Agricultural Leadership, Education and Communication

Description

General Information
A degree in agricultural leadership, education and communication is designed to prepare students with the necessary communication and interpersonal skills, leadership training, and knowledge of technical agriculture, natural resources, and environmental sciences for employment in agribusiness leadership training and/or development, teaching school based agricultural education, and/or careers in communications, advocacy, and public service. The core curriculum gives students a balanced education in communications, leadership development and the teaching and learning process.

Options
Each ALEC student studies a core curriculum that provides a comprehensive approach to human development through leadership, education and communication preparing for a wide range of careers in the human sciences. In addition to the core, there are four different options from which students can choose an area of focus that meets their individual interests and career objectives. These options include:

- Agricultural and Environmental Sciences Communication
- Leadership
- Agricultural Education*
- Skilled and Technical Sciences*

*Both agricultural education and skilled and technical sciences options lead to a recommendation for Nebraska teacher certification.

Major Department Admission
(Appplies only to agricultural education and skilled and technical sciences options)

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 grade 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.

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

Nebraska Teaching Certificate Requirements
To qualify for a Nebraska Department of Education (NDE) issued teaching certificate a student must successfully complete the teaching endorsement requirements. NDE also requires a passing score on the corresponding PRAXIS II SERIES Content Area Test and an institutional verification from the University of Nebraska–Lincoln Certification Office.

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 background checks 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 Tylee Hanson (thanson9@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 the 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.

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 word 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.

**Experiential Learning**
All undergraduates in the College of Agricultural Sciences and Natural Resources must take an Experiential Learning (EL) designated course. This may include 0-credit courses designed to document co-curricular activities recognized as Experiential Learning.

**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, 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 the 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 CASNR1 (>299) 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. The 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 the 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. Students transferring from a community college, but without admission to a Joint Academic Transfer Program, may be eligible to fulfill the requirements as stated in the catalog for an academic year in which they were enrolled at the community college prior to attending the University of Nebraska-Lincoln. This decision should be made in consultation with academic advisors, provided the student a) was enrolled in a community college during the catalog year they are utilizing, b) maintained continuous enrollment at the previous institution for 1 academic year or more, and c) continued enrollment at the University of Nebraska-Lincoln within 1 calendar year from their last term at the previous institution. In consultation with advisors, a student may choose to follow a subsequent catalog for any academic year in which they are admitted to and enrolled as a degree-seeking student at the University of Nebraska-Lincoln in the College of Agricultural Sciences and Natural Resources. Students must complete all degree requirements from a single catalog year. The catalog which a student follows for degree requirements may not be more than 10 years old at the time of graduation.

Learning Outcomes

Graduates of agricultural leadership, education and communication will be able to:

1. Demonstrate competence in visual and written communication techniques.
2. Apply communication concepts, theories, and principles of critical thinking to real world issues facing agriculture and the environment.
3. Understand diverse perspectives related to food, fuel, water, landscapes, and people in Nebraska, nationally and globally.
4. Communicate agricultural and environmental science information in lay language to targeted audiences.

Graduates in the agricultural education 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 manner, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Graduates in the skilled and technical sciences option will be able to:

1. Understand the central concepts, tools of inquiry, and structures of the disciplines he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.
2. Understand how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development.
3. Understand how students differ in their approaches to learning and 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 manner, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.

Graduates in the 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**

**Core Requirements**
The following basic courses are required for majors in agricultural leadership, education, and communication. In addition, students must select and meet requirements of one of the ALEC options, depending on their own individual interests and career objectives.

**College Integrative Courses (ACE 8)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCIL 101</td>
<td>Science and Decision-Making for a Complex World</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

**Departmental Requirements**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership (ACE 2)</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 300</td>
<td>Teaching and Learning Design</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 305</td>
<td>Presentation Strategies to Communicate Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 9

**Communications**

**Written Communication (ACE 1)**

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</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></td>
</tr>
<tr>
<td>ENGL 254</td>
<td>Writing and Communities</td>
<td></td>
</tr>
<tr>
<td>JGEN 200</td>
<td>Technical Communication I</td>
<td>2</td>
</tr>
<tr>
<td>JGEN 300</td>
<td>Technical Communication II</td>
<td>2</td>
</tr>
<tr>
<td>JOUR 200B</td>
<td>Fundamentals of Editing and Reporting II</td>
<td>1</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

**Mathematics and Statistics (beyond college algebra) (ACE 3)**

Select 5-6 hours of the following (depending on option): 5-6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 215</td>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>MATH 102</td>
<td>Trigonometry</td>
<td></td>
</tr>
<tr>
<td>MATH 103</td>
<td>College Algebra and Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>MATH 104</td>
<td>Applied Calculus</td>
<td></td>
</tr>
<tr>
<td>MATH 106</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>MATH 203</td>
<td>Contemporary Mathematics</td>
<td></td>
</tr>
<tr>
<td>STAT 218</td>
<td>Introduction to Statistics</td>
<td>4</td>
</tr>
<tr>
<td>EDPS 459</td>
<td>Statistical Methods</td>
<td></td>
</tr>
</tbody>
</table>

**Natural Sciences (ACE 4)**  8

Agricultural Education Option must select 8 credits, one from CASNR Approved Life Sciences category and one from the Chemistry category.

Agricultural and Environmental Sciences Communication option must select 8 credits from 2 of 3 science categories with at least one course from CASNR Approved Life Sciences.

Leadership Option must select 8 credits from 2 of 3 science categories.

Skilled and Technical Sciences Option must select 8 credits from 2 of 3 science categories.

**CASNR Approved Life Sciences**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAS 131</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>PLAS 132</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>PLAS 133</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>PLAS 134</td>
<td>Plant Science</td>
<td></td>
</tr>
<tr>
<td>BIOS 101</td>
<td>General Biology</td>
<td></td>
</tr>
<tr>
<td>BIOS 101L</td>
<td>General Biology Laboratory</td>
<td>5</td>
</tr>
<tr>
<td>LIFE 120</td>
<td>Fundamentals of Biology I</td>
<td></td>
</tr>
<tr>
<td>LIFE 120L</td>
<td>Fundamentals of Biology I laboratory</td>
<td>5</td>
</tr>
<tr>
<td>ENTO 115 / BIOS 115</td>
<td>Insect Biology</td>
<td></td>
</tr>
<tr>
<td>ENTO 116 / BIOS 116</td>
<td>Insect Identification</td>
<td></td>
</tr>
</tbody>
</table>

**Chemistry**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 105A</td>
<td>Chemistry in Context I</td>
<td></td>
</tr>
<tr>
<td>CHEM 105L</td>
<td>Chemistry in Context I Laboratory</td>
<td></td>
</tr>
<tr>
<td>CHEM 109A</td>
<td>General Chemistry I</td>
<td></td>
</tr>
<tr>
<td>CHEM 109L</td>
<td>General Chemistry I Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

**Physics**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGST 109</td>
<td>Physical Principles in Agriculture and Life Sciences</td>
<td>5</td>
</tr>
<tr>
<td>PHYS 141</td>
<td>Elementary General Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 151</td>
<td>Elements of Physics</td>
<td></td>
</tr>
<tr>
<td>PHYS 211</td>
<td>General Physics I</td>
<td></td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 13

**Economics, Humanities and Social Sciences**

Select one of the following (ACE 6): 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECN 141</td>
<td>Introduction to the Economics of Agriculture</td>
<td>7</td>
</tr>
<tr>
<td>ECON 200</td>
<td>Economic Essentials and Issues</td>
<td></td>
</tr>
<tr>
<td>ECON 211</td>
<td>Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>ECON 212</td>
<td>Principles of Microeconomics</td>
<td></td>
</tr>
</tbody>
</table>

Select 3 hours of Humanities (ACE 5) | 3

Select 3 hours of Arts (ACE 7) | 3

Select 3 hours of Global Awareness & Diversity (ACE 9) | 3

Free Electives | 0-26
Agricultural and Environmental Sciences Communication Option

This option prepares students for careers in communications, advocacy, and public service roles in the agricultural, natural resources, and environmental disciplines. Degree requirements provide students with a broad education combining skills and knowledge in agricultural, environmental, and natural resources sciences; the social sciences; and mass communications. The agricultural and environmental sciences communication core provides an introduction to the areas of competence required of a professional communicator. Graduates of this program are also qualified to pursue careers in public relations and public service in government agencies, nonprofits, and private organizations. The program's general education requirements provide students with a well-rounded introduction to science, communications, humanities, and the social sciences. The agricultural and environmental sciences communication core provides an introduction to the areas of competence required of a professional communicator.

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

Required ALEC Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 90</td>
<td>Orientation to Agricultural &amp; Environmental Sciences Communication</td>
<td>0</td>
</tr>
<tr>
<td>ALEC 136</td>
<td>Fundamentals of Agricultural and Environmental Sciences Communication</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 207 / ADPR 207</td>
<td>Communicating Science with Public Audiences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 260</td>
<td>Introduction to Digital Media in Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 307</td>
<td>Advanced Strategic Writing for Agricultural and Environmental Sciences Communication</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 350</td>
<td>Agriculture, the Environment &amp; Science in the Media</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 388 / AECN 388</td>
<td>Ethics in Agriculture and Natural Resources (ACE 8)</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 481</td>
<td>Editing and Publishing Capstone Experience in Agricultural and Environmental Sciences Communication</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 495B</td>
<td>Internship in Agricultural and Environmental Sciences Communication</td>
<td>2</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 92

Total Credit Hours: 120

1. Not an approved course for the Leadership option.
2. Not approved courses for Agricultural and Environmental Sciences Communication option.
3. If MATH 103 is taken, only 2 credit hours can be counted toward this requirement.
4. STAT 218 is required for Agricultural and Environmental Sciences Communication option.
5. Available for Agricultural and Environmental Sciences Communication and Leadership options only.
6. AGST 109 available for Leadership option only.
7. AECN 141 or ECON 212 required for Agricultural Education option.

Agricultural Education Option

This option emphasizes interpersonal communication and leadership theory, a breadth of required agricultural science and natural resource course work, and field experiences to reinforce classroom learning. Completion of the agricultural education option provides professional endorsement and certification to teach agricultural education and work-based learning grades 6-12 in secondary educational institutions.

To be admitted into the student teaching program, candidates must have: 1) a minimum scholastic grade point average of 2.75, including no grade lower than C within the endorsement area and no grades lower than C+ within professional education courses; 2) a documented attempt
or passage of the Praxis I Core exam; 3) 1,000 hours of verified paid work experience within the agriculture, food, and natural resources (AFNR) career cluster, or 300 hours of supervised employment in the AFNR career cluster under the direction of a University of Nebraska–Lincoln academic unit. ALEC 431 Student Teaching is available as Pass/No Pass only. Meet with your advisor to plan for your student teaching experience.

**Teaching Certificate**

To actively engage in the teaching profession, a candidate must fulfill both the CASNR degree requirements and the professional certification requirements of the Nebraska Department of Education (NDE). Students may apply for a Nebraska teaching certificate at [www.education.ne.gov/tcert/](http://www.education.ne.gov/tcert/). Students completing the agricultural education option are also required to complete the work-based learning endorsement. Requirements for the work-based learning endorsement are included in the agricultural education degree option. As part of the application, students are required to send their transcripts to NDE and may do so through MyRED.

*Teaching Certificate*  
To actively engage in the teaching profession, a candidate must fulfill both the CASNR degree requirements and the professional certification requirements of the Nebraska Department of Education (NDE). Students may apply for a Nebraska teaching certificate at [www.education.ne.gov/tcert/](http://www.education.ne.gov/tcert/). Students completing the agricultural education option are also required to complete the work-based learning endorsement. Requirements for the work-based learning endorsement are included in the agricultural education degree option. As part of the application, students are required to send their transcripts to NDE and may do so through MyRED.

**Agricultural, Food and Natural Resources**

**Research and Applied Technology**

<table>
<thead>
<tr>
<th>Select one of the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGRI 115 Biotechnology: Food, Health and Environment</td>
<td></td>
</tr>
<tr>
<td>PLAS 215 Genetics</td>
<td></td>
</tr>
<tr>
<td>PLAS 431 / AGEN 431 / AGST 431 Site-specific Crop Management</td>
<td></td>
</tr>
</tbody>
</table>

**Policy**

<table>
<thead>
<tr>
<th>Select one of the following:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECN 256 Legal Aspects in Agriculture</td>
<td></td>
</tr>
<tr>
<td>AECN 265 / NREE 265 Resource and Environmental Economics I</td>
<td></td>
</tr>
<tr>
<td>AECN 345 Policy Issues in Agriculture and Natural Resources</td>
<td></td>
</tr>
<tr>
<td>AECN 376 Rural Community Economics</td>
<td></td>
</tr>
<tr>
<td>NRES 323 Natural Resources Policy</td>
<td></td>
</tr>
</tbody>
</table>

**Production and Management**

Select 3 hours from each of the following four subject areas: **12**

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

<table>
<thead>
<tr>
<th>Animal Systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCI 100 Fundamentals of Animal Biology and Industry</td>
<td></td>
</tr>
<tr>
<td>ASCI 200 Animal and Carcass Evaluation</td>
<td></td>
</tr>
<tr>
<td>ASCI 250 Animal Management</td>
<td></td>
</tr>
<tr>
<td>ASCI 300A Principles of Meat Evaluation, Grading and Judging</td>
<td></td>
</tr>
<tr>
<td>ASCI 300B Principles of Livestock Evaluation and Judging</td>
<td></td>
</tr>
<tr>
<td>ASCI 300D Principles of Meat Animal Evaluation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural Resources &amp; Environmental Service Systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AECN 265 / NREE 265 Resource and Environmental Economics I</td>
<td></td>
</tr>
<tr>
<td>AECN 357 / NREE 357 Natural Resource and Environmental Law</td>
<td></td>
</tr>
<tr>
<td>PLAS 153 / SOIL 153 Soil Resources</td>
<td></td>
</tr>
<tr>
<td>PLAS 245 / NRES 245 Introduction to Grassland Ecology and Management</td>
<td></td>
</tr>
<tr>
<td>PLAS 366 / SOIL 366 Soil Nutrient Relationships</td>
<td></td>
</tr>
<tr>
<td>PLAS 435 / NRES 435 Agroecology</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power, Structural &amp; Technical Systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTO 109 Beekeping</td>
<td></td>
</tr>
<tr>
<td>NRES 111 Wildlife and Natural Resource Conservation</td>
<td></td>
</tr>
<tr>
<td>NRES 115 Introduction to Environmental Science</td>
<td></td>
</tr>
<tr>
<td>NRES 211 Introduction to Conservation Biology</td>
<td></td>
</tr>
<tr>
<td>NRES 220 Principles of Ecology</td>
<td></td>
</tr>
<tr>
<td>NRES 310 Introduction to Forest Management</td>
<td></td>
</tr>
<tr>
<td>NRES 311 Wildlife Ecology and Management</td>
<td></td>
</tr>
<tr>
<td>NRES 315 Human Dimensions of Fish and Wildlife Management</td>
<td></td>
</tr>
<tr>
<td>NRES 322 Environmental Education Curricula</td>
<td></td>
</tr>
<tr>
<td>NRES 330 Environmental Health</td>
<td></td>
</tr>
<tr>
<td>NRES 348 Wildlife Damage Management</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plant Systems</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAS 204 Resource-Efficient Crop Management</td>
<td></td>
</tr>
<tr>
<td>PLAS 240 / RNGE 240 Forage Crop and Pasture Management</td>
<td></td>
</tr>
<tr>
<td>PLAS 212 / NRES 212 / LARC 212 Woody Plants for Landscapes: Identification, Management, and Use</td>
<td></td>
</tr>
<tr>
<td>PLAS 214 Herbaceous Landscape Plants</td>
<td></td>
</tr>
<tr>
<td>PLAS 221 Plant Propagation</td>
<td></td>
</tr>
<tr>
<td>PLAS 227 Introductory Turfgrass Management</td>
<td></td>
</tr>
<tr>
<td>&amp; PLAS 229 Introductory Turfgrass Management Laboratory</td>
<td></td>
</tr>
<tr>
<td>PLAS 262 Floral Design II</td>
<td></td>
</tr>
<tr>
<td>PLAS 279 Soil Evaluation</td>
<td></td>
</tr>
<tr>
<td>PLAS 306 Greenhouse Practices and Management</td>
<td></td>
</tr>
<tr>
<td>PLAS 307 Hydroponics for Growing Populations</td>
<td></td>
</tr>
<tr>
<td>PLAS 319 Edible Landscapes</td>
<td></td>
</tr>
<tr>
<td>PLAS 321 Arboriculture: Maintenance &amp; Selection of Landscape Trees</td>
<td></td>
</tr>
<tr>
<td>PLAS 326 Landscape Solutions</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agricultural Leadership, Education and Communication</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCI 310 Fresh Meats</td>
<td></td>
</tr>
<tr>
<td>ASCI 330 Animal Breeding and Genetics</td>
<td></td>
</tr>
<tr>
<td>ASCI 370 Animal Welfare</td>
<td></td>
</tr>
</tbody>
</table>

**Natural Resources & Environmental Service Systems**

<table>
<thead>
<tr>
<th>Select 9 hours of the following:</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGST 232 Power and Machinery Principles</td>
<td></td>
</tr>
<tr>
<td>AGST 245 Fundamentals of Electrical Systems (UNL)</td>
<td></td>
</tr>
<tr>
<td>or from SCC-Lincoln.</td>
<td></td>
</tr>
<tr>
<td>AUTT 1003 Small Engines</td>
<td></td>
</tr>
</tbody>
</table>


**Agriculture, Food, and Natural Resources Electives**

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

**Professional Education Core**

- ALEC 135 Early Field Experience in Agricultural Leadership, Education, and Communication (3)
- ALEC 234 Planning Leadership and Experience Programs (3)
- ALEC 308 Laboratory Instruction and Management (3)
- ALEC 405 Methods of Instruction for Secondary Ag Science Education (3)
- ALEC 405L Methods of Instruction Laboratory Education (1)
- ALEC 413 Program Development (3)
- ALEC 494 Undergraduate Seminar in Agricultural Education (1)
- EDPS 457 Learning and Motivation Principles for Secondary Teaching (3)
- or EDPS 362 Learning in the Classroom (3)
- SPEC 201 Introduction to Special Education (3)
- TEAC 330 / ETHN 330 Multicultural Education (ACE 9) (3)
- or SOCI 217 Sociology of Race and Ethnicity (3)

**Capstone Course**

- ALEC 431 Student Teaching (1-12)

**Free Electives**

Select 5-6 hours

**Total Credit Hours** 82

---

1. 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.

2. Courses available through SCC-Lincoln or SCC-Milford. Meet with your advisor to plan for your mechanized systems classes.

3. No grades lower than C+ within professional education courses.

4. TEAC 330 or SOCI 217 required for Agricultural Education option.

---

**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
- CHEM 109L General Chemistry I Laboratory

**Physics**

Select one course from the following: 4-5

- PHYS 141 Elementary General Physics I
- PHYS 151 Elements of Physics
- PHYS 211 General Physics I
- AGST 109 Physical Principles in Agriculture and Life Sciences

**Earth Science**

- GEOL 101 Dynamic Earth

**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 are 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**

- PLAS 131 Plant Science
- PLAS 132 and Agronomic Plant Science Laboratory
- PLAS 131 Plant Science
- & PLAS 133 and Horticultural Plant Science Laboratory
- PLAS 204 Resource-Efficient Crop Management
- PLAS 240 / RNGE 240 Forage Crop and Pasture Management

**Ecology**

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

**Genetics**

- BIOS 206 General Genetics
- PLAS 215 Genetics

**Zoology and/or Microbiology**

- BIOS 115 / INSECT 115 and Insect Identification
- ENTO 115 / ENTO 116
- & BIOS 116
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 Option**

Completion of the skilled and technical sciences option provides professional endorsement and certification to teach skilled and technical sciences and work-based learning grades 6-12 in secondary educational institutions. Students who meet entry requirements in this 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 the 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. 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 grade lower than C within the endorsement area and no grades lower than C+ within professional education courses; 2) a documented attempt or passage of the Praxis I Core exam; 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. ALEC 431 Student Teaching is available as Pass/No Pass only. Meet with your advisor to plan for your student teaching experience.

---

### Teaching Certificate

To actively engage in the teaching profession, a candidate must fulfill both the CASNR degree requirements and the professional certification requirements of the Nebraska Department of Education (NDE). Students may apply for a Nebraska teaching certificate at [www.education.ne.gov/tcert/](http://www.education.ne.gov/tcert/). Students completing the skilled and technical sciences option are also required to complete the work-based learning endorsement. Requirements for the work-based learning endorsement are included in the skilled and technical sciences degree option. As part of the application, students are required to send their transcripts to NDE and may do so through MyRED.

### Skilled and Technical Sciences Endorsement Area

<table>
<thead>
<tr>
<th>Credit Hours Subtotal:</th>
<th>36</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Core</strong> 1</td>
<td></td>
</tr>
<tr>
<td>ALEC 135A</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 235</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 308</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 405L</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 413</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 494</td>
<td>1</td>
</tr>
<tr>
<td>ALEC 496</td>
<td>3</td>
</tr>
<tr>
<td>EDPS 457</td>
<td>3</td>
</tr>
<tr>
<td>or EDPS 362</td>
<td></td>
</tr>
<tr>
<td>SPED 201</td>
<td>3</td>
</tr>
<tr>
<td>TEAC 259</td>
<td>3</td>
</tr>
<tr>
<td>Capstone Course (ACE 10)</td>
<td>1-12</td>
</tr>
</tbody>
</table>

**Credit Hours Subtotal:** 39

**Maximum Credits for Transfer into UNL is 60 credits 2**

**Total Credit Hours:** 75

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

### Skilled and Technical Science Credit Requirements for BS Degree in Agricultural Education

<table>
<thead>
<tr>
<th>Maximum Credits for Transfer into UNL</th>
<th>60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Hours Required for Graduation</td>
<td>120</td>
</tr>
</tbody>
</table>

### Leadership Option

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

### Additional ACE 2 Course
Choose 1 course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 286</td>
<td>Business and Professional Communication</td>
<td>3</td>
</tr>
<tr>
<td>COMM 209</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

### Leadership Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 202</td>
<td>Foundations of Leadership Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 302</td>
<td>Dynamics of Effective Leadership in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 388 / AECN 388</td>
<td>Ethics in Agriculture and Natural Resources (ACE 8)</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>Supervisory Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 410 / NRES 413</td>
<td>Environmental Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 422</td>
<td>Facilitation and Project Planning</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 428 / NRES 428</td>
<td>Leadership in Public Organizations</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 455</td>
<td>Dynamics of Effective Leadership in Groups &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 466</td>
<td>Leadership and Diversity in Organizations and Communities</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 376</td>
<td>Rural Community Economics</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 388</td>
<td>Employment Seminar</td>
<td>1</td>
</tr>
</tbody>
</table>

Optional:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 414</td>
<td>Classic Figures in Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

CASNR Minor 1 12-18

Credit Hours Subtotal: 46-55

### Capstone Course (ACE 10)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 495A</td>
<td>Internship in Leadership Development</td>
<td>5</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 5

### Free Electives

Select 15-26 hours

Credit Hours Subtotal: 15-26

Total Credit Hours 69-89

1 The leadership and communication minor and the leadership and entrepreneurship minor are not permitted.

### Requirements for Minor Offered by Department

#### Agricultural and Environmental Sciences Communication Minor

The agricultural and environmental sciences communication minor provides students an opportunity to focus on building communication skills and knowledge in the context of global challenges and issues in science related to food, fiber, fuel, water, and health. Students complete a series of communication courses using problem-based and experiential-learning strategies that effectively help them translate their field of science for a global, non-scientific audience. Students enrolled in the minor will build knowledge and skills in visual literacy, media literacy, and science literacy, which meet the growing demand of the modern workforce.

Students earning a minor in agricultural and environmental sciences communication will be able to:

- Develop an understanding of the importance of communication in addressing 21st Century global issues related to food, fiber, fuel, water, and health.
- Identify and analyze effective communication strategies for discussing challenging issues influencing science literacy.
- Develop and demonstrate excellence in written and oral communication through various course assignments and projects.
- Create messages and campaigns about controversial scientific issues utilizing critical communication theories and frameworks, as well as multimedia tools and applications for increasing the science literacy of diverse audiences.
- Design, implement, and evaluate a communications project integrated into real-world science engagement contexts connected to CASNR disciplines that demonstrates an understanding of media literacy, science literacy, visual literacy, and digital citizen concepts.

#### Complete 6 hours from the following courses: 6

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 136</td>
<td>Fundamentals of Agricultural and Environmental Sciences Communication</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 207</td>
<td>Communicating Science with Public Audiences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 260</td>
<td>Introduction to Digital Media in Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Complete 9 hours from the following courses: 9

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 305</td>
<td>Presentation Strategies to Communicate Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 307</td>
<td>Advanced Strategic Writing for Agricultural and Environmental Sciences Communication</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 350</td>
<td>Agriculture, the Environment &amp; Science in the Media</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 360</td>
<td>Advanced Visual Communication for Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 361</td>
<td>Video and Audio Production for Communicating Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 388</td>
<td>Ethics in Agriculture and Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 391</td>
<td>Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 393</td>
<td>Digital Imaging and Storytelling in Agriculture and Natural Resources</td>
<td>3</td>
</tr>
</tbody>
</table>

#### 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.
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 Code</th>
<th>Course Title</th>
<th>Credit 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>
<tr>
<td>ALEC 302</td>
<td>Dynamics of Effective Leadership in Organizations</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 9

**Advanced Leadership Courses**

Select three of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 305</td>
<td>Presentation Strategies to Communicate Agricultural and Environmental Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 337</td>
<td>Instructional Internship in Leadership Development</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 388 / AECN 388</td>
<td>Ethics in Agriculture and Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 407</td>
<td>Supervisory Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 410 / NRES 413</td>
<td>Environmental Leadership</td>
<td></td>
</tr>
<tr>
<td>ALEC 414</td>
<td>Classic Figures in Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 422</td>
<td>Facilitation and Project Planning</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 455</td>
<td>Dynamics of Effective Leadership in Groups &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 466</td>
<td>Leadership and Diversity in Organizations and Communities</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>Leadership and Motivation</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 9

**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 experiential learning opportunities.

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 Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 202</td>
<td>Foundations of Leadership Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 302</td>
<td>Dynamics of Effective Leadership in Organizations</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 477</td>
<td>Leadership and Motivation</td>
<td>3</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 3

**Application of Leadership Theory**

Select one course from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 407</td>
<td>Supervisory Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 410 / NRES 413</td>
<td>Environmental Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 455</td>
<td>Dynamics of Effective Leadership in Groups &amp; Teams</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 466</td>
<td>Leadership and Diversity in Organizations and Communities</td>
<td>3</td>
</tr>
</tbody>
</table>
### 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 101</td>
<td>Introductory Seminar on Opportunities in Engineering</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 103</td>
<td>Computer-Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 104</td>
<td>Wood Technology</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 105</td>
<td>Interpersonal Skills for Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 122</td>
<td>Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 242</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 303</td>
<td>Engineering Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>AECN 275</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 310</td>
<td>Study Tours in International Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496</td>
<td>Independent Study in Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496A</td>
<td>Independent Study in Leadership Education</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 275</td>
<td>Business Systems in Entrepreneurship</td>
<td>2</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 101</td>
<td>Introductory Seminar on Opportunities in Engineering</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 103</td>
<td>Computer-Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 104</td>
<td>Wood Technology</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 105</td>
<td>Interpersonal Skills for Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 122</td>
<td>Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 242</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 303</td>
<td>Engineering Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>AECN 275</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 310</td>
<td>Study Tours in International Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496</td>
<td>Independent Study in Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496A</td>
<td>Independent Study in Leadership Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**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.

### ALEC 102 Interpersonal Skills for Leadership

**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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 102</td>
<td>Interpersonal Skills for Leadership</td>
<td>2</td>
</tr>
<tr>
<td>ALEC 153</td>
<td>Chancellor's Leadership Class</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 165</td>
<td>Pepsi Service Scholars</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 337</td>
<td>Instructional Internship in Leadership Development</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 422</td>
<td>Facilitation and Project Planning</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 496</td>
<td>Independent Study in Leadership Education (Field Experience)</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 496A</td>
<td>Independent Study in Leadership Education: Experiential Learning in Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AGRI 310</td>
<td>Study Tours in International Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496</td>
<td>Independent Study in Entrepreneurship</td>
<td>3</td>
</tr>
</tbody>
</table>

**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.

### ALEC 103 Computer-Aided Drafting

**Prerequisites:** ALEC 122.

**Description:** Applying computer commands to create two-dimensional engineering and architectural drawings.

**Credit Hours:** 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 103</td>
<td>Computer-Aided Drafting</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 104</td>
<td>Wood Technology</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 105</td>
<td>Interpersonal Skills for Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 122</td>
<td>Entrepreneurship</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 242</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>ALEC 243</td>
<td>Entrepreneurial Finance</td>
<td>3</td>
</tr>
<tr>
<td>AECN 275</td>
<td>Agribusiness Entrepreneurial Finance</td>
<td>2</td>
</tr>
<tr>
<td>AGRI 310</td>
<td>Study Tours in International Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>EAEP 496</td>
<td>Independent Study in Entrepreneurship</td>
<td>3</td>
</tr>
</tbody>
</table>

**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.

### 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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALEC 105</td>
<td>Introduction to Engineering Design (IED)</td>
<td>4</td>
</tr>
</tbody>
</table>

**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 105

Course and Laboratory Fee: $25

ALEC 115 Principles of Engineering (POE)
Prerequisites: ALEC 105, Introduction To Engineering Design
Description: ALEC 105, Introduction To Engineering Design
Notes: This course is the second foundational course taught in the
Project Lead the Way pre-engineering curriculum. Students who 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: 2
Max credits per semester: 2
Max credits per degree: 2
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; 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 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

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 n the community.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option

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
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
Course and Laboratory Fee: $15

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 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

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

ALEC 242 Construction Technology
Groups: Introductory

ALEC 244 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
Course and Laboratory Fee: $15
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
Course and Laboratory Fee: $15

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
Course and Laboratory Fee: $15

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 with a C or higher, and ALEC 207 with a C or higher.
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:** Graded with Option  
**Experiential Learning:** Internship/Co-op

**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  
**Course and Laboratory Fee:** $25

**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  
**Course and Laboratory Fee:** $25

**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 356 Advanced Visual Communication for Agricultural and Environmental Sciences**  
**Prerequisites:** ALEC 260 with a C or higher  
**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 with a C or higher  
**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 360 Advanced Visual Communication for Agricultural and Environmental Sciences**  
**Prerequisites:** ALEC 260 with a C or higher  
**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 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  
**ACE:** ACE 8 Civic/Ethics/Stewardship

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

**ALEC 391 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:** 0-3  
**Min credits per semester:**  
**Max credits per semester:** 3  
**Max credits per degree:** 12  
**Grading Option:** Graded with Option
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
Course and Laboratory Fee: $50
Experiential Learning: Case/Project-Based Learning

ALEC 399 Independent Study in Communications
Prerequisites: Permission and advance approval of plan of work.
Description: Individual or group projects in research, literature review, or extension of course work under supervision and evaluation of a departmental faculty member.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 12
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 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  
Experiential Learning: Student Teaching/Education Practicum
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 445 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 455 Leadership and Diversity in Organizations and Communities
Prerequisites: Junior standing
Description: The study of leadership through the lens of diversity and inclusion. Exploration of how your life has shaped your approach and understanding of leadership, diversity, equity, and inclusion. Analyze how leaders create inclusion in the workplace and in communities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded with Option
Offered: FALL/SPR
Course and Laboratory Fee: $20
Experiential Learning: Community Engagement

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 with a C or higher; ALEC 360 with a C or higher OR ALEC 361 with a C or higher
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

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 with a C or higher and ALEC 260 with a C or higher.
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 with Option

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 minoring 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: 0
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.
• Marketing and Communications Intern, Agriculture Future of America
  - Kansas City, MO