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.

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. One-thousand (1,000) hours of verified paid work experience within their intended teaching endorsement area or 300 hours of supervised employment under the direction of a University of Nebraska–Lincoln academic unit.

Student Teaching (ALEC 431) 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 skilled and technical science (6-12). The choice is available to students completing an agricultural education endorsement to complete additional coursework 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 Nebraska 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. If any new charges or convictions are acquired after a background check has been completed, students are required to report those to the Director of Field Experiences immediately after the event occurs. Depending upon the infraction or change, an additional background check may be required at your cost. For more information, contact sskretta2@unl.edu. You are obligated to immediately report a change in criminal history. Background reviews must be completed through the CEHS vendor. See your advisor or practicum course instructor for necessary details to request and complete a background review.

College Requirements
College Admission
Requirements for admission into the College of Agricultural Sciences and Natural Resources (CASNR) 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 sciences, and 2 units of world language. Students must also meet performance requirements: a 3.0 cumulative high school grade point average OR an ACT composite of 20 or higher, writing portion not required OR a score of 1040 or higher on the SAT Critical Reading and Math sections 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 the University of Nebraska–Lincoln, or within the first calendar year at Nebraska, whichever takes longer, excluding foreign languages. Students have up to 60 credit hours to remove world language deficiencies. College-level coursework taken to remove deficiencies may be used to meet degree requirements in CASNR.

Deficiencies in the required entrance subjects can be removed by the 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 ensures that a student will meet the minimum curriculum requirements of the College.
World Languages/Language Requirement

Two units of a world 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. Some degree programs have a higher cumulative grade point average required for graduation. Please check the degree program on its graduation cumulative grade point average.

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 (withdrew), 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/ (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. Some degree programs have a higher cumulative grade point average required for graduation. Please check the degree program on its graduation cumulative grade point average.

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 (60) is the maximum number of hours the University will accept on transfer from a two-year college. Ninety (90) is the maximum number of hours the University 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 the University of Nebraska–Lincoln 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 the University of Nebraska–Lincoln.

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 the University of Nebraska–Lincoln 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 coursework. 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 at the community college, transfer to the University of Nebraska–Lincoln, 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
- Nebraska Indian Community College
- 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 the University of Nebraska–Lincoln 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 provide transcripts and complete the Application for Degree form via MyRED. Students without MyRED access may apply for graduation in person at Husker Hub in the Canfield Administration Building, or by mail.
Students should discuss these degree programs with their academic advisor.

**Cooperative Degree Programs**

Academic credit from the University and a cooperating institution are applied towards a four-year degree from either the University of Nebraska–Lincoln (University degree-granting program) or the cooperating institution (non University degree-granting program). All have approved programs of study.

**UNL Degree-Granting Programs**

A University of Nebraska–Lincoln 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 and a 3+1 program leading to a bachelor of science in Applied Science.

**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.** Transfer programs are available for students pursuing degree programs leading to a bachelor of science degree.

**Non University of Nebraska–Lincoln Degree-Granting Programs**

CASNR cooperates with other institutions to provide coursework 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 the University 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 coursework at Chadron State College and one year of specialized range science coursework (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 University of Nebraska–Lincoln credits. At least 18 of the 30 credit hours must be in courses offered through CASNR including the appropriate ACE 10 degree requirement or an approved ACE 10 substitution offered through another Nebraska 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 the University of Nebraska–Lincoln and participate in prior-approved education abroad programs. University of Nebraska–Lincoln open enrollment and summer independent study courses count toward residence.

1 Includes courses taught by CASNR faculty through interdisciplinary prefixes (e.g., LIFE, MBIO, ENVR, SCIL, EAEP, 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 coursework 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 ace.unl.edu (https://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.

**Catalog Rule**

Students must fulfill the requirements stated in the catalog for the academic year in which they are first admitted to the University of Nebraska–Lincoln or when they were first admitted to a Joint Academic Transfer Program. In consultation with advisors, a student may choose to follow a subsequent catalog for any academic year in which they are
Learning Outcomes
Graduates of 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 create 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.

Graduates of 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 Requirements
Teaching Option

College Integrative Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCIL 101</td>
<td>Science and Decision-Making for a Complex World (ACE 8)</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 431</td>
<td>Student Teaching (ACE 10)</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Credit Hours Subtotal:</td>
<td>15</td>
</tr>
</tbody>
</table>

Mathematics and Statistics (beyond college algebra)

Select 5-6 hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 103</td>
<td>College Algebra and Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or MATH 102 Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or MATH 104 Applied Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH 106</td>
<td>Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 459</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or STAT 218 Introduction to Statistics</td>
<td>3</td>
</tr>
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<td></td>
<td>Credit Hours Subtotal:</td>
<td>6</td>
</tr>
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</table>

Communications

Written Communication (ACE 1)

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 150</td>
<td>Writing and Inquiry</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 151</td>
<td>Writing and Argument</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 254</td>
<td>Writing and Communities</td>
<td>3</td>
</tr>
<tr>
<td>JGEN 200</td>
<td>Technical Communication I</td>
<td>3</td>
</tr>
<tr>
<td>JGEN 300</td>
<td>Technical Communication II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Oral Communication</td>
<td></td>
</tr>
<tr>
<td>COMM 209</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>or COMM 286</td>
<td>Business and Professional Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Communication/Interpersonal Skills (ACE 2)</td>
<td></td>
</tr>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Natural Sciences (ACE 4)</td>
<td></td>
</tr>
<tr>
<td>CHEM 105A</td>
<td>Chemistry in Context I</td>
<td>4</td>
</tr>
<tr>
<td>&amp; CHEM 105L</td>
<td>Chemistry in Context I Laboratory</td>
<td>4</td>
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<tr>
<td></td>
<td>CASNR Approved Life Sciences</td>
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<tr>
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<td>Select one of the following:</td>
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<tr>
<td>AGRO 131</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>HORT 131</td>
<td>Plant Science and Agronomic Plant Science Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>&amp; AGRO 132</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>HORT 131</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>AGRO 131</td>
<td>Plant Science and Horticultural Plant Science Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>&amp; HORT 133</td>
<td>Plant Science</td>
<td></td>
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<tr>
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<td>Select one of the following:</td>
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<tr>
<td>PHYS 141</td>
<td>Elementary General Physics I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 151</td>
<td>Elements of Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 211</td>
<td>General Physics I</td>
<td>3</td>
</tr>
<tr>
<td>MSYM 109</td>
<td>Physical Principles in Agriculture and Life Sciences</td>
<td>3</td>
</tr>
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<td>Credit Hours Subtotal:</td>
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Economics

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

Humanities and Social Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Humanities and Social Sciences</td>
<td></td>
</tr>
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</table>
Select one course each in ACE areas 5 and 7.  

Credit Hours Subtotal: 6

**Agricultural and Natural Resource Sciences (Endorsement Area)**

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AGRI 115</td>
<td>Biotechnology: Food, Health and Environment</td>
</tr>
<tr>
<td>AGRO 215 /</td>
<td>Genetics</td>
</tr>
<tr>
<td>HORT 215 /</td>
<td>Site-specific Crop Management</td>
</tr>
<tr>
<td>TLMT 215</td>
<td></td>
</tr>
<tr>
<td>AGRO 431 /</td>
<td></td>
</tr>
<tr>
<td>AGRO 431 /</td>
<td></td>
</tr>
<tr>
<td>MSYM 431</td>
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**Research and Applied Technology**

Select one of the following:  

<table>
<thead>
<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>NREE 265</td>
<td></td>
</tr>
<tr>
<td>AECN 345</td>
<td>Policy Issues in Agriculture and Natural Resources</td>
</tr>
<tr>
<td>AECN 376</td>
<td>Rural Community Economics</td>
</tr>
<tr>
<td>NRES 323</td>
<td>Natural Resources Policy</td>
</tr>
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**Policy**

Select one of the following:  

<table>
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<th>Course Title</th>
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<tbody>
<tr>
<td>AECN 367</td>
<td>Policy Issues in Agriculture and Natural Resources</td>
</tr>
<tr>
<td>NRES 323</td>
<td>Natural Resources Policy</td>
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**Production and Management**

Select 3 hours from each of the following four subject areas:  

<table>
<thead>
<tr>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>MRKT 225</td>
<td></td>
</tr>
<tr>
<td>AECN 235</td>
<td>Introduction to Commodity Marketing</td>
</tr>
<tr>
<td>AECN 325 /</td>
<td>Marketing of Agricultural Commodities</td>
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<tr>
<td>MRKT 325</td>
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</table>

**Agribusiness**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>AECN 201</td>
<td>Farm and Ranch Management</td>
</tr>
<tr>
<td>AECN 225 /</td>
<td>Agribusiness Entrepreneurship in Food Products Marketing</td>
</tr>
<tr>
<td>EAEP 225 /</td>
<td>Products Marketing</td>
</tr>
<tr>
<td>MRKT 225</td>
<td></td>
</tr>
<tr>
<td>AECN 235</td>
<td>Introduction to Commodity Marketing</td>
</tr>
<tr>
<td>AECN 325 /</td>
<td>Marketing of Agricultural Commodities</td>
</tr>
<tr>
<td>MRKT 325</td>
<td></td>
</tr>
</tbody>
</table>

**Animal Systems**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>ASCI 100</td>
<td>Fundamentals of Animal Biology and Industry</td>
</tr>
<tr>
<td>ASCI 250</td>
<td>Animal Management</td>
</tr>
<tr>
<td>ASCI 330</td>
<td>Animal Breeding and Genetics</td>
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</tbody>
</table>

**Natural Resources & Environmental Service Systems**

<table>
<thead>
<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>NREE 265</td>
<td></td>
</tr>
<tr>
<td>AECN 357 /</td>
<td>Natural Resource and Environmental Law</td>
</tr>
<tr>
<td>NREE 357</td>
<td></td>
</tr>
<tr>
<td>AGRO 153 /</td>
<td>Soil Resources</td>
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<tr>
<td>HORT 153 /</td>
<td></td>
</tr>
<tr>
<td>SOIL 153</td>
<td></td>
</tr>
<tr>
<td>AGRO 245 /</td>
<td>Introduction to Grassland Ecology and Management</td>
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<tr>
<td>NRES 245</td>
<td></td>
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<tr>
<td>AGRO 366 /</td>
<td>Soil Nutrient Relationships</td>
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<td>SOIL 366</td>
<td></td>
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<tr>
<td>AGRO 435 /</td>
<td>Agroecology</td>
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<td>HORT 435 /</td>
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<tr>
<td>NRES 435</td>
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<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>
<tr>
<td>NRES 311</td>
<td>Wildlife Ecology and Management</td>
</tr>
<tr>
<td>AGRO 204</td>
<td>Resource-Efficient Crop Management</td>
</tr>
<tr>
<td>AGRO 240 /</td>
<td>Forage Crop and Pasture Management</td>
</tr>
<tr>
<td>RNGE 240</td>
<td></td>
</tr>
<tr>
<td>HORT 212 /</td>
<td>Woody Plants for Landscapes: Identification, Management, and Use</td>
</tr>
<tr>
<td>NRES 212 /</td>
<td></td>
</tr>
<tr>
<td>LARC 212</td>
<td></td>
</tr>
<tr>
<td>HORT 221</td>
<td>Plant Propagation</td>
</tr>
<tr>
<td>HORT 227 /</td>
<td>Introductory Turfgrass Management</td>
</tr>
<tr>
<td>AGRO 227 /</td>
<td>and Introductory Turfgrass Management</td>
</tr>
<tr>
<td>TLMT 227</td>
<td>Laboratory</td>
</tr>
<tr>
<td>HORT 299</td>
<td></td>
</tr>
<tr>
<td>HORT 306</td>
<td>Greenhouse Practices and Management</td>
</tr>
</tbody>
</table>

**Power, Structural & Technical Systems**

Select 9 hours of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSYM 232</td>
<td>Power and Machinery Principles</td>
</tr>
<tr>
<td>MSYM 245</td>
<td>Fundamentals of Electrical Systems (UNL)</td>
</tr>
<tr>
<td>or from SCC-Lincoln:</td>
<td></td>
</tr>
<tr>
<td>AUTT 1003</td>
<td>Small Engines</td>
</tr>
<tr>
<td>CNST 1101</td>
<td>Basic Woods Manufacturing or</td>
</tr>
<tr>
<td>CNST 1102</td>
<td>Construction Basics</td>
</tr>
<tr>
<td>WELD 1060</td>
<td>Basic Oxy -Acetylene/Shielded Metal Arc Techniques</td>
</tr>
<tr>
<td>WELD 1070</td>
<td>Arc Theory and Lab &amp; Advanced Oxy -Acetylene/Shielded Metal Arc Techniques</td>
</tr>
</tbody>
</table>

**Food Products & Processing Systems**

Select one of the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCI 210</td>
<td>Animal Products</td>
</tr>
<tr>
<td>FDST 131 /</td>
<td>The Science of Food</td>
</tr>
<tr>
<td>CHEM 131 /</td>
<td></td>
</tr>
<tr>
<td>NUTR 131</td>
<td></td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 30

**Endorsement Electives**

Select 9 hours from courses within any of the five previous categories.  

Credit Hours Subtotal: 9

**Professional Education Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 135</td>
<td>Early Field Experience in Agricultural Leadership, Education and Communication</td>
</tr>
<tr>
<td>ALEC 234</td>
<td>Planning Leadership and Experience Programs</td>
</tr>
<tr>
<td>ALEC 308</td>
<td>Laboratory Instruction and Management</td>
</tr>
<tr>
<td>ALEC 405</td>
<td>Methods of Instruction for Secondary Agriscience Education</td>
</tr>
<tr>
<td>ALEC 405L</td>
<td>Methods of Instruction Laboratory Education</td>
</tr>
<tr>
<td>ALEC 413</td>
<td>Program Development</td>
</tr>
<tr>
<td>ALEC 494</td>
<td>Undergraduate Seminar in Agricultural Education</td>
</tr>
<tr>
<td>EDPS 457</td>
<td>Learning and Motivation Principles for Secondary Teaching</td>
</tr>
<tr>
<td>SPED 201</td>
<td>Introduction to Special Education</td>
</tr>
<tr>
<td>TEAC 330 /</td>
<td>Multicultural Education (ACE 9)</td>
</tr>
<tr>
<td>ETHN 330</td>
<td></td>
</tr>
<tr>
<td>or SOCI 217</td>
<td>Sociology of Race and Ethnicity</td>
</tr>
</tbody>
</table>
Agricultural Education

Credit Hours Subtotal: 26

**Free Electives**
Select 4 hours
Credit Hours Subtotal: 4

Total Credit Hours 120

1 If MATH 103 is taken, only 2 credit hours can be counted toward this requirement.
2 Students pursuing combined agriculture-biology endorsement must complete CHEM 109A General Chemistry I/ CHEM 109L General Chemistry I Laboratory.
3 A minimum of 15 hours completed at the 200 level or above, and including at least 9 hours completed at the 300 level or above. Students must have a course in four 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 39-hour agricultural science requirement. No grades lower than C within the endorsement area.

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

**Supporting Laboratory Based Courses**

**Chemistry**
CHEM 109A General Chemistry I 4
& CHEM 109L General Chemistry I Laboratory 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 120

**Biology Courses**
Select at least one of the suggested courses from each of the following categories; however, within Fundamentals of Biology, both LIFE 120 and LIFE 121 are required. A minimum of 24 different hours is required. At least 12 hours must be taken at the 200 level or higher. Other coursework may be negotiated with your academic advisor.

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

**Botany** 1
- AGRO 131 / HORT 131 Plant Science and Agronomic Plant Science Laboratory
 & AGRO 132

AGRO 204 Resource-Efficient Crop Management
AGRO 240 / RNGE 240 Forage Crop and Pasture Management
HORT 131 / AGRO 131 Plant Science and Horticultural Plant Science Laboratory & HORT 133

Fundamentals of Biology (all required) 1
- LIFE 120 Fundamentals of Biology I
 & LIFE 120L Fundamentals of Biology I Laboratory
- LIFE 121 Fundamentals of Biology II
 & LIFE 121L Fundamentals of Biology II Laboratory

Ecology 1
- NRES 211 Introduction to Conservation Biology
- NRES 220 Principles of Ecology
 & NRES 222 and Ecology Laboratory
- NRES 311 Wildlife Ecology and Management

Genetics 1
- BIOS 206 General Genetics
AGRO 215 / HORT 215 / TLMT 215 Genetics

Zoology and/or Microbiology 1
- BIOS 115 / ENTO 115 Insect Biology
 & BIOS 116 / ENTO 116 and Insect Identification
- ASCI 100 Fundamentals of Animal Biology and Industry
- ASCI 240 Anatomy and Physiology of Domestic Animals
- ASCI 250 Animal Management
- ASCI 271 Companion Animal and Equine Behavior
- NUTR 372 Food Safety and Sanitation

Integrated Laboratory Management
ALEC 308 Laboratory Instruction and Management

Science Methods Instruction
- TEAC 397V Professional Practicum Experience III
 & TEAC 451V Secondary Science
 and Learning and Teaching Principles and Practices: Secondary Science

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.

Total Credit Hours 24

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

Skilled and Technical Sciences 2+2 Teaching Option
Students who meet entry requirements in the STS Teaching Option will have completed a variety of coursework from their community college. See website http://alec.unl.edu/sts/sts-22-programs (http://alec.unl.edu/sts/sts-22-programs/). Many of the courses within the community college system have direct equivalencies with our ACE program at
the University of Nebraska–Lincoln. Following a comprehensive transfer analysis, students will be provided an accurate degree audit of the remaining ACE courses needed at the University, 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 the requirements of ACE outcomes 5, 7, 8, and 10. 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.

The transfer policy in CASNR will be in effect for all students interested in the STS 2+2 program. Students do have the option of taking ALEC 105 Introduction to Engineering Design (IED) and ALEC 115 Principles of Engineering (POE) on campus at Nebraska. Once completed, these courses can be reverse transferred to satisfy the STEM requirement at the community college. See your STS faculty advisor for details.

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 Core I; 3) 1,000 hours of verified paid 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 University of Nebraska–Lincoln 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
Select one course each in ACE outcomes 5, 7, and 8 1 9
Credit Hours Subtotal: 9
Leadership and Education (Professional Education Courses) 2
ALEC 135A Introduction to Skilled and Technical Sciences Education 1
ALEC 235 STS Technical Skills and Skills USA 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 431 Student Teaching (ACE 10) 12
ALEC 494 Undergraduate Seminar in Agricultural Education 1
ALEC 496 Independent Study in Leadership Education (SkillsUSA/PDP) 3
EDPS 209 Strategies for Academic Success 3
EDPS 457 Learning and Motivation Principles for Secondary Teaching 3
SPED 201 Introduction to Special Education 3
TEAC 259 Instructional Technology 3
Credit Hours Subtotal: 42
Free Electives
Select 9 hours 9
Credit Hours Subtotal: 9
Program Credit Requirements
Complete requirements 60
Credit Hours Subtotal: 60
Total Credit Hours 120
1 Students should work with an advisor.
2 No grades lower than C within professional education courses.

STS 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/sts-2-2-programs (http://agedteaching.unl.edu/sts-2-2-programs/).

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 hours from the following: 5-6
MATH 103 College Algebra and Trigonometry 1
or MATH 102 Trigonometry
or MATH 104 Applied Calculus
or MATH 203 Contemporary Mathematics
MATH 106 Calculus I
EDPS 459 Statistical Methods
or STAT 218 Introduction to Statistics
Credit Hours Subtotal: 5
Communications
Written Communication
Select one of the following: 3
ENGL 150 Writing and Inquiry
ENGL 151 Writing and Argument
ENGL 254 Writing and Communities
JGEN 200 Technical Communication I
JGEN 300 Technical Communication II (ACE 1)
Oral Communication
COMM 209 Public Speaking
or COMM 286 Business and Professional Communication 3
Credit Hours Subtotal: 6
### Natural Sciences
Select two of the following:  
- CASNR Approved Life Sciences
- CHEM 105A & CHEM 105L: Chemistry in Context I & Laboratory
- or CHEM 109A & CHEM 109L: General Chemistry I & Laboratory
- PHYS 141 or PHYS 151: Elementary General Physics I or Laboratory
- or MSYM 109: Physical Principles in Agriculture and Life Sciences

Credit Hours Subtotal: 8

### Economics, Humanities and Social Sciences
Select one of the following:

- AECN 141: Introduction to the Economics of Agriculture (ACE 6)
- ECON 200: Economic Essentials and Issues
- ECON 211: Principles of Macroeconomics
- ECON 212: Principles of Microeconomics

Credit Hours Subtotal: 3

### ACE Courses
Select one course each from ACE outcomes 5, 7, and 9

- ALEC 388 / AECN 388: Ethics in Agriculture and Natural Resources (ACE 8)

Credit Hours Subtotal: 9

### Major Requirements

- ALEC 102: Interpersonal Skills for Leadership
- ALEC 202: Foundations of Leadership Theory and Practice
- ALEC 302: Dynamics of Effective Leadership in Organizations
- ALEC 407: Supervisory Leadership
- ALEC 410 / NRES 413: Environmental Leadership
- ALEC 428 / NRES 428: Leadership in Public Organizations
- ALEC 455: Dynamics of Effective Leadership in Groups & Teams
- ALEC 466: Leadership and Diversity in Organizations and Communities
- ALEC 477: Leadership and Motivation
- AECN 376: Rural Community Economics
- AGRI 388: Employment Seminar

Optional:

- ALEC 414: Classic Figures in Leadership

Credit Hours Subtotal: 31

### Teaching & Learning

- ALEC 300: Teaching and Learning Design
- ALEC 305: Presentation Strategies to Communicate Agricultural and Environmental Sciences
- ALEC 422: Facilitation and Project Planning

Credit Hours Subtotal: 9

### 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: 18

### Free Electives
Select 9-20 hours

Credit Hours Subtotal: 20

Total Credit Hours: 120

---

1. If MATH 103 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 leadership competencies to effectively communicate 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:

#### Leadership & Communication Core Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 202</td>
<td>Foundations of Leadership Theory and Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Additional Leadership Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 388</td>
<td>Ethics in Agriculture and Natural Resources (ACE 8)</td>
<td>3</td>
</tr>
</tbody>
</table>

### Notes:

1. If MATH 103 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.
Expected outcomes from a minor in leadership and entrepreneurship:

- In the contexts of commerce and community, students are able to apply knowledge and skills about leadership and entrepreneurship.
- Understand human aspects of organizational models.
- Navigate social systems in businesses and communities.
- Effectively negotiate consumer relations, business-to-business relations, and community relations.
- Better prepared to assume leadership roles in business and industry as well as in communities.
- Better prepared to be an effective and engaged citizen.
- Effectively negotiate political and regulatory landscapes using critical thinking and creative problem-solving.

Leadership Theory
Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 202</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 302</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 9

Application of Leadership Theory
Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 407</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 410 / NRES 413</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 455</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 466</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 9

Entrepreneurship Foundation
EAEP 101 Introductory Seminar on Opportunities in Entrepreneurship 2

Credit Hours Subtotal: 2

Entrepreneurship Development
Select one course from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAEP 275 / AECN 275</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 388</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

Experiential Learning in Leadership and/or Entrepreneurship
Select 7 hours from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 102</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 153</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 165</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 337</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 422</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 496</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 310</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 7

Total Credit Hours 18

1 ENGR 100, ALEC 153, or ALEC 165 can be used in place of ALEC 102. 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.

Leadership and Entrepreneurship Minor
An 18-hour minor in leadership and entrepreneurship is available through a joint program offered by the Departments of Agricultural Leadership, Education and Communication and the Engler Agribusiness Entrepreneurship Program. This minor is intended for those who are interested in gaining additional professional skills in leadership and entrepreneurship. The 18-hour minor is comprised of theory-based and applied courses as well as a final capstone course.

Credit Hours Subtotal: 9

Total Credit Hours 18

1 Junior standing is required for these three 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

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 115, ALEC 102, ALEC 346

**ALEC 102 Interpersonal Skills for Leadership**

**Prerequisites:** Open to Freshman or Sophomores, or Agricultural Education degree students, or Leadership & Communication Minor students, or Leadership & Entrepreneurship Minor students.

**Notes:** Credit for both ALEC 102 and ENGR 100 is not allowed.

**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

**Grading Option:** Graded with Option

**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

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 346

**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

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 242; ALEC 243

**ALEC 105 Introduction to Engineering Design (IED)**

**Notes:** This course is the first course in the Project Lead the Way pre-engineering program and requires no prerequisite. 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

**Grading Option:** Graded with Option

**Offered:** SUMMER

**Prerequisite for:** ALEC 115

**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

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 303

**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

**Grading Option:** Graded with Option

**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

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 103
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:** 3
**Max credits per semester:** 3
**Max credits per degree:** 3
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 234

**ALEC 135 Early Field Experience in Agricultural Leadership, Education and Communication**
**Prerequisites:** Agricultural leadership, education and communication major.
**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
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 234

**ALEC 136 Fundamentals of Agricultural and Environmental Sciences Communication**
**Description:** Introduction to all areas of agricultural and environmental sciences (AES) communications and core competencies related to communication, including how to share AES stories through multimedia projects. Introduction to various AES issues using different communication styles while exploring how these may differ based on audience and media utilized.

**Credit Hours:** 3
**Max credits per semester:** 3
**Max credits per degree:** 3
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 234; EDPS 457

**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
**Grading Option:** Graded with Option

**Prerequisite for:** EDPS 457

**ALEC 137 Introduction to Agricultural and Environmental Sciences**
**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.

**Credit Hours:** 3
**Max credits per semester:** 3
**Max credits per degree:** 3
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 234

**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

**Prerequisite for:** ALEC 234

**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
**Grading Option:** Graded with Option

**Prerequisite for:** 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
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 242

**ALEC 201 Electricity/Electronics**
**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
**Grading Option:** Graded with Option

**ALEC 202 Foundations of Leadership Theory and Practice**
**Notes:** 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.
**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.

**Credit Hours:** 3
**Max credits per semester:** 3
**Max credits per degree:** 3
**Grading Option:** Graded with Option

**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
**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 303
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
Grading Option: Graded with Option
Prerequisite for: ALEC 246; ALEC 303

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
Grading Option: Graded with Option
Prerequisite for: ALEC 303

ALEC 207 Communicating Science with Public Audiences
Crosslisted with: ADPR 207
Description: Concepts and techniques of strategic communication, with a special focus on issues involving food, agricultural production, environmental sustainability, and natural resources. Skills and theory essential for relating to public audiences and other stakeholders.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option
Prerequisite for: ALEC 307; ALEC 417, ADPR 417; ALEC 495B

ALEC 234 Planning Leadership and Experience Programs
Prerequisites: Sophomore standing and ALEC 134 and/or ALEC 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
Grading Option: Graded with Option
Prerequisite for: ALEC 307; ALEC 417, ADPR 417; ALEC 495B

ALEC 235 STS Technical Skills and Skills USA
Description: Theory of experiential education to middle school and secondary Skilled and Technical Sciences education programs, especially leadership and career education. Exposure to Supervised Career and Technical Student Organization Experience (CTSO), Skills USA, appropriate to the community, school, and student needs recording 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
Grading Option: Graded with Option
Groups: Introductory

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option
Prerequisite for: ALEC 340

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
Grading Option: Graded with Option

ALEC 260 Introduction to Digital Media in Agricultural and Environmental Sciences
Prerequisites: Major in Agricultural and Environmental Sciences Communication or Minor in Science Communication
Description: Use a variety of digital media tools to communicate agricultural and environmental sciences to diverse audiences. Hands-on approach to utilize digital media and develop communication pieces to add to portfolios.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ALEC 360; ALEC 361; ALEC 495B

ALEC 300 Teaching and Learning Design
Description: Learn how educational psychology impacts learning and how it is used to design learning opportunities. Focus on needs assessment, program design, and lesson planning.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Offered: FALL
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
Grading Option: Graded with Option
Prerequisite for: ALEC 495A

ALEC 303 Energy, Power and Transportation Technology
Prerequisites: ALEC 101, 109, 203, 204 and 205.
Notes: 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
Grading Option: Graded with Option

ALEC 305 Presentation Strategies to Communicate Agricultural and Environmental Sciences
Description: Presentation strategies used in agribusiness, education, government and public service. Attention to audience needs, organization, methodology, and technology when presenting about agricultural and environmental sciences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option

ALEC 307 Advanced Strategic Writing for Agricultural and Environmental Sciences Communication
Prerequisites: Major in Agricultural and Environmental Sciences Communication (AESC) or minor in Science Communication, JOUR 200A and ALEC 207.
Description: Advanced development and refinement of strategic writing skills and storytelling, including Associated Press writing style, audience analysis, interviewing skills, writing mechanics, and nuances of both verbal and nonverbal communication and professional collaboration.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ALEC 480

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

ALEC 337 Instructional Internship in Leadership Development
Prerequisites: Permission.
Description: A structured professional and personal leadership developmental experience by providing planning, facilitation, instruction, and evaluation assistance in leadership & communication courses.
Credit Hours: 0-3
Min credits per semester:
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Pass No Pass

ALEC 340 Advanced Machine Woodworking
Prerequisites: ALEC 243
Notes: 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
Grading Option: Graded with Option

ALEC 341 Podcasting to Increase Science Literacy
Prerequisites: AESC majors and minors
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. Offered in the spring semester of odd years.
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.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
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
Grading Option: Graded with Option

ALEC 350 Agriculture, the Environment & Science in the Media
Prerequisites: Junior level students and above.
Description: How agriculture, the environment, and science are covered in media by different types of 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 agriculture, the environment, and science.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ASCI 381

ALEC 360 Advanced Visual Communication for Agricultural and Environmental Sciences
Prerequisites: ALEC 260
Description: Visual communication to deliver science-based agricultural and environmental information for diverse audiences. Develop an understanding of layout design and digital photography concepts, utilize industry standard technology, create "real-world" portfolio pieces related to agriculture and the environment.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ALEC 480

ALEC 361 Video and Audio Production for Communicating Agricultural and Environmental Sciences
Prerequisites: ALEC 260
Description: Exploration and application of audio and video media storytelling techniques for agricultural communicators as used in promoting, marketing and communicating about agricultural and environmental sciences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ALEC 480

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
Grading Option: Graded with Option
ACE: ACE 8 Civic/Ethics/Stewardship

ALEC 480 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
Grading Option: Graded with Option

ALEC 480 Independent Study in Communications
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
Grading Option: Graded
Prerequisite for: ALEC 397 Special Topics

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
Grading Option: Graded

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
Grading Option: Graded with Option

ALEC 399 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
Grading Option: Graded with Option

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: 3
Grading Option: Graded with Option
ALEC 400 Overview to Program Planning
Crosslisted with: ALEC 800
Prerequisites: ALEC 305 or ALEC/TEAC 805/NUTR 806.
Notes: 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
Grading Option: Graded with Option

ALEC 405 Methods of Instruction for Secondary Agriscience Education
Prerequisites: Senior standing and 3 hrs educational psychology
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
Grading Option: Graded with Option
Prerequisite for: ALEC 405L

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
Grading Option: Graded with Option

ALEC 407 Supervisory Leadership
Crosslisted with: ALEC 807; CYAF 807
Prerequisites: ALEC 202 or ALEC 302; Junior standing
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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

ALEC 417 Issues Management and Crisis Communications in Agricultural and Environmental Sciences
Crosslisted with: ADPR 417
Prerequisites: Junior standing. ALEC 207. College of Journalism and Mass Communications: Junior standing; JOMC 101, JOMC 130-134, ADPR 151, ADPR 221, and ADPR 283
Notes: Recommended: ALEC 260
Description: Examines strategic communication practices of issues management, risk assessment, and crisis communications in agriculture and other industries, explores the process necessary to address current and future issues, and outlines effective communication in times of crisis. Focused on issues and crisis in agriculture, environmental science, natural resources, and society.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option
ALEC 419 Public Information Campaigns  
Crosslisted with: ALEC 819  
Prerequisites: Undergraduates: ALEC 207, ALEC 260; Graduates: permission of instructor  
Notes: Create a thoroughly researched campaign plan and presentation that can be added to a professional portfolio.  
Description: Apply skills in communications, public relations, and journalism to plan a strategic communications campaign. Examine principles and practice of marketing and communications applied to agricultural, science, or environmental issues.  
Credit Hours: 3  
Max credits per semester: 3  
Max credits per degree: 3  
Grading Option: Graded with Option

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  
Grading Option: Graded with Option

ALEC 421 Agricultural & Environmental Sciences Communication Practicum  
Prerequisites: Junior status. Major or minor in Agricultural and Environmental Sciences Communication.  
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  
Grading Option: Graded with Option

ALEC 422 Facilitation and Project Planning  
Prerequisites: ALEC 202 or equivalent and at least junior standing  
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  
Grading Option: Graded with Option

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  
Grading Option: Graded with Option

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  
Grading Option: Graded with Option

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  
Grading Option: Pass No Pass  
ACE: ACE 10 Integrated Product

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  
Grading Option: Graded
ALEC 455 Dynamics of Effective Leadership in Groups & Teams
Crosslisted with: ALEC 855, CDEV 855
Prerequisites: At least Junior standing is required for ALEC 455.
Description: Explore 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
Grading Option: Graded with Option
Offered: SPRING

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option

ALEC 480 Capstone Experience in Agricultural and Environmental Sciences Communication
Prerequisites: Agricultural and Environmental Sciences Communication major and Permission of Instructor. ALEC 307; ALEC 360 OR ALEC 361
Notes: Requires interviews outside of class time.
Description: Senior capstone for Agricultural and Environmental Sciences Communication. Investigate topics identified by IANR as critical to the state of Nebraska, conduct interviews, write, edit, design and assist in the production of print and multimedia versions of the Strategic Discussions for Nebraska student publication. Emphasis on factual, complete, accurate and clear communication of complex scientific and sociologically important issues in Nebraska agriculture and environmental science. Learning to communicate research and science-based agricultural and environmental concepts to public audiences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
Prerequisite for: ALEC 481
ACE: ACE 10 Integrated Product

ALEC 481 Editing and Publishing Capstone Experience in Agricultural and Environmental Sciences Communication
Prerequisites: ALEC 480
Description: Second course in a two-course capstone series for the Agricultural and Environmental Sciences Communication program. Focused on editing, publishing, and promoting the Strategic Discussions for Nebraska student publication.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

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
Grading Option: Graded with Option

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
Grading Option: Graded with Option
Prerequisite for: ALEC 405

ALEC 495A Internship in Leadership Development
Prerequisites: Junior standing; ALEC 302; Agricultural Education major; and permission.
Notes: Must be taken as ‘Pass/No Pass’ by Agricultural Education majors. 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
Grading Option: Pass No Pass
ACE: ACE 10 Integrated Product

ALEC 495B Internship in Agricultural and Environmental Sciences Communication
Prerequisites: Sophomore Standing, Agricultural and Environmental Sciences Communication major. Instructor Permission. ALEC 207 and ALEC 260.
Notes: Department approval is required. 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 directly related to communications.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 6
Grading Option: Graded
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
Grading Option: Graded with Option

ALEC 496A Independent Study in Leadership Education: Experiential Learning in Leadership
Notes: For students majoring in the Leadership Option or minorin in Leadership and Communication or Leadership and Entrepreneurship only
Description: Projects to research, literature review, or extension of coursework related specifically to experiential learning in leadership
Credit Hours: 0-3
Min credits per semester: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

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
Grading Option: Graded

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

Agricultural Education - Teaching

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