Prerequisites:** This course is the first course in the Project Lead the Way pre-engineering program and requires no prerequisite.

**Notes:** This is a secondary course training option for pre service teachers in Skilled and Technical Sciences. It is a STEM skill requirement for the 2+2 articulation agreement with various community colleges across the state of Nebraska. By allowing pre-service teachers to complete this course, students can reverse transfer the credit back to the community colleges to enforce rigorous training needs in the STEM field for future STS teachers coming out of the ALEC department.

**Description:** Students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3d modeling software, and use an engineering notebook to document their work.

- **Credit Hours:** 4
- **Max credits per semester:** 4
- **Max credits per degree:** 4
- **Format:** LAB

**Prerequisite for:** ALEC 115

ALEC 108 Food in Society
**Description:** An introduction to the systems required to produce, distribute and sell the food that sustains life. The course provides the opportunity to learn from international experts who specialize in the sources, production, safety, distribution, culture, sale, politics and consumption of food worldwide.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC

**ACE:** ACE 6 Social Science

ALEC 109 Industrial Metals and Plastics Materials Processing
**Description:** Forming, molding, separating, and fabricating of industrial materials.

- **Credit Hours:** 3
- **Max credits per semester:** 3
- **Max credits per degree:** 3
- **Format:** LEC
ALEC 115 Principles of Engineering (POE)
Prerequisites: ALEC 105, Introduction To Engineering Design is a prerequisite
Notes: This course is the second foundational course taught in the Project Lead the Way pre-engineering curriculum. Students that complete this course will be certified to teach both foundational courses in any secondary PLTW pre-engineering program across the country. This certification gives UNL STS students in the ALEC department a rigorous STEM skill set. Once the course is completed the credit will be reverse transferred back to the community college to fulfill the STEM skill requirement of the 2+2 articulation agreements established with UNL and the ALEC department.
Description: Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.
Credit Hours: 5
Max credits per semester: 5
Max credits per degree: 5
Format: LAB

ALEC 122 Architectural Drafting
Prerequisites: ALEC 101.
Description: Basic skills in the construction of architectural drawings, plot plans, elevation view, wall and floor sections, and roof construction. Architectural modeling.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 125 Land, Food and People
Description: Analyze and synthesize information about the dynamic relationships of land, food, and people and the impacts of human decisions on renewable and non-renewable resources from a local and global perspective.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ACE: ACE 8 Civic/Ethics/Stewardship

ALEC 134 Agricultural Leadership, Education and Communication Careers
Description: Explore the career opportunities available in agricultural leadership, education and communication focusing on agribusiness, industry training positions, secondary agriscience instruction, extension education, agricultural and environmental sciences communication, and international agricultural education. Course has guest speakers and field trips.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Format: LEC

ALEC 135 Early Field Experience in Agricultural Leadership, Education and Communication
Prerequisites: Agricultural leadership, education and communication major or permission
Description: An exploration of the history, philosophy, goals, and objectives of career and Technical Education, more specifically, School-Based Agricultural Education. An introduction to lesson plan development, objective/essential question writing, and peer teaching will provide knowledge and skills that will be used in an early field experience. The early field experience will provide a platform for critical reflection that will help mold future agricultural teachers.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 135A Introduction to Skilled and Technical Sciences Education
Description: This is an introduction to basic lesson plan development, objective writing, and teaching in Skilled and Technical Sciences. A 40-hour early field experience in a Skills USA affiliated STS education program is required. The early field experience explores teaching as a potential career.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Format: FLD

ALEC 136 Fundamentals of Agricultural and Environmental Sciences Communication
Description: Introduction to the study of agricultural and environmental sciences communications. Strategies and techniques for success in the major and college courses generally using a systems thinking approach, fundamental concepts of communicating information related to science, environment, agriculture and natural resources to internal and external audiences, and job shadowing experience to help prepare for careers in the field.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 153 Chancellor's Leadership Class
Prerequisites: Admission to the Chancellor's Leadership Class program
Description: Leadership development. Understanding of self, develop leadership knowledge, and how to make a difference in the community.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 165 Pepsi Service Scholars
Prerequisites: Pepsi Scholarship for Outstanding Leadership and Service recipient
Notes: Requires 2 to 3 hours per week of outside of class time in community service.
Description: Civic and social responsibility through service-learning programming. Introduction to civic life, civic agent, and life-long service.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ACE: ACE 8 Civic/Ethics/Stewardship
ALEC 189H University Honors Seminar
Prerequisites: Good standing in the University Honors Program or by invitation.
Description: Topic varies.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 200 Writing for Agriculture and Natural Resources
Prerequisites: Major or minor in Agricultural and Environmental Sciences Communication (AESC)
Description: Application of generally accepted practices for students desiring a communications career in agricultural and/or environmental sciences. Associated Press writing style, audience analysis, interviewing skills, writing mechanics, nuances of both verbal and nonverbal communication and professional collaboration.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 201 Writing for Agriculture and Natural Resources
Description: Introduction to electricity and/or electronics and their applications to industry. AC and DC circuit design, construction, and analysis.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 202 Foundations of Leadership Theory and Practice
Description: Foundational knowledge of leadership theory and its relationship to the practice of leadership. Resolve complex leadership challenges by evaluating the intersection between leader, follower, and context. Critically assess real-world situations and make decisions about what theoretically-based leadership skills and behaviors are most likely to be effective. ALEC 202 will be offered both in face-to-face and online formats during fall and spring semesters and will be offered only online during the summer 8-week session.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Prerequisite for: ALEC 422

ALEC 203 Automotive Technology
Description: Automotive technology and the equipment related to automotive repairs. The design, theory, and operations of automotive systems through laboratory activities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 204 Machine Tool Technology
Description: Basic machine shop practices involving hand and precision measuring tools, bench work, layout, engine lathe, milling machine, surface and pedestal grinders.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 205 Welding Technology
Description: Basic knowledge and skill in both oxygen-acetylene welding and cutting, and electrical arc welding.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 207 Communicating to Public Audiences
Crosslisted with: ADPR 207
Prerequisites: College of Agricultural Sciences and Natural Resources (CASNR) completion of all CASNR core communications course requirements.
Description: Concepts and techniques of public relations. Skills and theory for relating to government, corporate, and other agricultural public audiences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 207 Planning Leadership and Experience Programs
Prerequisites: Sophomore standing and ALEC 134 and/or 135.
Description: Theory of experiential education to middle school and secondary agricultural education programs, especially leadership and career education. Development of Supervised Agricultural Experiences (SAE), Young Adult/Farmer, FFA, and alumni activities, appropriate to the community, school, and student needs using electronic technology in learning how to teach Nebraska's agricultural education financial management system.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 234 Planning Leadership and Experience Programs
Prerequisites: Sophomore standing and ALEC 134 and/or 135.
Description: Theory of experiential education to middle school and secondary agricultural education programs, especially leadership and career education. Development of Supervised Agricultural Experiences (SAE), Young Adult/Farmer, FFA, and alumni activities, appropriate to the community, school, and student needs using electronic technology in learning how to teach Skilled and Technical Science courses supported by Skills USA. This course will provide the work based learning credit (006.34D3) for the Industrial Technology Education Field Endorsement, and STS Supplemental endorsements. This course includes 20 hours of SkillsUSA field experience.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Groups: Introductory
ALEC 240 Digital Photography and Visual Communication for Agriculture and the Environment
Prerequisites: Students must be an AESC major or minor. Otherwise, instructor permission is required.
Description: Digital photography theory and tools to deliver science-based agricultural and environmental information for diverse audiences. Develop an understanding of and apply digital photography concepts such as composition, lighting, landscape, portrait, and editing in the development of a final photo essay project for a real-world audience.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 241 Mobile Video Production of Agricultural and Environmental Issues
Prerequisites: AESC major or minor. Otherwise, instructor permission required.
Notes: This is a blended learning course. We will meet face-to-face once a week to develop our projects. We will also participate in weekly online activities such as readings, discussion boards, wikis, etc.
Description: Use mobile devices to research agricultural and environmental science topics, conduct and record video interviews with scientists about controversial scientific topics, record footage in science labs and field sites, and produce final videos for real-world audiences. Gain experience with digital storytelling theory and techniques.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 242 Construction Technology
Prerequisites: ALEC 104.
Description: Classifications, properties, and uses of common construction materials and building practices. Construction of a residential dwelling from plot plan through trim and finish work.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 243 Fine Woodworking
Prerequisites: ALEC 104.
Description: Woodworking special processes. Furniture design, frame and panel construction, veneering and steam bending. Project design and construction on an individual project serve as the final assessment.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 246 Modern Industries
Prerequisites: ALEC 204.
Description: CNC (Computer Numerical Control) programming for tool making to include milling, computer aided manufacturing and/or drafting and/or design and electrical discharge machines.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 302 Dynamics of Effective Leadership in Organizations
Prerequisites: Open to sophomores or above.
Description: Principle and process of effective leadership in complex organizations of society and commerce. Dynamic interactions of personal characteristics, technical skills, interpersonal influence, commitment, goals and power.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 303 Energy, Power and Transportation Technology
Prerequisites: ALEC 101, 109, 203, 204, and 205.
Notes: ALEC 303 is a synthesis of skill-based courses for Industrial Technology Education (ITE) majors.
Description: Design, construct, and test a one-person electric vehicle. Enter the vehicle in a statewide competition.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 305 Presentation Strategies for Agricultural Audiences
Prerequisites: JGEN 200 or 300.
Description: Presentation strategies used in agribusiness, education, government and public service. Attention to audience need, organization, methodology and management of presentation resource, especially electronic technology.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 308 Laboratory Instruction and Management
Prerequisites: 6 hrs mechanized systems management; advanced standing
Notes: Student demonstrations and presentations required.
Description: Planning, conducting, and administering the instructional programs related to experientially based education in school laboratory settings. Variety of laboratory settings, including agricultural mechanics, greenhouse, soils, etc.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 330 Foundations of Cooperative Extension
Prerequisites: Junior standing.
Description: Cooperative Extension in a variety of settings and its role in the land-grant mission. Processes for developing and conducting need-driven, research-based, extension programs. Relationships with public and private agencies. Strategies for volunteerism.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ALEC 331 Supervised Field Experiences
Prerequisites: Junior or senior by application.
Description: Field course of supervised observation and participation with various phases of agricultural education and/or agribusiness.
Credit Hours: 2-5
Min credits per semester: 2
Max credits per semester: 5
Max credits per degree: 10
Format: FLD

ALEC 337 Instructional Internship in Leadership Development
Prerequisites: Permission.
Description: A structured professional and personal development experience. Small group facilitation and instructional assistance in leadership development courses.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: FLD

ALEC 340 Advanced Machine Woodworking
Prerequisites: ALEC 243
Notes: ALEC 340 is a continuation of ALEC 243.
Description: Machine woodworking on a major individual project. Wood finishing and maintenance of hand and power tools.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 341 Podcasting to Increase Science Literacy
Prerequisites: AESC majors and minors. Otherwise, instructor permission is required.
Notes: This is a blended learning course. We will meet face-to-face once a week to develop our projects. We will also participate in weekly online activities such as readings, discussion boards, wikis, etc.
Description: Analysis and research of science literacy concepts, how to engage in public conversations about controversial issues, how to interview scientists, how to edit scientific audio interviews, and how to ultimately produce a podcast series with the goal of increasing the public’s science literacy. Offered in the spring semester of odd years.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 346 Advanced Computer Aided Drafting and Design
Prerequisites: ALEC 101 or 103.
Description: Introduction to 3D modeling using sketching and Inventor software.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 350 Agriculture, the Environment & Science in the Media
Prerequisites: Completion of ACE 1 and ACE 2 coursework
Notes: Recommended for junior level students and above.
Description: How agriculture, the environment, and science are covered in media by news media outlets. Use of framing theory as a foundation to understand why messages are crafted in certain ways, how and why news media portray topics and issues using certain metaphors and story lines. Creation of effective media messages related to topics using framing, how to handle and respond to media requests, and interact with members of the media.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 388 Ethics in Agriculture and Natural Resources
Crosslisted with: AECN 388
Description: Ethics focusing on agricultural and natural resource issues. Using case studies from the professional workplace and contemporary society, develops intellectual skills necessary to reflect critically on ethical issues and apply appropriate conceptual tools for resolution of issues arising from conflicting ethical and value systems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ACE: ACE 8 Civic/Ethics/Stewardship

ALEC 390 Industrial Experience
Prerequisites: Permission.
Description: Occupational experience or supervised occupational experience in conjunction with directed observation.
Credit Hours: 1-6
Min credits per semester: 1
Max credits per semester: 6
Max credits per degree: 6
Format: FLD

ALEC 393 Digital Imaging and Storytelling in Agriculture and Natural Resources
Crosslisted with: NRES 393
Prerequisites: Consent of instructor(s). One college level course in photography or equivalent, and knowledge of the basics of shooting still photographs or video using digital cameras. Open only to College of Agricultural Sciences and Natural Resources students.
Notes: Can be repeated for a maximum of 9 credit hours by consent of instructor.
Description: Concepts and techniques related to use of remote and automated digital camera technology to capture images in agriculture and natural resources contexts to communicate a narrative/story. Completion of individual project using a variety of technologies including camera traps, time-lapse camera systems, remote triggered cameras, as well as traditional audio and video and conventional photography.
Credit Hours: 1-9
Min credits per semester: 1
Max credits per semester: 9
Max credits per degree: 9
Format: LAB
ALEC 397 Special Topics  
**Prerequisites:** Permission.  
**Description:** Readings; in depth discussions; analysis of current theory, issues, problems, research and practice in leadership, education and/or communication. Topics vary.  
**Credit Hours:** 1-3  
**Min credits per semester:** 1  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 399 Independent Study in Communications  
**Prerequisites:** Permission and advance approval of plan of work.  
**Description:** Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member.  
**Credit Hours:** 1-3  
**Min credits per semester:** 1  
**Max credits per semester:** 3  
**Max credits per degree:** 12  
**Format:** IND

ALEC 400 Overview to Program Planning  
**Crosslisted with:** ALEC 800  
**Prerequisites:** ALEC 305 or ALEC/TEAC 805/NUTR 806.  
**Notes:** ALEC 400/800 is designed for individuals interested in developing and/or improving program planning skills.  
**Description:** Theoretical and applied considerations for identifying content, design, implementation, and evaluation of educational programs that vary in length from several hours to several months.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 405 Methods of Instruction for Secondary Agriscience Education  
**Prerequisites:** Senior standing and 3 hrs educational psychology, or permission.  
**Description:** Instructional delivery of a secondary agricultural education program in the public school system. Organizing instructional content, individual lesson planning, methods of formal instructional delivery, student behavior management, instructing the handicapped and disadvantaged, and student testing. Considerable time is spent on undergraduates demonstrating instructional delivery.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 405L Methods of Instruction Laboratory Education  
**Prerequisites:** Admission to the teaching program in agricultural education and parallel registration in ALEC 405.  
**Description:** Laboratory exercises that complement material covered in ALEC 405. Involve practice teaching at either the middle or secondary school level.  
**Credit Hours:** 1  
**Max credits per semester:** 1  
**Max credits per degree:** 1  
**Format:** LAB

ALEC 407 Supervisory Leadership  
**Crosslisted with:** ALEC 807, CYAF 807  
**Prerequisites:** ALEC 302.  
**Description:** 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.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 410 Environmental Leadership  
**Crosslisted with:** ALEC 810, NRES 413, NRES 813  
**Prerequisites:** Junior Standing  
**Notes:** Offered on the World Wide Web (WWW) fall semester of odd-numbered years and in the classroom fall semester of even numbered-years.  
**Description:** Major leaders in conservation and ecology that emphasizes agricultural and cultural issues and relationships with the environment.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 412 Multimedia Applications for Education and Training  
**Crosslisted with:** ALEC 812, NUTR 812  
**Description:** 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.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 413 Program Development  
**Prerequisites:** Junior standing and acceptance into the student teaching program in agricultural education  
**Description:** Planning, marketing and managing formal and non-formal educational programs for youth and adults. The learning process applied to learner needs and styles. Building collaborative relationships.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC

ALEC 414 Classic Figures in Leadership  
**Crosslisted with:** ALEC 814  
**Prerequisites:** Junior standing.  
**Description:** Leadership theory in an applied context. Leadership analyzed through a variety of genres: autobiography, drama, fiction, tracts and treaties, speeches.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Format:** LEC
ALEC 417 Issues Management and Crisis Communications in Agriculture
Crosslisted with: ADPR 417
Prerequisites: Junior standing. College of Journalism and Mass Communications: Junior standing; ADPR 283.
Description: Fundamental components of issues management and crisis communications. Learning experiences in agriculture and natural resources that provide an understanding of issues facing the respective field of study.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Prerequisite for: ASCI 381

ALEC 420 Improvement of Instructional Programs for Post-High-School Occupational Education
Crosslisted with: ALEC 820
Description: Designing new instructional programs, expanding the impact of student behavioral objectives, and evaluating the total instructional program.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 421 Agricultural & Environmental Sciences Communication Practicum
Prerequisites: Junior status. Major or minor in Agricultural and Environmental Sciences Communication. Students in the minor must have completed a minimum of 12 credits of minor coursework to enroll.
Description: This is a project course for students enrolled in the Agricultural and Environmental Communications program. It provides students the opportunity to develop, plan, and execute a project of their own design to showcase skills and knowledge gained through coursework. Students are guided by course instructor(s) and collaborate with additional identified faculty with appropriate expertise in agricultural sciences and natural resources.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 422 Facilitation and Project Planning
Prerequisites: ALEC 202 or equivalent and at least junior standing or permission.
Notes: The course will require travel to project sites, which are within 75 miles of Lincoln. At least 5 project visits are required, and more project visits may be required depending on the project. Generally, students work in pairs, so not all students need to be able to drive, and the instructor will try to create partnerships that facilitate traveling needs. However, if students cannot find transportation to a project site, they will not be able to complete the course.
Description: Foundational knowledge of project planning and facilitation. An experiential opportunity to facilitate a project within a community.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 424 Foundation of Career and Technical Education
Crosslisted with: ALEC 824
Description: Scope and structure of career and technical education within the educational system. Teacher's role and responsibilities in dealing with legislative mandates in planning, management, and evaluation of a local program.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 428 Leadership in Public Organizations
Crosslisted with: ALEC 828, NRES 428, NRES 828
Prerequisites: Junior standing
Description: Leadership in theories, research, and practices in public organizations and natural resource agencies.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 431 Student Teaching
Prerequisites: 3 hrs EDPS; passing score on the Preprofessional Skills Tests (PPST); and permission
Notes: Capstone course. Placement arranged by the department. Student teaching placement arranged by the department. Seven to sixteen weeks of off-campus student teaching. Pass/no pass only.
Description: Guided participation in various phases of a public school agricultural education program.
Credit Hours: 1-12
Min credits per semester: 1
Max credits per semester: 12
Max credits per degree: 12
Format: FLD
ACE: ACE 10 Integrated Product

ALEC 433 Dynamics of Effective Leadership in Groups & Teams
Crosslisted with: ALEC 833
Prerequisites: At least Junior standing or permission
Description: This course will cover the foundational knowledge of team and group dynamics theory and its relationship to the practice of leadership in organizations and communities. Development of leadership, followership, and teamwork skills in small groups and teams. Focus on team and group decision making, problem solving, and creativity, peer assessment, and evaluation using real-world situations and contexts. Critically apply team and group dynamic theories and research to leadership in organizations and communities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ALEC 444 Science Writing
Crosslisted with: JOMC 444, JOMC 844
Prerequisites: Permission
Notes: Open to all majors. Articles may be submitted for publication.
Description: 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.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 466 Leadership and Diversity in Organizations and Communities
Crosslisted with: ALEC 866
Prerequisites: Junior standing.
Description: Leadership theories and their applications to human diversity in organizations and communities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 477 Leadership and Motivation
Crosslisted with: ALEC 877
Description: Classic and contemporary motivation theories applied to leadership in organizations and communities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 480 Capstone Experience in Agricultural and Environmental Sciences Communication
Prerequisites: Consent of Instructor. Senior standing.
Notes: Requires interviews outside of class time.
Description: Investigate topics identified by IANR as critical to Nebraska agriculture and research, conduct interviews, write, edit, design and assist in the production of print and multimedia versions of the Strategic Discussions for Nebraska publication. Emphasis on factual, complete, accurate and clear communication of complex scientific and sociologically important issues in Nebraska agriculture. Learning to communicate research and science-based agricultural concepts to public audiences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
ACE: ACE 10 Integrated Product

ALEC 488 Leadership, Power and Influence
Crosslisted with: ALEC 888
Description: Organizational influence processes, power, and politics in organizations and communities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 494 Undergraduate Seminar in Agricultural Education
Description: Philosophy and relationship of agricultural education in the public schools. Development and coordination of adult and continuing agricultural education programs.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

ALEC 495A Internship in Leadership Development
Prerequisites: Junior standing; ALEC 302; Agricultural Education major; and permission.
Notes: Agricultural Education majors must take ALEC 495A for 'Pass/No Pass'. Capstone course.
Description: Internship in a selected agribusiness, industry, or agency. Collaboration development of a training program and leadership activities.
Credit Hours: 3-6
Min credits per semester: 3
Max credits per semester: 6
Max credits per degree: 6
Format: FLD
ACE: ACE 10 Integrated Product

ALEC 495B Internship in Agricultural and Environmental Sciences Communication
Prerequisites: Junior standing; Agricultural and Environmental Sciences Communication major; and permission
Notes: ALEC 495B is taken the second semester of the junior year or in the summer following the junior year. Department approval is required. ALEC 495B cannot be taken Pass/No Pass.
Description: Internship experience with an organization selected by student and approved by instructor in an agricultural or environmental sciences organization where the focus of the internship is related broadly to communications.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: FLD

ALEC 496 Independent Study in Leadership Education
Crosslisted with: ALEC 896
Prerequisites: Permission.
Description: Projects to research, literature review, or extension of course work.
Credit Hours: 1-9
Min credits per semester: 1
Max credits per semester: 9
Max credits per degree: 9
Format: IND

ALEC 499H Honors Thesis
Prerequisites: Admission to the University Honors Program and permission, AGRI 299H recommended.
Description: Conduct a scholarly research project and write a University Honors Program or undergraduate thesis.
Credit Hours: 3-6
Min credits per semester: 3
Max credits per semester: 6
Max credits per degree: 6
Format: IND

PLEASE NOTE
This document represents a sample 4-year plan for degree completion with this major. Actual course selection and sequence may vary and should be discussed individually with your college or department academic advisor. Advisors also can help you plan other experiences to enrich your undergraduate education such as internships, education abroad, undergraduate research, learning communities, and service learning and community-based learning.

Agricultural Education - Agricultural Leadership

Icon Legend: Critical

14 HR TERM 1

College Course

complete SCIL 101

3hr

ACE 1 Written

complete 1 from ENGL 150, ENGL 151, ENGL 254, JGEN 200, JGEN 300

3hr

Interpers Skills And Theory

complete ALEC 102

NaNhr

ALEC 102 becomes critical to your success in the major if not completed by the second term of enrollment.

ACE 3 Math/Statistics

complete 1 from MATH 102, MATH 103, MATH 104, MATH 106, MATH 203

5hr

Completion of a MATH 100 level course becomes critical to your success in the major if not completed by the second term of enrollment.

ACE 7 Arts

complete 1 from ACE7

3hr

16 HR TERM 2

Interpers Skills And Theory

complete ALEC 202

3hr

ALEC 202 becomes critical to your success in the major if not completed by the second term of enrollment.

12 HR TERM 3

Leadership Dynamics

complete ALEC 302

NaNhr

ALEC 302 becomes critical to your success in the major if not completed by the fourth term of enrollment.

Psyc Educ Psyc

complete ALEC 305

3hr

ACE 6 Economics

complete 1 from ECON 211, AECN 141, ECON 200, ECON 212

3hr
Ag Science Literacy
complete ALEC 108

**16 HR TERM 4**

**ACE 4 Life Science**
complete 1 from BIOS 109, AGRO 131, AGRO 132, BIOS 101, BIOS 101L, BIOS 112, BIOS 112L, ENTO 115, ENTO 116, FORS 120, FORS 120L, HORT 131, HORT 133, LIFE 120, LIFE 120L, LIFE 121, LIFE 121L, CHEM 105, CHEM 109, MSYM 109, PHYS 141, PHYS 151, BIOS 103L

Completion of 8 hours of the Natural Sciences requirement becomes critical to your success in the major if not completed by the end of the fourth term of enrollment. Requirement will be 4-5 credit hours

**Minor Reqt**
complete Any Course

**ACE 5 Humanities**
complete 1 from ACE5

**Psyc Educ Psyc**
complete 1 from COMM 220, CYAF 380, EDPS 250, EDPS 251, EDPS 320, EDPS 362, EDPS 450, EDPS 451, EDPS 454, EDPS 457, PSYC 263, PSYC 288, PSYC 289, PSYC 368, PSYC 387, PSYC 446, PSYC 460, PSYC 461, PSYC 462, PSYC 463, PSYC 466, PSYC 483

**Electives**
complete Any Course

**12 HR TERM 5**

**Leadership/Educ/ACE 8**
complete ALEC 407, ALEC 410, ALEC 477

**ACE 8 Ethical Principles**
complete ALEC 388

**ACE 9 Global/Human Divers**
complete 1 from ACE9

**Psyc Educ Psyc**
complete ALEC 422

**Electives**
complete Any Course

NaNhr

ALEC 388 becomes critical to your success in the major if not completed by the sixth term of enrollment.

**18 HR TERM 6**

**Ag Science Literacy**
complete either ALEC 125 or ENVR 249

**Leadership/Educ/ACE 8**
complete AECN 376, ALEC 466, ALEC 494

ALEC 494 becomes critical to your success in the major if not completed by the sixth term of enrollment.

**ACE 9 Global/Human Divers**
complete 1 from ACE9

**Psyc Educ Psyc**
complete ALEC 422

**Electives**
complete Any Course

6hr

**14 HR TERM 7**

**ACE 10 Capstone Course**
complete ALEC 495A

**Psyc Educ Psyc**
complete ALEC 422

**Electives**
complete Any Course
ALEC 414 recommended this term.

**20 HR TERM 8**

**Minor Req**

Complete any course

Complete a course towards Minor.

**Electives**

Complete any course

Complete elective course as needed.

**Leadership/Educ/ACE 8**

Complete ALEC 428, ALEC 433

**Graduation Requirements**

1. Performance Measure: 2.00 GPA required for graduation.

2. ***Total Credits Applying Toward 120 Total Hours***

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**Agricultural Education - Teaching**

Icon Legend: Critical

**18 HR TERM 1**

**College Course**

Complete SCIL 101

**ACE 3 Math/Statistics**

Complete 1 from MATH 102, MATH 103, MATH 104, MATH 106, MATH 203, STAT 218

Completion of a MATH 100 level course becomes critical to your success in the major if not completed by the second term of enrollment.

**ACE 1 Written**

Complete either ENGL 151 or JGEN 200

**ACE 4 Life Science**

Complete AGRO 131, AGRO 132

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Field Exp And Planning

Complete ALEC 135

3hr

C+

ALEC 135 becomes critical to your success in the major if not completed by the sixth term of enrollment.

**16 HR TERM 2**

**ACE 2 Oral Comm**

Complete either COMM 109 or COMM 286

3hr

**Comm/Interpersonal Skills**

Complete ALEC 102

3hr

ALEC 102 becomes critical to your success in the major if not completed by the sixth term of enrollment.

**ACE 6 Economics**

Complete AECN 141

3hr

**ACE 4 Physics**

Complete 1 from PHYS 141, PHYS 151, PHYS 211, MSYM 109

4hr

Completion of 8 hours of the Natural Sciences requirement becomes critical to your success in the major if not completed by the end of the fourth term of enrollment.

**Mechanized Systems**

Recommend 1 or more courses

3hr

Meet with advisor to plan your Mechanized Systems courses.

**16 HR TERM 3**

**ACE 4 Chemistry**

Complete either CHEM 105 or CHEM 109

4hr
Completion of 8 hours of the Natural Sciences requirement becomes critical to your success in the major if not completed by the end of the fourth term of enrollment.

**Mechanized Systems**

recommend 1 or more courses

Meet with advisor to plan your Mechanized Systems courses.

**CASNR Courses 36 Hrs**

Complete 1 from AECN 201, AECN 225, AECN 265, AECN 276, AECN 325, AECN 346, AECN 376, AGRI 115, AGRO 153, AGRO 204, AGRO240, AGRO 366, AGRO 405, AGRO 431, ASCI 100, ASCI 150, ASCI 210, ASCI 250, ASCI 320, ASCI 330, ASCI 450, ASCI 451, ASCI 453, ASCI 455, ASCI 457, BIOS 232, ENTO 109, FDST 101, FDST131#, HORT 131, HORT 133, HORT 221, HORT 325, HORT 327, MSYM 245, NRES 211, NRES 220, NRES 311, NRES 323, POLS 235, POLS 236

**ACE 8 Ethical Principles**

Complete 1 from ACE8

**ACE 9 Global/Human Divers**

Complete EDPS 457

**ACE 3 Math/Statistics**

Complete either STAT 218 or EDPS 459

**CASNR Courses 36 Hrs**

Complete 1 from AECN 201, AECN 225, AECN 265, AECN 276, AECN 325, AECN 346, AECN 376, AGRI 115, AGRO 153, AGRO 204, AGRO240, AGRO 366, AGRO 405, AGRO 431, ASCI 100, ASCI 150, ASCI 210, ASCI 250, ASCI 320, ASCI 330, ASCI 450, ASCI 451, ASCI 453, ASCI 455, ASCI 457, BIOS 232, ENTO 109, FDST 101, FDST131#, HORT 131, HORT 133, HORT 221.
HORT 325, HORT 327, MSYM 245, NRES 211, NRES 220, NRES 311, NRES 323, POLS 235, POLS 236

Electives
complete Any Course

Complete an ACE requirement this term.

14 HR TERM 6

Leadership/Education

complete ALEC 405, ALEC 405L, ALEC 494, SPED 401B

CASNR Courses 36 Hrs

complete 2 from AECN 201, AECN 225, AECN 265, AECN 276, AECN 325, AECN 346, AECN 376, AGRI 115, AGRO 153, AGRO 204, AGRO240, AGRO 366, AGRO 405, AGRO 431, ASCI 100, ASCI 150, ASCI 210, ASCI 250, ASCI 320, ASCI 330, ASCI 450, ASCI 451, ASCI 453, ASCI 455, ASCI 457, BIOS 232, ENTO 109, FDST 101, FDST131#, HORT 131, HORT 133, HORT 221, HORT 325, HORT 327, MSYM 245, NRES 211, NRES 220, NRES 311, NRES 323, POLS 235, POLS 236

6hr

ACE 10 Student Teaching

complete ALEC 431

3hr

Graduation Requirements

1. Performance Measure: 2.00 GPA required for graduation.
2. ***Total Credits Applying Toward 120 Total Hours***

Career Information

The following represents a sample of the internships, jobs and graduate school programs that current students and recent graduates have reported.

Jobs of Recent Graduates

• Agricultural Education Teacher/FFA Advisor, Ord Public Schools - Ord NE (teaching option only)
• Skilled and Technical Sciences Teacher, Hastings Public Schools - Hastings NE (skilled and technical education option only)
• Leadership Development Specialist, American Farm Bureau Federation - Washington DC
• Recruitment Coordinator/Human Resources Specialist, Rural Initiatives, University of Nebraska-Lincoln - Lincoln NE
• Learning Designer/Training Consultant, Vivayic - Lincoln NE
• Media Specialist, Kimmel Education and Research Center - Nebraska City NE
• Program Assistant, Nebraska Farm Bureau - Lincoln NE
• Extension Assistant, Nebraska Extension, Antelope County - Neligh NE
• Sales Representative, Dow AgroSciences - Indianapolis IN
• Farmhand, Jon Eberspacher - Beaver Crossing NE

18 HR TERM 7

CASNR Courses 36 Hrs

complete 4 from AECN 201, AECN 225, AECN 265, AECN 276, AECN 325, AECN 346, AECN 376, AGRI 115, AGRO 153, AGRO 204, AGRO240, AGRO 366, AGRO 405, AGRO 431, ASCI 100, ASCI 150, ASCI 210, ASCI 250, ASCI 320, ASCI 330, ASCI 450, ASCI 451, ASCI 453, ASCI 455, ASCI 457, BIOS 232, ENTO 109, FDST 101, FDST131#, HORT 131, HORT 133, HORT 221, HORT 325, HORT 327, MSYM 245, NRES 211, NRES 220, NRES 311, NRES 323, POLS 235, POLS 236

12hr

Electives
complete Any Course

Complete an ACE requirement this term and an additional Elective course.

12 HR TERM 8