



# 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

(Applies only to agricultural education and skilled and technical sciences options)

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. 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 an institutional verification from the University of Nebraska–Lincoln Certification Officer.

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 2024, 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. One successful background check will be required during your teacher preparation program; one prior to your initial practicum experience and completing a self-report form 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. 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 ensure 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 their cumulative average a course grade of C-, D+, D, D-, or F if the student repeats the same course at the University of Nebraska and receives a grade other than P (pass), I (incomplete), N (no pass), W (withdrew), or NR (no report). If a course is no longer being offered, it is not eligible for the revised grade point average computation process.

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

### Pass/No Pass

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

### GPA Requirements

A minimum cumulative grade point average of C (2.0 on a 4.0 scale) must be maintained throughout the course of studies and is required for graduation. Some degree programs have a higher cumulative grade point average required for graduation. Please check the degree program on its graduation cumulative grade point average.

## Transfer Credit Rules

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

Ordinarily, credits earned at an accredited college are accepted by the University. The College, however, will evaluate all hours submitted on an application for transfer and reserves the right to accept or reject any of them. Sixty (60) is the maximum number of hours the University will accept on transfer from a two-year college. Ninety (90) is the maximum number of hours the University will accept from a four-year college. Transfer credit in the degree program must be approved by the degree program advisor on a Request for Substitution Form to meet specific course requirements, group requirements, or course level requirements in the major. At least 9 hours in the major field, including the capstone course, must be completed at the University of Nebraska–Lincoln regardless of the number of hours transferred.

The College will accept no more than 10 semester hours of C-, D+, D, and D- grades from other schools. The C-, D+, D, and D- grades can only be applied to free electives. This policy does not apply to the transfer of grades from UNO or UNK to the University of Nebraska–Lincoln.

### Joint Academic Transfer Programs

The College of Agricultural Sciences and Natural Resources has agreements with many institutions to support joint academic programs. The transfer programs include dual degree programs and cooperative degree programs. Dual degree programs offer students the opportunity to receive a degree from a participating institution and also to complete 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 technical and community colleges, allows students to complete up to 60 credits of a degree program at the participating technical or 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 technical or community college, students enrolled in the A to B Program may complete the requirements for an associate of science degree, transfer to the University of Nebraska–Lincoln, and work toward a bachelor of science degree.

Participating technical and 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.

### Residency

Students must complete at least 30 of the total hours for their degree using University of Nebraska–Lincoln credits. At least 18 of the 30 credit hours must be in courses offered through CASNR<sup>1</sup> (>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.

<sup>1</sup> *Includes courses taught by CASNR faculty through interdisciplinary prefixes (e.g., LIFE, MBIO, ENVR, SCIL, EAEP, 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](http://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 effective written, visual, and oral communication to communicate to diverse audiences about agricultural and environmental sciences.
2. Apply leadership knowledge, skills, and competencies to analyze, evaluate, and solve issues effectively with people from diverse backgrounds and perspectives in complex and global environments.
3. Design and deliver an instructional program that will engage an audience, meet identified learning objectives, and assess learning.
4. Demonstrate critical thinking, problem solving, and reflective skills to become life-long learners and engage in continual professional growth.

**Graduates in the agricultural and environmental sciences communication option 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 matter, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10. Foster relationships with school colleagues, parents, professional organizations, and agencies in the larger community to support students' learning and well-being.

**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 matter, students, the community, and curriculum goals.
8. Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.
9. Be a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.
10. Foster relationships with school colleagues, parents, professional organizations, and agencies in the larger community to support students' learning and well-being.

**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)

SCIL 101	Science and Decision-Making for a Complex World	3
Credit Hours Subtotal:		3

#### Departmental Requirements

ALEC 102	Interpersonal Skills for Leadership (ACE 2)	3
ALEC 136	Fundamentals of Agricultural and Environmental Sciences Communication	3
ALEC 206	Teaching and Learning Design	3
Credit Hours Subtotal:		9

#### Mathematics and Statistics (ACE 3)

Select 5-6 credit from the following:	5-6
MATH 106	Calculus I

Or		
STAT 218	Introduction to Statistics	
and one of the following: MATH 102, MATH 103, MATH 104, or MATH 203 <sup>1</sup>		
Credit Hours Subtotal:		5

#### ACE Requirement

Select one course each from ACE outcomes 5 and 7	6
<b>Required Option (includes ACE 10)</b>	<b>65-82</b>
Credit Hours Subtotal:	71

<b>Total Credit Hours</b>	<b>88</b>
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<sup>1</sup> Waived with a math placement exam of MATH 106.

## 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 AESC Courses

JOUR 200A	Fundamentals of Editing and Reporting I	3
ALEC 260	Introduction to Digital Media in Agricultural and Environmental Sciences	3
ALEC 350	Agriculture, the Environment & Science in the Media	3
ALEC 495B	Internship in Agricultural and Environmental Sciences Communication	2

Credit Hours Subtotal:	11
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### Written Communication (ACE 1)

ALEC 120	Science and Storytelling	3
Credit Hours Subtotal:		3

### Natural Sciences (ACE 4)

CASNR requires all students to complete at least two natural science courses for 7-9 hours. Both courses cannot be from the same category. A laboratory is required for life science and chemistry.

#### CASNR Approved Life Sciences

PLAS 131 & PLAS 132	Plant Science and Agronomic Plant Science Laboratory	7-9
PLAS 131 & PLAS 133	Plant Science and Horticultural Plant Science Laboratory	
PLAS 131 & PLAS 134	Plant Science and Plant Sciences Laboratory	
BIOS 101 & 101L	General Biology and General Biology Laboratory	
LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory	
ENTO 115 / BIOS 115 & ENTO 116 / BIOS 116	Insect Biology and Insect Identification	
ASCI 120	Animal Biology	

#### Chemistry

CHEM 105A & CHEM 105L	Chemistry in Context I and Chemistry in Context I Laboratory
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory

#### Physics

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

<b>Earth Science</b>		
ENSC 220	Energy Systems and Sustainability	
GEOG 155	Elements of Physical Geography	
GEOL 101	Dynamic Earth	
GEOL 109	Oceanography	
METR 100	Weather and Climate	
METR 180	Climate Change, Energy, and the Environment	
NRES 115	Introduction to Environmental Science	
Credit Hours Subtotal:		7-9
<b>Social Sciences (ACE 6)</b>		
ALEC 202	Foundations of Leadership Theory and Practice	3
Credit Hours Subtotal:		3
<b>Global Awareness &amp; Human Diversity (ACE 9)</b>		
Choose any 3-credit ACE 9 course.		3
Credit Hours Subtotal:		3
<b>Capstone Course (ACE 10)</b>		
ALEC 480	Capstone Experience in Agricultural and Environmental Sciences Communication	
<b>AESC Elective Courses</b>		
Select 15 hours from the following:		15
ALEC 90	Orientation to Agricultural & Environmental Sciences Communication	
ALEC 207 / ADPR 207	Communicating Science with Public Audiences	
ALEC 305	Presentation Strategies to Communicate Agricultural and Environmental Sciences	
ALEC 307	Advanced Strategic Writing for Agricultural and Environmental Sciences Communication	
ALEC 360	Advanced Visual Communication for Agricultural and Environmental Sciences	
ALEC 361	Video and Audio Production for Communicating Agricultural and Environmental Sciences	
ALEC 388 / AECN 388	Ethics in Agriculture and Natural Resources	
ALEC 391	Special Topics	
ALEC 399	Independent Study in Communications	
ALEC 417 / ADPR 417	Issues Management and Crisis Communications in Agricultural and Environmental Sciences	
ALEC 419	Public Information Campaigns	
ALEC 481	Editing and Publishing Capstone Experience in Agricultural and Environmental Sciences Communication	
NRES 260	Introduction to Conservation Photography	
ADPR 151	Introduction to Advertising and Public Relations	
ADPR 283	Strategy Development for Advertising and Public Relations	
<b>Leadership &amp; Communications Minor</b> <sup>1</sup>		<b>6-12</b>
Credit Hours Subtotal:		21-27
<b>Additional Requirements</b>		

<i>Any CASNR Minor</i>	12-18
<i>Free electives</i>	19-34
Credit Hours Subtotal:	31-52
<b>Total Credit Hours</b>	<b>79-108</b>

<sup>1</sup> *Leadership & Communications minor: 18 credit hour minor. Additional required courses are integrated into the major.*

## 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) 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/) (<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.

## Written Communication (ACE 1)

Select one of the following:	3
ALEC 120	Science and Storytelling
ENGL 150	Writing and Inquiry
ENGL 151	Writing for Change
ENGL 254	Writing and Communities

Credit Hours Subtotal: 3

## Natural Sciences (ACE 4)

CASNR requires all students to complete at least two natural science courses for 7-9 hours. Agricultural Education Option must select 8 credits, one from CASNR Approved Life Sciences category and one from the Chemistry, Physics, or Earth Science category. A laboratory is required for life science and chemistry.

### CASNR Approved Life Sciences

PLAS 131	Plant Science
& PLAS 132	and Agronomic Plant Science Laboratory
PLAS 131	Plant Science
& PLAS 133	and Horticultural Plant Science Laboratory



PLAS 131 & PLAS 134	Plant Science and Plant Sciences Laboratory
BIOS 101 & 101L	General Biology and General Biology Laboratory
LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory
ENTO 115 / BIOS 115 & ENTO 116 / BIOS 116	Insect Biology and Insect Identification
ASCI 120	Animal Biology

**Chemistry**

CHEM 105A & CHEM 105L	Chemistry in Context I and Chemistry in Context I Laboratory
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory

**Physics**

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

**Earth Science**

ENSC 220	Energy Systems and Sustainability
GEOG 155	Elements of Physical Geography
GEOL 101	Dynamic Earth
GEOL 109	Oceanography
METR 100	Weather and Climate
METR 180	Climate Change, Energy, and the Environment
NRES 115	Introduction to Environmental Science

Credit Hours Subtotal: 7-9

**Social Sciences (ACE 6)**

AECN 141	Introduction to the Economics of Agriculture	3
or ECON 212	Principles of Microeconomics	

Credit Hours Subtotal: 3

**Agricultural, Food and Natural Resources Content Courses <sup>1</sup>**

*Agricultural Research and Applied Technology*

Select one of the following: 3

AGRI 115	Biotechnology: Food, Health and Environment
AGST 316	Technologies and Techniques in Digital Agriculture
PLAS 215	Genetics
PLAS 431 / AGEN 431 / AGST 431	Site-specific Crop Management

*Agricultural Policy*

Select one of the following: 3

AECN 256	Legal Aspects in Agriculture
AECN 265	Resource and Environmental Economics I
AECN 345	Policy Issues in Agriculture and Natural Resources
AECN 376	Rural Community Economics

NRES 323	Natural Resources Policy
<b>Agribusiness Management: Select one of the following 3</b>	

AECN 201	Farm and Ranch Management
AECN 225 / EAEP 225 / MRKT 225	Agribusiness Entrepreneurship in Food Products Marketing
AECN 235	Introduction to Commodity Marketing
AECN 325 / MRKT 325	Marketing of Agricultural Commodities

*Animal Systems Production or Management*

Select one of the following: 3

ASCI 100	Fundamentals of Animal Biology and Industry
ASCI 200	Animal and Carcass Evaluation
ASCI 310	Fresh Meats
ASCI 330	Animal Breeding and Genetics
ASCI 370	Animal Welfare

*Natural Resources & Environmental Service Systems Management*

Select one of the following: 3

AECN 265	Resource and Environmental Economics I
AECN 357 / NREE 357	Natural Resource and Environmental Law
PLAS 153 / SOIL 153	Soil Resources
PLAS 245 / NRES 245	Introduction to Grassland Ecology and Management
PLAS 366 / SOIL 366	Soil Nutrient Relationships
PLAS 435 / NRES 435	Agroecology
NRES 111	Wildlife and Natural Resource Conservation
NRES 211	Introduction to Conservation Biology
NRES 220	Principles of Ecology
NRES 310	Introduction to Forest Management
NRES 311	Wildlife Ecology and Management
NRES 315	Human Dimensions of Fish and Wildlife Management
NRES 322	Environmental Education Curricula
NRES 330	Environmental Health
NRES 434	Environmental Education and Interpretation

*Plant Systems Production or Management*

Select one of the following: 3

PLAS 204	Resource-Efficient Crop Management
PLAS 240 / RNGE 240	Forage Crop and Pasture Management
PLAS 212 / NRES 212 / LARC 212	Woody Plants for Landscapes: Identification, Management, and Use
PLAS 214	Herbaceous Landscape Plants
PLAS 221	Plant Propagation
PLAS 227 & PLAS 229	Introductory Turfgrass Management and Introductory Turfgrass Management Laboratory
PLAS 262	Floral Design II

PLAS 306	Greenhouse Practices and Management	
PLAS 307	Hydroponics for Growing Populations	
PLAS 319	Edible Landscapes	
PLAS 321	Arboriculture: Maintenance & Selection of Landscape Trees	
PLAS 326	Landscape Management Solutions	

**Power, Structural & Technical Systems**

Select 9 hours of the following: 9

AGST 216	Fundamentals of Electrical Systems	
AGST 232	Power and Machinery Principles	
or from SCC-Lincoln: <sup>2</sup>		
AUTT 1003	Small Engines	
CNST 1101	Basic Woods Manufacturing or	
CNST 1201	Construction Basics	
WELD 1060	Basic Oxy -Acetylene/Shielded Metal	
WELD 1070	Arc Theory and Lab & Advanced Oxy - Acetylene/Shielded Metal Arc Techniques	
WELD 1080	GTAW Theory & Lab	

**Food Products & Processing Systems**

Select one of the following: 3

ASCI 210 & 210L	Principles of Animal Products for Today's Society and Principles of Animal Products Laboratory	
FDST 131 / CHEM 131 / NUTR 131	The Science of Food	

Credit Hours Subtotal: 30

**Agriculture, Food and Natural Resources Electives**

Select 6 hours from courses within any of the eight previous categories or from the following courses: 6

ASCI 100L	Fundamentals of Animal Biology and Industry Laboratory	
ASCI 250A	Basic Beef Cow-Calf Management	
ASCI 250B	Basic Beef Stocker and Feedlot Management	
ASCI 250K	Basic Swine Management	
ASCI 250M	Basic Dairy Management	
ASCI 250P	Basic Poultry Management	
ASCI 250R	Basic Small Ruminant Management	
ASCI 300A	Principles of Meat Evaluation, Grading and Judging	
ASCI 300B	Principles of Livestock Evaluation and Judging	
ASCI 300D	Principles of Meat Animal Evaluation	
ENTO 109	Beekeeping	
FDST 101	Introductory Food Science	
PLAS 279	Soil Evaluation	

Credit Hours Subtotal: 6

**Professional Education Core<sup>3</sup>**

ALEC 135	Introduction to Agricultural Education (Early Field Experience)	3
ALEC 234	Planning SAE and FFA Programs	3
ALEC 308	Laboratory Instruction and Management	3

ALEC 405	Methods of Instruction	3
ALEC 405L	Methods of Instruction Laboratory	1
ALEC 413	Program Development	3
ALEC 490	Professional Seminar	1
EDPS 457	Learning and Motivation Principles for Secondary Teaching	3
or EDPS 362	Learning in the Classroom	
or EDPS 251	Fundamentals of Adolescent Development for Education	
SPED 201	Introduction to Special Education	3
TEAC 330 / ETHN 330	Multicultural Education (ACE 9)	3
or SOCI 217	Sociology of Race and Ethnicity	
Credit Hours Subtotal:		26
<b>Capstone Course (ACE 10)</b>		
ALEC 431	Student Teaching	12
Credit Hours Subtotal:		12
<b>Free Electives</b>		
Select 8-9 hours		5-6
Credit Hours Subtotal:		5
<b>Total Credit Hours</b>		<b>92-94</b>

<sup>1</sup> A minimum of 15 hours completed at the 200 level or above, and including at least 9 hours completed at the 300 level or above. Students must have a course in four CASNR departments or program areas. A course may be used to fulfill more than one category; however, the hours will only count once toward the 39-hour agricultural science requirement.

No grades lower than C within the endorsement area.

<sup>2</sup> Courses available through SCC-Lincoln or SCC-Milford. Meet with your advisor to plan for your power, structural and technical classes.

<sup>3</sup> No grades lower than C+ within professional education courses.

**Biology Option/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 Agricultural Education Option. The Biology Option/Endorsement may only be completed by students completing the Agricultural Education Option.

**Supporting Laboratory Based Courses**

<b>Chemistry</b>		
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory	4
<b>Physics</b>		
Select one course from the following:		4-5
PHYS 141	Physics for Life Sciences I	
PHYS 151	Elements of Physics	
PHYS 211	General Physics I	
AGST 109	Physical Principles in Agriculture and Life Sciences	
<b>Earth Science</b>		
GEOL 101	Dynamic Earth	4
<b>Biology Courses</b>		<b>24</b>

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 <sup>1</sup>

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

#### Fundamentals of Biology (all required) <sup>1</sup>

LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory	4
LIFE 121 & 121L	Fundamentals of Biology II and Fundamentals of Biology II Laboratory	4

#### Ecology <sup>1</sup>

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

#### Genetics <sup>1</sup>

BIOS 201	General Genetics	
PLAS 215	Genetics	

#### Zoology and/or Microbiology <sup>1</sup>

BIOS 115 / ENTO 115 / ENTO 116 & BIOS 116	Insect Biology and Insect Identification	
ASCI 100	Fundamentals of Animal Biology and Industry	
ASCI 240	Physiology of Domestic Animals	
ASCI 271	Companion Animal Behavior	
NUTR 372	Food Safety and Sanitation	

#### Integrated Laboratory Management

ALEC 308	Laboratory Instruction and Management	
Credit Hours Subtotal:		44-45

#### Science Methods Instruction

TEAC 397V	Professional Practicum Experience III Secondary Science	1
TEAC 451V	Learning and Teaching Principles and Practices: Secondary Science	3
Credit Hours Subtotal:		4

#### Student Teaching

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

**Total Credit Hours 48-49**

<sup>1</sup> 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) 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/) (<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.

### Written Communication (ACE 1)

Select one of the following:		3
ALEC 120	Science and Storytelling	
ENGL 150	Writing and Inquiry	
ENGL 151	Writing for Change	
ENGL 254	Writing and Communities	
Credit Hours Subtotal:		3

### Natural Sciences (ACE 4)

CASNR requires all students to complete at least two natural science courses for 7-9 hours. Both courses cannot be from the same category. A laboratory is required for life science and chemistry.

#### CASNR Approved Life Science

PLAS 131 & PLAS 132	Plant Science and Agronomic Plant Science Laboratory
PLAS 131 & PLAS 133	Plant Science and Horticultural Plant Science Laboratory
PLAS 131 & PLAS 134	Plant Science and Plant Sciences Laboratory
BIOS 101 & 101L	General Biology and General Biology Laboratory
LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory
ENTO 115 / BIOS 115 & ENTO 116 / BIOS 116	Insect Biology and Insect Identification
ASCI 120	Animal Biology

#### Chemistry

CHEM 105A & 105A	Chemistry in Context I and Chemistry in Context I
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory

#### Physics

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

#### Earth Science

ENSC 220	Energy Systems and Sustainability
GEOG 155	Elements of Physical Geography
GEOL 101	Dynamic Earth
GEOL 109	Oceanography
METR 100	Weather and Climate
METR 180	Climate Change, Energy, and the Environment
NRES 115	Introduction to Environmental Science

Credit Hours Subtotal: 7-9

#### Social Sciences (ACE 6)

Choose any 3-credit ACE 6 course 3

Credit Hours Subtotal: 3

#### Global Awareness & Human Diversity (ACE 9)

UNL students are encouraged to take SOCI 217 Sociology of Race and Ethnicity or TEAC 330 Multicultural Education. Students should meet with the STS advisor to explore other ACE 9 options to be completed in the community college system that also meet Nebraska Department of Education Teacher Certification requirements for Human Relations Training.

#### Skilled and Technical Sciences Endorsement Area (transferred)

7-9 Including a minimum of six credit hours in each of these categories: Architecture & Construction; Manufacturing; Energy & Engineering; and Transportation, Distribution, & Logistics. 36

#### STS Professional Core <sup>1</sup>

ALEC 135A	Introduction to Skilled and Technical Sciences Education	1
ALEC 235	Planning STS Work-Based Learning and Skills USA Programs	3
ALEC 308	Laboratory Instruction and Management	3
ALEC 405	Methods of Instruction	3
ALEC 405L	Methods of Instruction Laboratory	1
ALEC 413	Program Development	3
ALEC 490	Professional Seminar	1
ALEC 496	Independent Study in Leadership Education	1-9
EDPS 457	Learning and Motivation Principles for Secondary Teaching	3
or EDPS 362	Learning in the Classroom	
or EDPS 251	Fundamentals of Adolescent Development for Education	
SPED 201	Introduction to Special Education	3
TEAC 259	Instructional Technology	3
Credit Hours Subtotal:		61-69
<b>Capstone Course (ACE 10)</b>		
ALEC 431	Student Teaching	12
Credit Hours Subtotal:		12
<b>Total Credit Hours</b>		<b>86-96</b>

<sup>1</sup> No grades lower than C+ within professional education courses.

*Skilled and Technical Science Credit Requirements for BS Degree in ALEC, including ALEC Core, STS Professional Core, and Electives not completed at community college* 60

*Maximum Credits for Transfer into UNL* 60

Students typically complete 36 hours of STS endorsement areas and ACE 1, 3, 4, 5, 9 from a community college.

*Minimum Credit Hours Required for Graduation* 120

### Work-Based Learning (Grades 9-12) Supplemental Education Endorsement

This endorsement requires an applicant to have, or earn concurrently, an endorsement in a subject or field. Persons with this endorsement may coordinate, teach and supervise programs of instruction that develop career and life skills.

#### For Agricultural Education Option students

ALEC 234	Planning SAE and FFA Programs	3
ALEC 413	Program Development	3
Select one of the following:		0-2
1,000 hours of approved work experience		
ALEC 390	Industrial Experience	
ALEC 490	Professional Seminar	
TEAC 297	Professional Practicum Experiences II	

**Total Credit Hours** 6-8



**For Skilled and Technical Sciences Option students**

ALEC 235	Planning STS Work-Based Learning and Skills USA Programs	3
ALEC 413	Program Development	3
Select one of the following:		0-2
1,000 hours of approved work experience		
ALEC 390	Industrial Experience	
ALEC 490	Professional Seminar	
TEAC 297	Professional Practicum Experiences II	

**Total Credit Hours** **6-8**

**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.

**Written Communication (ACE 1)**

Select one of the following:		3
ALEC 120	Science and Storytelling	
ENGL 150	Writing and Inquiry	
ENGL 151	Writing for Change	
ENGL 254	Writing and Communities	
Credit Hours Subtotal:		3

**Natural Sciences (ACE 4)**

CASNR requires all students to complete at least two natural science courses for 7-9 hours. Both courses cannot be from the same category. A laboratory is required for life science and chemistry.

*CASNR Approved Life Sciences*

PLAS 131 & PLAS 132	Plant Science and Agronomic Plant Science Laboratory	
PLAS 131 & PLAS 133	Plant Science and Horticultural Plant Science Laboratory	
PLAS 131 & PLAS 134	Plant Science and Plant Sciences Laboratory	
BIOS 101 & 101L	General Biology and General Biology Laboratory	
LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory	
ENTO 115 / BIOS 115 & ENTO 116 / BIOS 116	Insect Biology and Insect Identification	
ASCI 120	Animal Biology	

*Chemistry*

CHEM 105A & CHEM 105L	Chemistry in Context I and Chemistry in Context I Laboratory	
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory	

*Physics*

AGST 109	Physical Principles in Agriculture and Life Sciences	
PHYS 141	Physics for Life Sciences I	
PHYS 151	Elements of Physics	
PHYS 211	General Physics I	
<i>Earth Science</i>		
ENSC 220	Energy Systems and Sustainability	
GEOG 155	Elements of Physical Geography	
GEOL 101	Dynamic Earth	
GEOL 109	Oceanography	
METR 100	Weather and Climate	
METR 180	Climate Change, Energy, and the Environment	
NRES 115	Introduction to Environmental Science	

Credit Hours Subtotal: 7-9

**Social Sciences (ACE 6)**

ALEC 202		
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**Global Awareness & Human Diversity (ACE 9)**

Choose any 3-credit ACE 9 course.	3
Credit Hours Subtotal:	3

**Capstone (ACE 10)**

ALEC 495A	Internship in Leadership Development	5
Credit Hours Subtotal:		5

**Leadership Core**

ALEC 302	Dynamics of Effective Leadership in Organizations	3
ALEC 388 / AECN 388	Ethics in Agriculture and Natural Resources (ACE 8)	3
ALEC 407	Supervisory Leadership	3
ALEC 428 / NRES 428	Leadership in Public Organizations	3
ALEC 455	Dynamics of Effective Leadership in Groups & Teams	3
ALEC 466	Leadership and Diversity in Organizations and Communities	3
ALEC 477	Leadership and Motivation	3
AECN 376	Rural Community Economics	3

**Agricultural and Environmental Sciences Minor<sup>1</sup>**

Credit Hours Subtotal: 27

**Additional Requirements**

<i>Additional Minor<sup>2</sup></i>	12-18
<i>Free Electives</i>	30-39
Select 16-27 hours	16-27
Credit Hours Subtotal:	58-84

**Total Credit Hours** **103-131**

<sup>1</sup> AESC minor is a 15 hour minor. Additional required courses are integrated into the major.

<sup>2</sup> The leadership and communication minor and the leadership and entrepreneurship minor are not permitted.

## Additional Major Requirements

### Grade Rules

#### Pass/No Pass

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

## Requirements for Minor Offered by Department

### 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**

ALEC 120	Science and Storytelling
ALEC 136	Fundamentals of Agricultural and Environmental Sciences Communication
ALEC 260	Introduction to Digital Media in Agricultural and Environmental Sciences

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

ALEC 305	Presentation Strategies to Communicate Agricultural and Environmental Sciences
ALEC 307	Advanced Strategic Writing for Agricultural and Environmental Sciences Communication
ALEC 350	Agriculture, the Environment & Science in the Media

ALEC 360	Advanced Visual Communication for Agricultural and Environmental Sciences
ALEC 361	Video and Audio Production for Communicating Agricultural and Environmental Sciences
ALEC 388	Ethics in Agriculture and Natural Resources
ALEC 391	Special Topics
ALEC 399	Independent Study in Communications
ALEC 417	Issues Management and Crisis Communications in Agricultural and Environmental Sciences
ALEC 419	Public Information Campaigns
ALEC 477	Leadership and Motivation

### 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

ALEC 102	Interpersonal Skills for Leadership <sup>1</sup>	3
ALEC 202	Foundations of Leadership Theory and Practice	3
ALEC 302	Dynamics of Effective Leadership in Organizations	3
Credit Hours Subtotal:		9

#### Advanced Leadership Courses

Select three of the following: <b>9</b>		
ALEC 305	Presentation Strategies to Communicate Agricultural and Environmental Sciences	
ALEC 337	Instructional Internship in Leadership Development <sup>2</sup>	
ALEC 388 / AECN 388	Ethics in Agriculture and Natural Resources	
ALEC 407	Supervisory Leadership	
ALEC 410 / NRES 413	Environmental Leadership	
ALEC 414	Classic Figures in Leadership	
ALEC 422	Facilitation and Project Planning	



ALEC 455	Dynamics of Effective Leadership in Groups & Teams	
ALEC 466	Leadership and Diversity in Organizations and Communities	
ALEC 477	Leadership and Motivation	
ALEC 496A	Independent Study in Leadership Education: Experiential Learning in Leadership	
AERO 331	Leading People and Effective Communication I <sup>3</sup>	
AERO 332	Leading People and Effective Communication II <sup>3</sup>	
Credit Hours Subtotal:		9
<b>Total Credit Hours</b>		<b>18</b>

<sup>1</sup> ENGR 100, ALEC 153, or ALEC 165 can be used in place of ALEC 102. No more than 3 credit hours of ALEC 102, ALEC 153, ALEC 165 or ENGR 100 can be applied to meet the minor requirements.

<sup>2</sup> For students who have been selected as teaching assistants.

<sup>3</sup> May be substituted for Air Force ROTC students only.

### Leadership and Entrepreneurship Minor

An 18-hour minor in leadership and entrepreneurship is available through a joint program offered by the Departments of Agricultural Leadership, Education and Communication and the Engler Agribusiness Entrepreneurship Program. This minor is intended for those who are interested in gaining additional professional skills in leadership and entrepreneurship. The 18-hour minor is comprised of theory-based and applied courses as well as 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:		3
ALEC 202	Foundations of Leadership Theory and Practice	
ALEC 302	Dynamics of Effective Leadership in Organizations	
ALEC 477	Leadership and Motivation	
Credit Hours Subtotal:		3

#### Application of Leadership Theory

Select one course from the following:		3
ALEC 407	Supervisory Leadership	

ALEC 410 / NRES 413	Environmental Leadership <sup>1</sup>	
ALEC 455	Dynamics of Effective Leadership in Groups & Teams	
ALEC 466	Leadership and Diversity in Organizations and Communities <sup>1</sup>	
Credit Hours Subtotal:		3
<b>Entrepreneurship Foundation</b>		
EAEP 101	Exploring the Entrepreneurial Mindset	3
Credit Hours Subtotal:		3
<b>Entrepreneurship Development</b>		
Select one course from the following:		3
EAEP 275 / AECN 275	Agribusiness Entrepreneurial Finance	
EAEP 388	Business Systems in Entrepreneurship	
Credit Hours Subtotal:		3
<b>Experiential Learning in Leadership and/or Entrepreneurship</b>		
Select 6 hours from the following:		6
ALEC 102	Interpersonal Skills for Leadership <sup>2</sup>	
ALEC 153	Chancellor's Leadership Class	
ALEC 165	Pepsi Service Scholars	
ALEC 337	Instructional Internship in Leadership Development <sup>3</sup>	
ALEC 422	Facilitation and Project Planning	
ALEC 496	Independent Study in Leadership Education (Field Experience)	
ALEC 496A	Independent Study in Leadership Education: Experiential Learning in Leadership	
AGRI 310	Study Tours in International Agriculture	
EAEP 496	Independent Study in Entrepreneurship	
Credit Hours Subtotal:		6
<b>Total Credit Hours</b>		<b>18</b>

<sup>1</sup> Junior standing is required for these three courses.

<sup>2</sup> With 20-hour service learning project.

<sup>3</sup> Credit received for being a teaching assistant.

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

**ALEC 101 Mechanical Drafting**

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

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 122; ALEC 303; ALEC 346

**ALEC 102 Interpersonal Skills for Leadership**

**Prerequisites:** Credit toward the degree may be earned in only one of: ALEC 102, ENGR 100, or ENGR 100H

**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.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** FALL/SPR

**ACE:** ACE 2 Communication Competence

**Experiential Learning:** Community Engagement

**ALEC 103 Computer-Aided Drafting**

**Prerequisites:** ALEC 122.

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

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 346

**ALEC 104 Wood Technology**

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

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

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

**Course and Laboratory Fee:** \$15

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

**Notes:** This course is the first course in the Project Lead the Way pre-engineering program and requires no prerequisite. This is a secondary course training option for pre service teachers in Skilled and Technical Sciences. It is a STEM skill requirement for the 2+2 articulation agreement with various community colleges across the state of Nebraska. By allowing pre-service teachers to complete this course, students can reverse transfer the credit back to the community colleges to enforce rigorous training needs in the STEM field for future STS teachers coming out of the ALEC department.

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

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded with Option

**Offered:** SUMMER

**Prerequisite for:** ALEC 115

**ALEC 109 Industrial Metals and Plastics Materials Processing**

**Description:** Forming, molding, separating, and fabricating of industrial materials.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 303

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

**ALEC 115 Principles of Engineering (POE)**

**Prerequisites:** ALEC 105

**Notes:** This course is the second foundational course taught in the Project Lead the Way pre-engineering curriculum. Students that complete this course will be certified to teach both foundational courses in any secondary PLTW pre-engineering program across the country. This certification gives UNL STS students in the ALEC department a rigorous STEM skill set. Once the course is completed the credit will be reverse transferred back to the community college to fulfill the STEM skill requirement of the 2+2 articulation agreements established with UNL and the ALEC department.

**Description:** Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation.

**Credit Hours:** 5

**Max credits per semester:** 5

**Max credits per degree:** 5

**Grading Option:** Graded with Option

**ALEC 120 Science and Storytelling**

**Description:** Introduction to science writing and storytelling techniques for communicating topics in agricultural sciences and natural resources. Focuses on crafting clear, engaging, and audience-centered narratives that make complex scientific information accessible. Develop skills to research effectively, write compelling stories tailored to distinct audiences, and critically analyze science-focused storytelling. Explores how storytelling bridges discovery in agricultural sciences and natural resources with public understanding.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ACE:** ACE 1 Writing

**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

**ALEC 135 Introduction to Agricultural Education (Early Field Experience)**

**Prerequisites:** Agricultural leadership, education and communication major

**Notes:** Requires 30 additional hours of field experience time, in an SBAE program, outside of regularly scheduled class hours.

**Description:** Covers the history, philosophy, goals, and objectives of Career and Technical Education, more specifically, School-Based Agricultural Education. Introduction to lesson plan development, writing objectives/essential questions, and peer teaching to provide knowledge and skills to be used in a 40-hour early field experience. The early field experience provides a platform for critical reflection to explore teaching as a potential career.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** FALL

**Prerequisite for:** ALEC 234; EDPS 362; EDPS 457

**ALEC 135A Introduction to Skilled and Technical Sciences Education**

**Notes:** Requires 30 additional hours of field experience time, in a Skills USA Affiliated STS Education program, outside of regularly scheduled class hours.

**Description:** Covers the history, philosophy, goals, and objectives of Career and Technical Education, more specifically, Skilled and Technical Sciences Education. Introduction to lesson plan development, writing objectives/essential questions, and peer teaching to provide knowledge and skills to be used in a 30-hour early field experience. The early field experience provides a platform for critical reflection to explore 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 362; 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 in 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

**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

**Course and Laboratory Fee:** \$15

**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

**ACE:** ACE 6 Social Science

**ALEC 203 Automotive Technology**

**Description:** Automotive technology and the equipment related to automotive repairs. The design, theory, and operations of automotive systems through laboratory activities.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 303

**ALEC 204 Machine Tool Technology**

**Description:** Basic machine shop practices involving hand and precision measuring tools, bench work, layout, engine lathe, milling machine, surface and pedestal grinders.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 246; ALEC 303

**ALEC 205 Welding Technology**

**Description:** Basic knowledge and skill in both oxygen-acetylene welding and cutting, and electrical arc welding.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Prerequisite for:** ALEC 303

**ALEC 206 Teaching and Learning Design**

**Description:** Cover a broad range of topic areas in the field of teaching and learning. Learn how educational psychology impacts learning and how it is used to design learning opportunities. Focus on developing community centered educational programming with learning science in mind. Design and deliver effective education programming within their community and beyond.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Offered:** SPRING

**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 SAE and FFA Programs**

**Prerequisites:** Sophomore standing and/or ALEC 135.

**Notes:** Provides a portion of the work-based learning credit (006.34D3) for the Agricultural Education Field Endorsement. Includes 20 hours of required early field experience.

**Description:** Examines the theory of experiential education to middle school and secondary agricultural education programs, especially leadership and career education. Develop Supervised Agricultural Experiences (SAE) as a Work-Based Learning strategy, advising FFA as a CTSO, and alumni activities appropriate to the community, school, and student needs. Introduction to various technologies to support effective program leadership.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ALEC 235 Planning STS Work-Based Learning and Skills USA Programs**

**Notes:** Provides the work-based learning credit (006.34D3) for the Industrial Technology Education Field Endorsement and STS Supplemental endorsements. Includes 20 hours of required early field experience.

**Description:** Applies the theory of experiential education to middle school and secondary Skilled and Technical Sciences education programs, especially leadership and career education. Provides exposure to supervised Work-Based Learning experiences and advising SkillsUSA as a CTSO, appropriate to the community, school, and student needs. Introduction to various technologies to support effective program leadership.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Groups:** Introductory

**ALEC 242 Construction Technology****Prerequisites:** ALEC 104**Description:** Classifications, properties, and uses of common construction materials and building practices. Construction of a residential dwelling from plot plan through trim and finish work.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**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**Course and Laboratory Fee:** \$15**ALEC 260 Introduction to Digital Media in Agricultural and Environmental Sciences****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 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:** \$25**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:** 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**ALEC 308 Laboratory Instruction and Management****Notes:** Student demonstrations and presentations required. Partially meets at Southeast Community College in Lincoln to ensure adequate experience with the equipment used in CTE programs. Includes 5 hours of required early field experience.**Description:** Covers the planning, conducting, and administration of instructional programs related to experientially-based education in school laboratory settings. Introduction to a variety of laboratory settings, including mechanics, greenhouse, and land labs, among others.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Course and Laboratory Fee:** \$60**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:** \$15

### **ALEC 350 Agriculture, the Environment & Science in the Media**

**Prerequisites:** Junior level students and above.

**Description:** How agriculture, the environment, and science are covered in media by different types of outlets. Use of framing theory as a foundation to understand why messages are crafted in certain ways, how and why news media portray topics and issues using certain metaphors and story lines. Creation of effective media messages related to agriculture, the environment, and science.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** ASCI 381

### **ALEC 360 Advanced Visual Communication for Agricultural and Environmental Sciences**

**Prerequisites:** ALEC 260 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

### **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

### **ALEC 388 Ethics in Agriculture and Natural Resources**

**Crosslisted with:** AECN 388

**Description:** Ethics focusing on agricultural and natural resource issues. Using case studies from the professional workplace and contemporary society, develops intellectual skills necessary to reflect critically on ethical issues and apply appropriate conceptual tools for resolution of issues arising from conflicting ethical and value systems.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ACE:** ACE 8 Civic/Ethics/Stewardship

### **ALEC 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**

**Prerequisites:** Parallel Enrollment in ALEC 405L and ALEC 413

**Description:** Covers the practice of instructional delivery of secondary Agricultural Education and Skilled and Technical Sciences programs in the public school system. Focused on organizing instructional content, individual lesson planning, methods of formal instructional delivery, student behavior management, instructing students with exceptionalities, and assessment. Includes 25 hours of required early field experience.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**ALEC 405L Methods of Instruction Laboratory**

**Prerequisites:** Parallel enrollment in ALEC 405L and 413.

**Description:** Promotes student practice of instructional delivery in Agricultural Education and Skilled and Technical Sciences programs in the public school system. Engage in practice for teaching at either the middle or high 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:** Parallel Enrollment in ALEC 405 and ALEC 405L

**Description:** An applied and collaborative engagement toward program planning, marketing, and managing formal and non-formal education programs for youth and adults. Emphasis on building collaborative relationships through a learning process focused on experiential learning.

**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

**Experiential Learning:** Case/Project-Based Learning

**ALEC 431 Student Teaching**

**Prerequisites:** 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. 3 credit hours are needed to meet the ACE 10 requirement.

**Description:** Guided participation in various phases of a public school Agricultural Education or Skilled and Technical Sciences programs.

**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 455 Dynamics of Effective Leadership in Groups & Teams**

**Crosslisted with:** ALEC 855, CDEV 855

**Prerequisites:** At least Junior standing is required for ALEC 455.

**Description:** Explore foundational knowledge of team and group dynamics theory and its relationship to the practice of leadership in organizations and communities. Development of leadership, followership, and teamwork skills in small groups and teams. Focus on team and group decision making, problem solving, and creativity, peer assessment, and evaluation using real-world situations and contexts. Critically apply team and group dynamic theories and research to leadership in organizations and communities.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**Offered:** SPRING

**ALEC 466 Leadership and Diversity in Organizations and Communities**

**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:** Permission of Instructor.

**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

**ACE:** ACE 10 Integrated Product

**ALEC 481 Editing and Publishing Capstone Experience in Agricultural and Environmental Sciences Communication**

**Prerequisites:** Permission of instructor.

**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 490 Professional Seminar**

**Description:** Addresses issues of planning for the student teaching experience, entering the profession of teaching secondary agricultural education or skilled and technical sciences education, planning for professional growth as an educator, and recognizing the professional responsibilities associated with being an educator.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 3

**Grading Option:** Graded with Option

**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. 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

**Experiential Learning:** Internship/Co-op

**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:**

**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

## Career Information

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

### Jobs of Recent Graduates

- Public Information Officer & Exec. Officer, The Nebraska Wheat Board & Wheat Growers Assoc. - Lincoln, NE
- Deputy Press Secretary, U.S. House of Representatives - Washington, DC
- Marketing Specialist, LI-COR Biosciences - Lincoln, NE
- Farm Broadcaster, Rural Radio Network - Scottsbluff, NE
- Communications Specialist, Farmway Coop - Beloit, KS

- Editor & Agricultural Reporter, Northeast Nebraska News Company - Hartington, NE
- Social Media Coordinator, RFD TV - Omaha, NE
- Creative Services Manager, David & Associates - Hastings, NE
- Account Coordinator, Broadhead - Minneapolis, MN
- Sales Representative, Dow AgroSciences - Indianapolis, IN

### Internships

- Communications Intern, Nebraska Wheat Board - Lincoln, NE
- Corporate Communications Intern, Aurora Cooperative - Aurora, NE
- Marketing and Public Relations Intern, AKSARBEN Foundation - Omaha, NE
- Sales Intern, Dow AgroSciences - Lincoln, NE
- Promotions Department Intern, NBC Universal Sports Network - Stamford, CT
- Broadcast Intern, UNL Ed Media - Lincoln, NE
- Program & Production Intern, Rural Media Group, Inc. and RFD TV - Omaha, NE
- Public Relations/Marketing, Ak-Sar-Ben/River City Roundup - Omaha, NE
- Media Intern, American Royal - Kansas City, MO
- Marketing and Communications Intern, Agriculture Future of America - Kansas City, MO