

GRASSLAND SYSTEMS

Description

Website: <https://grassland.unl.edu/major/grassland-systems/>

University of Nebraska–Lincoln students pursuing the bachelor of science degree in Grassland Systems will benefit from an interdisciplinary, holistic approach to the study of grasslands, rangelands, and prairies. Approximately 60% of Nebraska’s landmass is grassland which offers exceptional experiential learning opportunities. Students first develop a strong base with core courses in grassland systems, mathematics and statistics, communications, and natural sciences before advanced study in one of two options: grassland ecology and management (GECM) or grazing livestock systems (GLS). Students may also pursue two minors: Rangeland Management Specialist, which equips students for federal range management careers, and Grazing Livestock Systems, which equips students with the essentials of sustainable management of beef cattle production systems.

Grassland Ecology and Management Option

The University of Nebraska is recognized as the birthplace of prairie ecology. Students pursuing the GECM option learn the principles and techniques needed to manage and monitor grasslands that provide wildlife habitat, conservation, livestock production, and other ecosystem services associated with diverse, resilient grasslands.

- For students excited about studying, managing, and conserving private and public grasslands.
- An integration of disciplines involved in the study, conservation, and utilization of grasslands.
- Foundation of the degree program is multiple use, emphasizing integrated grassland management for water, wildlife, forage, recreation, and aesthetics.
- Students learn through coursework, seminars, capstone experiences, and optional internships with state and federal agencies, research organizations, and private industry.
- Careers include stewardship of grassland resources on private and public lands including habitat management, grassland establishment and prairie restoration; and optional internships with state and federal agencies, research organizations non-governmental organizations and private industry.
- Curriculum meets the federal civil service requirements for rangeland management specialist positions and planning positions with environmental consulting firms, natural resources districts, non-governmental organizations, and local, state and federal natural resource agencies.
- Breadth of the curriculum prepares students for postgraduate education in most disciplines related to natural resource sciences.

Grazing Livestock Systems Option

Nebraska has some of the most diverse and expansive grassland and rangeland resources in the country that supports a premier beef industry. Students choosing the GLS option will learn how to manage beef cattle

production systems on grazing lands and other forage resources that are economically and ecologically sustainable.

- For students whose career interests involve the production of livestock utilizing harvested forages, pasture, and range as the principal feed resources.
- Careers include managers of livestock farms or ranches and public or private sector positions that assist in the management, education, and support of grazing livestock decision making.
- Students study principles of forage and range sciences, animal sciences, and management economics.
- Students also learn through seminars, capstone experiences, and a planned internship.
- Integration of disciplines is emphasized in developing production systems that will optimize economic returns consistent with management objectives, resource availability, and environmental health.
- Flexibility allows specialization in ruminant livestock, forage, and range management or economics, while preserving the systems orientation.

Other

Scholarships and Financial Aid

In addition to other scholarships a student might receive, the grassland systems program awards scholarships annually to qualifying new and current grassland systems students, based primarily on academic performance. For more information on these scholarships, contact the Center for Grassland Studies, 402-472-4101, grassland@unl.edu.

Academic Advising

Students are assigned a faculty advisor after admission into their program. The advisor serves as a resource regarding the degree, academic plans and progress, and career options. Students are encouraged to regularly consult with their advisor, especially before registering for classes.

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 community colleges, allows students to complete the first two years of a degree program at the participating community college and continue their education and study in a degree program leading toward a bachelor of science degree.

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

Depending on the community college, students enrolled in the A to B Program may complete the requirements for an associate of science at

the community college, transfer to the University of Nebraska–Lincoln, and work toward a bachelor of science degree.

Participating community colleges include:

- Central Community College
- Metropolitan Community College
- Mid-Plains Community College
- Nebraska College of Technical Agriculture
- Nebraska Indian Community College
- Northeast Community College
- Southeast Community College
- Western Nebraska Community College

3+2 Programs

Two specialized degree programs in **animal science** and **veterinary science** are offered jointly with an accredited college or school of veterinary medicine. These two programs permit CASNR animal science or veterinary science students to receive a bachelor of science degree from the University of Nebraska–Lincoln with a degree in animal science or veterinary science after successfully completing two years of the professional curriculum in veterinary medicine at an accredited veterinary school. Students who successfully complete the 3+2 Program, must provide transcripts and complete the Application for Degree form via MyRED. Students without MyRED access may apply for graduation in person at Husker Hub in the Canfield Administration Building, or by mail. Students should discuss these degree programs with their academic advisor.

Cooperative Degree Programs

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

UNL Degree-Granting Programs

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

Chadron State College. Chadron State College offers a 2+2 program leading to a grassland ecology and management degree program and a transfer program leading to a bachelor of science in agricultural education in the teaching option.

Wayne State College. Wayne State College offers a 3+1 program leading to a bachelor of science in plant biology in the ecology and management option and a 3+1 program leading to a bachelor of science in Applied Science.

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

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

Non University of Nebraska–Lincoln Degree-Granting Programs

CASNR cooperates with other institutions to provide coursework that is applied towards a degree at the cooperating institution. Pre-professional

programs offered by CASNR allow students to complete the first two or three years of a degree program at the University prior to transferring and completing a degree at the cooperating institution.

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

Residency

Students must complete at least 30 of the total hours for their degree using University of Nebraska–Lincoln credits. At least 18 of the 30 credit hours must be in courses offered through CASNR¹ (>299) including the appropriate ACE 10 degree requirement or an approved ACE 10 substitution offered through another Nebraska college and excluding independent study regardless of the number of hours transferred. Credit earned during education abroad may be used toward the residency requirement if students register through the University of Nebraska–Lincoln and participate in prior-approved education abroad programs. The University of Nebraska–Lincoln open enrollment and summer independent study courses count toward residence.

¹ *Includes courses taught by CASNR faculty through interdisciplinary prefixes (e.g., LIFE, MBIO, ENVR, SCIL, EAEP, ENSC) and CASNR crosslisted courses taught by non-CASNR faculty.*

Online and Distance Education

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

For further information, contact:

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

Independent Study Rules

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

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

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

Other College Degree Requirements

Capstone Course Requirement

A capstone course is required for each CASNR degree program. A capstone course is defined as a course in which students are required to

integrate diverse bodies of knowledge to solve a problem or formulate a policy of societal importance.

ACE Requirements

All students must fulfill the Achievement Centered Education (ACE) requirements. Information about the ACE program may be viewed at ace.unl.edu (<https://ace.unl.edu/>).

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

Catalog Rule

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

Learning Outcomes

Graduates of Grassland Ecology and Management graduates also will be able to:

1. Plan and manage for multiple ecosystem services, including livestock production, wildlife habitat, biodiversity, and conservation on private and public grasslands.
2. Describe the interrelationships of ecological factors and processes with an emphasis on vegetation, fire, grazing animals, economics, and wildlife.
3. Critically analyze management systems, integrate a wide range of interrelated inputs and disciplines into a single process or system, and make decisions based on properly-collected information and sound reasoning and communicate them effectively to peers and stakeholders.

Grassland Ecology and Management graduates will be able to:

1. Conduct grassland surveys, use ecological site descriptions, develop prescriptions for grazing, prescribed fire and vegetation management, design grassland plantings, use current geospatial technologies, analyze quantitative field data, and interpret results of data analyses.
2. Use ecological principles to analyze and interpret the interactions of the plant, animal, soil, climate, and economic aspects of prairies and rangelands.

3. Integrate conservation strategies that ensure sustained productivity and resilience of grasslands with livestock production, recreation and other grassland-based enterprises.
4. Develop a comprehensive management plan for a unit of private or public grassland, including both ecological and economic considerations. Use decision support tools and technologies to develop and analyze management systems and strategies.

Grazing Livestock Systems graduates also will be able to:

1. Conduct a survey of the range and pasture resources of a livestock operation, including plant identification, range and pasture condition determination, site classification, and degree of plant and pasture utilization.
2. Analyze and interpret the forage, animal, and economic aspects of a ranch unit, including mapping of pastures and physical facilities.
3. Integrate range and pasture improvements such as grazing systems, range seeding, weed control, and hay and supplemental forage management with livestock management such as breeding systems, nutrition, insect, and disease control.
4. Develop a comprehensive management plan including marketing strategies and economic analysis for the ranch unit. Use computer-based decision support tools to develop and evaluate management strategies/systems for livestock enterprises.

Major Requirements

Grassland Systems Core Requirements

| | | |
|--|---|-----|
| <i>College Integrative Course (ACE 8)</i> | | |
| SCIL 101 | Science and Decision-Making for a Complex World | 3 |
| <i>Mathematics and Statistics (beyond college algebra)</i> | | |
| STAT 218 | Introduction to Statistics (ACE 3) | 3 |
| Select one of the following: | | 3-5 |
| MATH 102 | Trigonometry | |
| MATH 103 | College Algebra and Trigonometry | |
| MATH 104 | Applied Calculus (ACE 3) | |
| MATH 106 | Calculus I (ACE 3) | |
| MATH 203 | Contemporary Mathematics (ACE 3) | |
| <i>Written Communication (ACE 1)</i> | | |
| Select one of the following: | | 3 |
| ENGL 150 | Writing and Inquiry | |
| ENGL 151 | Writing for Change | |
| ENGL 254 | Writing and Communities | |
| JGEN 120 | Basic Business Communication | |
| JGEN 200 | Technical Communication I | |
| <i>Oral Communication (ACE 2)</i> | | |
| Select one of the following: | | 3 |
| ALEC 102 | Interpersonal Skills for Leadership | |
| COMM 101 | Communication in the 21st Century | |
| COMM 209 | Public Speaking | |
| COMM 210 | Communicating in Small Groups | |
| COMM 215 | Visual Communication | |
| COMM 283 | Interpersonal Communication | |
| COMM 286 | Business and Professional Communication | |



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| MRKT 257 | Sales Communication | |
| TMFD 121 | Visual Communication with Animation | |
| <i>Economics (ACE 6)</i> | | |
| Select one of the following: | | 3 |
| AECN 141 | Introduction to the Economics of Agriculture | |
| ECON 200 | Economic Essentials and Issues | |
| ECON 211 | Principles of Macroeconomics | |
| ECON 212 | Principles of Microeconomics | |
| Credit Hours Subtotal: | | 18-20 |
| ACE Requirement | | |
| Select one course each from ACE outcomes 5, 7, and 9 | | 9 |
| <i>Natural Sciences</i> | | |
| <i>Chemistry (ACE 4)</i> | | |
| CHEM 105A & CHEM 105L | Chemistry in Context I and Chemistry in Context I Laboratory or CHEM 109A General Chemistry I and General Chemistry I Laboratory & CHEM 109L | 4 |
| CHEM 106A & CHEM 106L | Chemistry in Context II and Chemistry in Context II Laboratory or CHEM 110A General Chemistry II and General Chemistry II Laboratory & CHEM 110L | 4 |
| <i>Grassland Systems</i> | | |
| PLAS 153 / SOIL 153 | Soil Resources | 4 |
| PLAS 215 | Genetics | 4 |
| | or BIOS 201 General Genetics | |
| PLAS 245 / NRES 245 | Introduction to Grassland Ecology and Management | 3 |
| PLAS 340 / GRAS 340 / RNGE 340 | Range Management and Improvement | 3 |
| PLAS 440 / GRAS 440 / NRES 440 / RNGE 440 | Great Plains Ecosystem | 3 |
| PLAS 442 / GRAS 442 / NRES 442 / RNGE 442 | Wildland Plants | 3 |
| PLAS 444 / GRAS 444 / NRES 444 / RNGE 444 | Ecosystem Monitoring and Assessment | 3 |
| Credit Hours Subtotal: | | 40 |
| Total Credit Hours | | 58-60 |

Grassland Ecology and Management Option Requirements

| | | |
|---------------------------------|---|-----|
| <i>ACE 10 Course (Capstone)</i> | | |
| NRES 438 | Grassland Conservation: Planning and Management | 3 |
| <i>Experiential Learning</i> | | |
| GRAS 398R | Research Experiences in Grasslands | 1-3 |
| <i>Natural Resources</i> | | |

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|--------------------------------|---|-----|
| AECN 265 / NREE 265 | Resource and Environmental Economics I | 3 |
| NRES 220 & NRES 222 | Principles of Ecology and Ecology Laboratory | 4 |
| Select two of the following: | | 7-8 |
| NRES 218 | Introduction to Geospatial Technologies | |
| GEOG 217 | Principles of GIS | |
| NRES 415 | GIS for Agriculture and Natural Resources | |
| NRES 418 | Introduction to Remote Sensing | |
| NRES 420 / GEOG 419 / PLAS 419 | Applications of Remote Sensing in Agriculture and Natural Resources | |

CASNR Approved Life Sciences

| | | |
|-----------------|--|---|
| 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 |

*Specific Major Requirements**Natural Resources and Sciences*

| | | |
|---|---|---|
| NRES 211 | Introduction to Conservation Biology | 3 |
| | or NRES 311 Wildlife Ecology and Management | |
| NRES 281 / GEOG 281 | Introduction to Water Science | 3 |
| PLAS 325 | Introductory Plant Physiology | 4 |
| PLAS 477 / NRES 477 / SOIL 477 / GEOG 467 | Great Plains Field Pedology | 4 |

Inventory and Policy

| | | |
|---------------------|---|---|
| ALEC 388 / AECN 388 | Ethics in Agriculture and Natural Resources | 3 |
| | or PHIL 225 Environmental Ethics | |
| NRES 323 | Natural Resources Policy | 3 |
| | or AECN 357 / NRES 357 Natural Resource and Environmental Law | |

| | |
|--------------------------------|--------------|
| Free Electives (Varies) | 11-16 |
| Credit Hours Subtotal: | 60-62 |
| Total Credit Hours | 60-62 |

¹ Students may consider PHIL 225 for meeting their ACE 9 requirement.

Grazing Livestock Systems Option Requirements

| | | |
|---------------------------------|---|-----|
| <i>ACE 10 Course (Capstone)</i> | | |
| Select one of the following: | | 3 |
| NRES 438 | Grassland Conservation: Planning and Management | |
| ASCI 455 | Beef Cow-Calf Management | |
| <i>Experiential Learning</i> | | |
| Complete minimum 1 hour | | 1-3 |
| GRAS 398R | Research Experiences in Grasslands | |
| GRAS 490 | Internship Experience in Grazing Livestock Systems | |
| ASCI 496 | Independent Study in Animal Science (Nebraska Ranch Management) | |

Natural Resources

Select one of the following: 4

| | | |
|------------------------|--|--|
| ASCI 120 | Animal Biology | |
| PLAS 131 & PLAS 132 | Plant Science and Agronomic Plant Science Laboratory | |
| BIOS 101 & 101L | General Biology and General Biology Laboratory | |
| LIFE 120 & 120L | Fundamentals of Biology I and Fundamentals of Biology I laboratory (ACE 4) | |

Animal Science

| | | |
|-------------------------|--|---|
| ASCI 100 | Fundamentals of Animal Biology and Industry | 3 |
| ASCI 100L | Fundamentals of Animal Biology and Industry Laboratory | 1 |
| ASCI 220 | Feeds and Feeding | 2 |
| ASCI 240 or ASCI 340 | Physiology of Domestic Animals Animal Physiological Systems | 3 |
| ASCI 243 | Fundamental Animal Anatomy Laboratory | 1 |
| ASCI 320 | Animal Nutrition | 3 |
| ASCI 330 | Animal Breeding and Genetics | 4 |
| ASCI 341 | Physiology and Management of Reproduction | 4 |

Select three of the following: 3

| | | |
|-----------|---|--|
| ASCI 250A | Basic Beef Cow-Calf Management | |
| ASCI 250B | Basic Beef Stocker and Feedlot Management | |
| ASCI 250M | Basic Dairy Management | |
| ASCI 250R | Basic Small Ruminant Management | |

Agricultural Economics Requirements

| | | |
|------------------------|-------------------------------------|---|
| AECN 201 | Farm and Ranch Management | 4 |
| AECN 235 / MRKT 235 | Introduction to Commodity Marketing | 3 |

Select one from two of the three areas: 6

Farm Management and Marketing

| | | |
|------------------------|---|--|
| AECN 301 | Farm Accounting, Analysis, and Tax Management | |
| AECN 325 / MRKT 325 | Marketing of Agricultural Commodities | |
| AECN 401 | Advanced Farm Management and Linear Programming | |
| AECN 435 | Advanced Agricultural Marketing Management | |

Agricultural Financial Analysis

| | | |
|----------|---|--|
| AECN 301 | Farm Accounting, Analysis, and Tax Management | |
| AECN 452 | Agricultural Finance | |
| AECN 453 | Agricultural and Rural Property Appraisal | |

Natural Resources, Policy, and Legal Environment

| | | |
|------------------------|--|--|
| AECN 256 | Legal Aspects in Agriculture | |
| AECN 265 / NREE 265 | Resource and Environmental Economics I | |
| AECN 345 | Policy Issues in Agriculture and Natural Resources | |
| AECN 357 / NREE 357 | Natural Resource and Environmental Law | |

AECN 445 /
NREE 445
 Agricultural and Natural Resource Policy Analysis | |

AECN 456 /
NREE 456
 Environmental Law | |

AECN 465 /
NREE 465
 Resource and Environmental Economics II | |

Grassland Requirements

GRAS 240 /
PLAS 240 /
RNGE 240
 Forage Crop and Pasture Management | 3 |

Free Electives (Varies) 10-14

Credit Hours Subtotal: 60-62

Total Credit Hours 60-62

Requirements for Minors Offered by Department

Ranch Management Minor

Requirements

| | | |
|--------------------------------------|---------------------------------------|---|
| AECN 201 | Farm and Ranch Management | 4 |
| ASCI 220 | Feeds and Feeding | 2 |
| ASCI 455 | Beef Cow-Calf Management ¹ | 3 |
| PLAS 240 / GRAS 240 / RNGE 240 | Forage Crop and Pasture Management | 3 |

Select 2 of 4 from the following: 2

| | | |
|-----------|---|--|
| ASCI 250A | Basic Beef Cow-Calf Management | |
| ASCI 250B | Basic Beef Stocker and Feedlot Management | |
| ASCI 250M | Basic Dairy Management | |
| ASCI 250R | Basic Small Ruminant Management | |

Select a minimum of 5 hours from the following: 5

| | | |
|--|--|--|
| AECN 235 | Introduction to Commodity Marketing | |
| AECN 325 / MRKT 325 | Marketing of Agricultural Commodities ² | |
| AECN 401 | Advanced Farm Management and Linear Programming | |
| AECN 435 | Advanced Agricultural Marketing Management | |
| ASCI 320 | Animal Nutrition ³ | |
| ASCI 330 | Animal Breeding and Genetics ⁴ | |
| ASCI 341 | Physiology and Management of Reproduction | |
| PLAS 340 / GRAS 340 / RNGE 340 | Range Management and Improvement | |
| PLAS 440 / GRAS 440 / NRES 440 / RNGE 440 | Great Plains Ecosystem | |

Credit Hours Subtotal: 19

Total Credit Hours 19

¹ Requires senior standing or permission; ASCI 320; ASCI 330 or ASCI 341

² Requires AECN 235

³ Requires CHEM 106A or CHEM 110A and ASCI 220

⁴ Requires PLAS 215 or BIOS 201; STAT 218

Rangeland Management Minor

| | | |
|---|--|-----------|
| NRES 438 | Grassland Conservation: Planning and Management | 3 |
| PLAS 245 / NRES 245 | Introduction to Grassland Ecology and Management | 3 |
| PLAS 340 / GRAS 340 / RNGE 340 | Range Management and Improvement | 3 |
| PLAS 440 / GRAS 440 / NRES 440 / RNGE 440 | Great Plains Ecosystem | 3 |
| PLAS 442 / GRAS 442 / NRES 442 / RNGE 442 | Wildland Plants | 3 |
| PLAS 444 / GRAS 444 / NRES 444 / RNGE 444 | Ecosystem Monitoring and Assessment | 3 |
| Total Credit Hours | | 18 |

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

- Manager, L&L Farms - Upland, NE
- Associate, Farm Credit Services of America - Omaha, NE
- Sales and Associate, Leroy Voss - Pioneer Seed & Precision Planting - Bruning, NE
- Record Keeping Analyst, Jerry Fullerton - Cody, NE
- Elevator Superintendent Trainee, Scouler Grain Company - Venango, NE
- Data Management and Seedstock Development, Lone Creek Cattle Company - Lincoln, NE
- Cattle Operations Manager, Tri R Farms - Springview, NE
- Cattle Health Assistant, Adams Land and Cattle Co. - Broken Bow, NE
- Farmer/Rancher, Jagels Farms - Davenport, NE
- Senior Sales Associate, Tanker Main Exchange - Oklahoma City, OK
- Preserve Assistant Manager, The Nature Conservancy - Ainsworth, NE
- Beef Systems Extension Educator, University of Nebraska-Lincoln Nebraska - Rushville, NE
- Habitat Program Manager, Spring Creek Prairie Audubon Center - Denton, NE
- Soil Conservationist, Natural Resources Conservation Service – USDA - David City, NE
- Rangeland Management Specialist, NRCS – USDA - David City, NE
- Private Lands Biologist, Pheasants Forever - Fairbury, NE
- Media Producer, Platte Basin Timelapse - Lincoln, NE
- Pratt County Extension Agent, Kansas State Extension - Kansas
- Cattle Health Assistant, Adams Land & Cattle CO - Broken Bow, NE

Internships

- Intern, Spencer Herefords - Brewster, NE
- Pen Rider, Darr Feedlot - Cozad, NE
- Intern, Ranch Practicum, University of Nebraska-Lincoln Nebraska - Lincoln, NE
- Intern, Sandhills Publishing - Lincoln, NE
- Range & Forage Science Research Assistant, University of Nebraska-Lincoln - Lincoln, NE
- Research Technician Intern, Animal Science Dept, University of Nebraska-Lincoln - Lincoln, NE
- Intern, Otter Creek Organic Farm - Avoca, WI
- Intern, Plum Thicket Farms - Gordon, NE
- Intern, Lindskov-Thiel Ranch - Isabel, SD
- Pathways Program Intern, Natural Resources Conservation Service – USDA, NE
- Research Technician, Agricultural Research Service - USDA, Ft. Collins, CO
- Intern, Lower Loup Natural Resources District - Ord, NE
- Intern, Lone Creek Cattle Company - Lincoln, NE
- Student Manager, Nine-Mile Prairie - University of Nebraska-Lincoln - Lincoln, NE
- Summer Intern, Prairie Corridor Haines Branch - Lincoln, NE
- Research Technician, Agronomy/Horticulture, University of Nebraska-Lincoln Nebraska - Lincoln, NE

Graduate & Professional Schools

- Master's in Animal Science, West Texas A&M - Canyon, TX
- Ph.D., Ruminant Nutrition, University of Nebraska-Lincoln - Lincoln, NE
- Master's in Wildlife Biology, Fort Hayes State University - Fort Hayes, KS
- Master's in Natural Resources, University of Nebraska-Lincoln - Lincoln, NE
- Master's in Wildlife, Aquatic and Wildlands Science - Texas Tech, Lubbock, TX