

ANIMAL SCIENCE

Description

General Information

The field of animal science encompasses the sciences related to animals and their contributions and interactions with humans. This program is designed particularly for students who are interested in pursuing careers associated with the livestock, poultry, meat, and companion animal industries. The core curriculum gives students a balanced education in animal science, biological sciences, physical sciences, mathematics, communications, and humanities and social sciences.

Options

Each animal science student studies a core curriculum that provides a comprehensive look at animal biological systems, use of animal products, and current issues and careers in the animal industries. In addition to the core, there are seven different options from which students can choose an area of focus that meets their own individual interests and career objectives. These options include:

- Biology, Biotechnology and Veterinary Science Option
- Companion Animal Science Option
- Equine Science Option
- Food Animal Systems Option

Midwest Poultry Consortium

Students interested in any aspect of poultry science or avian biology may earn up to 24 credits through the Midwest Poultry Consortium's Undergraduate Center of Excellence in Madison, WI. The credits may be applied toward an animal science degree from the University of Nebraska. Further details are available from the Department of Animal Science.

3+2 year Veterinary Medicine/Animal Science B.S. Degree

Students pursuing a DVM degree at an accredited college of veterinary medicine may obtain a BS degree in animal science, granted by the University of Nebraska, upon successful completion of the first two years of the curriculum in veterinary medicine. To be eligible, students must have completed at least 90 credit hours of pre-professional courses, all Achievement-Centered Education course requirements, and 20 credit hours in animal science courses at the University of Nebraska. 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 the program with their academic advisor.

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 animal science will be able to:

1. Develop professional competencies related to navigating and achieving professional goals with application to Animal Science.

- Communication. Develop and apply multiple types of communication skills for delivery to diverse audiences.
- Problem-Solving. Develop critical thinking skills and apply those skills to solving complex problems.
- Leadership and Collaboration. Discover ways to lead and collaborate with diverse teams using inclusive practices.

- **Application of Technology.** Discover and apply technological solutions impacting global animal agriculture.
- **Career Navigation.** Leverage experiential learning opportunities to build professional networks and develop lifelong career management skills.
- **Integrity, commitment to professionalism, and ethical responsibility.** Demonstrate awareness of ethical principles and professional integrity in the context of animal practices.

2. Demonstrate knowledge of fundamental Animal Science principles.

- **Nutrition**
 - Describe classes and functional roles of nutrients.
 - Outline species-specific methods of nutrient digestion and absorption.
 - Formulate and evaluate diets relative to life stages.
 - Compare the nutrient profile and quantity of diets on a dry matter vs. as-fed basis.
 - Properly interpret feed labels and nutrient analysis data.
 - Describe the interaction of nutrition with animal systems relative to performance and well-being goals.
- **Breeding & Genetics**
 - Describe how animal health, fitness, and performance are a result of the animals' genetics, their environment, and the interaction of those genetics with the environment.
 - Reliably evaluate animals to inform decisions with regards to genetic selection.
 - Discern among traditional and evolving approaches (quantitative, molecular) that may be used to address genetic questions and challenges across species.
 - Communicate contributions of genetics to sustainability of livestock and companion animal enterprises.
- **Physiology**
 - Describe how tissues and their functions integrate to maintain whole body systems.
 - Apply knowledge of body systems to solve physiological problems.
 - Utilize animal physiological principles to improve or enhance animal production practices.
- **Meats**
 - Discuss the nutritional value of animal products.
 - Outline the biological structure of muscle and the conversion of muscle to meat.
 - Explain how value of meat products is determined and enhanced for producers, retailers, and consumers.
 - Discuss methods by which the industry and consumers can assure food safety.
 - Outline the flow of products from production to consumption.
- **Animal behavior, health, and welfare**
 - Outline biological mechanisms by which the body functions to maintain a healthy state.
 - Identify and explain the five freedoms of animal welfare.
 - Describe species-specific behaviors and how those behaviors relate to effective animal handling and welfare.
 - Evaluate animal care and management programs.
 - Define, measure, and assess animal behavior, health, and welfare.

- Navigate difficult conversations about animal production systems from the lens of human responsibility to animals and the social contract between agriculture and society.

3. Apply Animal Science knowledge to address issues related to animal products and/or animal systems.

- Interpret and evaluate animal science concepts pertaining to targeted outcomes/interactions.
- Integrate knowledge from multiple disciplines to positively impact animal systems of interest.
- Articulate the thought process used in solving problems and making decisions.

Major Core Requirements

The following basic courses are required for majors in animal science. In addition, students must select and meet the requirements of one of the animal science options, depending on their own individual interests and career objectives.

College Integrative Course (ACE 8)

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

Professional Departmental Requirements

ASCI 101	Animal Sciences Orientation Seminar	1
or PVET 101	Success in Veterinary Science	
ASCI 201	Professional Development for Careers in Animal Science	1
ASCI 391	Networking with Animal Science Industry Professionals	1

Select one Capstone course (ACE 10) from the following according to your option:

ASCI 450	Horse Management	
ASCI 455	Beef Cow-Calf Management	
ASCI 457	Beef Feedlot Management	
ASCI 458	Advanced Companion Animal Biology	
Credit Hours Subtotal:		3

Core Disciplinary Requirements

ASCI 100	Fundamentals of Animal Biology and Industry	3
ASCI 100L	Fundamentals of Animal Biology and Industry Laboratory	1
ASCI 210	Principles of Animal Products for Today's Society	2
ASCI 220	Feeds and Feeding	2
ASCI 270	Fundamentals of Animal Behavior and Welfare	2
ASCI 330	Animal Breeding and Genetics	4
ASCI 341	Physiology and Management of Reproduction	4
PLAS 215	Genetics ¹	4
or BIOS 201	General Genetics	
Credit Hours Subtotal:		22

Basic Animal Management Requirements

Select 4 credits from at least 2 of 4 Species Categories:	4
<i>Livestock Species Management (Beef & Dairy Cattle)</i>	

ASCI 250A	Basic Beef Cow-Calf Management	
ASCI 250B	Basic Beef Stocker and Feedlot Management	
ASCI 250M	Basic Dairy Management	
<i>Livestock Species Management (Non-bovine)</i>		
ASCI 250K	Basic Swine Management	
ASCI 250P	Basic Poultry Management	
ASCI 250R	Basic Small Ruminant Management	
<i>Companion Animals</i>		
ASCI 251A	Basic Companion Animal Management - Dog	
ASCI 251B	Basic Companion Animal Management - Cat	
ASCI 251E	Basic Companion Animal Management - Small Mammals	
ASCI 251J	Basic Companion Animal Management - Non-Domesticated/Specialty	
<i>Equine</i>		
ASCI 252A	Introduction to the Horse Industry and Management ²	
ASCI 252B	Basic Equine Management ³	
Credit Hours Subtotal:		4
Natural Sciences		
Select one of the following:		4
ASCI 120	Animal Biology	
BIOS 101 & 101L	General Biology and General Biology Laboratory	
LIFE 120 & 120L	Fundamentals of Biology I and Fundamentals of Biology I laboratory ⁴	
Credit Hours Subtotal:		4
Mathematics and Statistics (ACE 3)		
STAT 218	Introduction to Statistics	3
Select one of the following:		3-5
MATH 102	Trigonometry	
MATH 103	College Algebra and Trigonometry	
MATH 104	Applied Calculus	
MATH 106	Calculus I	
MATH 203	Contemporary Mathematics	
Credit Hours Subtotal:		8
Communications		
<i>Written Communications (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	
JGEN 300	Technical Communication II	
<i>Oral Communications (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	
JGEN 300	Technical Communication II	
MRKT 257	Sales Communication	
TMFD 121	Visual Communication with Animation	
Credit Hours Subtotal:		6
Economics (ACE 6)		
Select one of the following: ⁵		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:		3
ACE Requirement		
Select one course each from ACE outcomes 5, 7, and 9		9
Credit Hours Subtotal:		9
Total Credit Hours		62

¹ BIOS 201 requires both LIFE 120 & LIFE 120L and LIFE 121 & LIFE 121L as prerequisites.

² Equine option students are required to complete ASCI 252A.

³ Students may not receive credit for both ASCI 252A and ASCI 252B for fulfillment of this requirement.

⁴ LIFE 120 & LIFE 120L required for the Biology, Biotechnology, and Veterinary Science option.

⁵ Higher level AECN courses (specifically AECN 201) require completion of AECN 141 or ECON 212.

Select one of the following options:

Biology, Biotechnology and Veterinary Science Option

This option is designed for students planning a career in veterinary medicine and provides for completion of the pre-veterinary course requirements for application to the joint University of Nebraska/Iowa State University program for the doctorate of veterinary medicine (DVM) degree. However, it can easily be adapted to meet specific requirements for other colleges of veterinary medicine. Courses in animal management, nutrition, physiology and related areas complement the foundational science courses and provide a comprehensive background for careers in veterinary medicine. Completion of the option also provides excellent preparation for graduate study or other professional programs in the biological sciences. Students admitted to veterinary college after three years of undergraduate study may earn a bachelor of science degree through a 3+2 program (three years of undergraduate study plus two years of veterinary school).

Departmental Requirements

<i>Written Communication</i>		
Select a 2nd written communication course required for veterinary school		3
Credit Hours Subtotal:		3
Natural Sciences (ACE 4)		
CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory	4

CHEM 110A & CHEM 110L	General Chemistry II and General Chemistry II Laboratory	4
CHEM 251	Organic Chemistry I	3
CHEM 253	Organic Chemistry I Laboratory	1
BIOC 401	Elements of Biochemistry	3
LIFE 121 & 121L	Fundamentals of Biology II and Fundamentals of Biology II Laboratory	4
PHYS 141	Physics for Life Sciences I ¹	5
Credit Hours Subtotal:		24
Departmental Requirements		
ASCI 340	Animal Physiological Systems	4
<i>Nutrition</i>		
Select 1 from the following:		2-3
ASCI 320	Animal Nutrition	
ASCI 321	Companion Animal Nutrition	
ASCI 322	Equine Nutrition	
<i>Advanced Animal Disciplinary Courses</i>		
Select 6 hours from the following:		6
<i>Behavior:</i>		
ASCI 271	Companion Animal and Equine Behavior	
ASCI 370	Animal Welfare	
ASCI 445	Equine and Canine Exercise Science	
<i>Nutrition:</i>		
ASCI 421	Advanced Animal Nutrition	
ASCI 422	Advanced Feeding and Feed Formulation	
<i>Breeding/Genetics:</i>		
ASCI 431	Advanced Animal Breeding	
ASCI 432	Genome Analysis	
<i>Reproduction:</i>		
ASCI 342	Equine Reproduction	
ASCI 441	New Techniques in Reproductive Biology	
ASCI 442	Endocrinology	
<i>Physiology/Health:</i>		
ASCI 443	Physiology of Animal Cells and Tissues	
ASCI 444	Domestic Animal Immunology	
BIOS 312 & BIOS 314	Microbiology and Microbiology Laboratory	
VBMS 303	Principles and Prevention of Livestock Diseases	
VBMS 406	Introduction to the Principles of Biosecurity and Disease Transmission	
VBMS 407	Introduction to Veterinary Anatomy	
VBMS 408	Functional Histology	
VBMS 410	General Pharmacology and Toxicology	
VBMS 425	Wildlife Health	
<i>Meat Science:</i>		
ASCI 310	Fresh Meats	
ASCI 411	HACCP and Food Safety Systems for the Food Industry	
<i>Advanced Management:</i> ²		
ASCI 450	Horse Management	
ASCI 455	Beef Cow-Calf Management	
ASCI 457	Beef Feedlot Management	

ASCI 458	Advanced Companion Animal Biology	
Credit Hours Subtotal:		12-13
Experiential Learning (4 hours required)		
<i>Hands-on Skills Courses</i>		
ASCI 150	Animal Production Skills	1-2
or ASCI 197	Animal Science Skills	
<i>Off-campus Industry Exposure</i> ³		
Complete minimum of 2 credits associated with on-site industry exposure (internship, study tours, competitive teams)		2-3
<i>Study Tours</i>		
AGRI 310	Study Tours in International Agriculture	
ASCI 311A	Equine Industry Study Tour	
ASCI 311B	Meat Industry Study Tour	
ASCI 311E	Beef Industry Study Tour	
<i>Competitive Teams</i>		
ASCI 300D	Principles of Meat Animal Evaluation	
ASCI 400A	Advanced Meat Grading and Evaluation	
ASCI 400B	Advanced Livestock Evaluation and Judging	
ASCI 400E	Advanced Horse Evaluation and Judging	
<i>Internship, Extension, Research, Teaching</i>		
ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
ASCI 395D	Research Experiences	
ASCI 395E	Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience	
ASCI 419	Meat Investigations	
ASCI 490A	Animal Science Internship - Beef Feedlot Management	
ASCI 499H	Honors Thesis	
GRAS 490	Internship Experience in Grazing Livestock Systems	
Credit Hours Subtotal:		4
Business		
Select 1 course from the listing of Business Courses provided.		3
Credit Hours Subtotal:		3
Free Electives		
Select 8-11 hours of electives		8-11
Credit Hours Subtotal:		8-11
Total Credit Hours		54-58

¹ PHYS 141 is a required course for admittance to most colleges of veterinary medicine, including the ISU CVM. Although PHYS 142 is not required for admission to the ISU CVM, it is required by other colleges of veterinary medicine including KSU.

² Animal Management courses can not be used in the option and to meet ACE 10 requirements.

³ Students are strongly recommended to complete a veterinary based internship before applying to vet school.

Companion Animal Science Option

Designed for students with a specific interest in companion animals. For students interested in pursuing a career in the companion animal industry, this option provides an overview of the general animal sciences in combination with a concentrated study of animal behavior and human interactions along with companion animal breeding and genetics, nutrition, reproduction, care, and management.

Departmental Requirements

Natural Sciences

CHEM 105A & CHEM 105L or CHEM 109A & CHEM 109L	Chemistry in Context I and Chemistry in Context I Laboratory General Chemistry I and General Chemistry I Laboratory	4
CHEM 106A & CHEM 106L or CHEM 110A & CHEM 110L	Chemistry in Context II and Chemistry in Context II Laboratory General Chemistry II and General Chemistry II Laboratory	4

Companion Animal Disciplinary Courses

ASCI 171	Human-Companion Animal Interactions	2
ASCI 340 or ASCI 240	Animal Physiological Systems Physiology of Domestic Animals	3
ASCI 271	Companion Animal and Equine Behavior	3
ASCI 321	Companion Animal Nutrition	3

ACE 10

ASCI 458	Advanced Companion Animal Biology	
Credit Hours Subtotal:		19

Other Companion Animal Disciplinary Courses.

Select 6-10 credit hours from the following: 6-10

Behavior:

ASCI 370	Animal Welfare	
ASCI 445	Equine and Canine Exercise Science	
BIOS 462	Animal Behavior	
PSYC 461	Animal Learning & Cognition	

Meat Science:

ASCI 310	Fresh Meats	
ASCI 410	Processed Meats	
ASCI 411	HACCP and Food Safety Systems for the Food Industry	

Nutrition:

ASCI 322	Equine Nutrition	
ASCI 421	Advanced Animal Nutrition	
ASCI 422	Advanced Feeding and Feed Formulation	

Breeding & Genetics:

ASCI 431	Advanced Animal Breeding	
ASCI 432	Genome Analysis	

Reproduction:

ASCI 342	Equine Reproduction	
ASCI 441	New Techniques in Reproductive Biology	
ASCI 442	Endocrinology	

Physiology & Health:

ASCI 443	Physiology of Animal Cells and Tissues	
ASCI 444	Domestic Animal Immunology	

BIOS 111	Introduction to Microbiology and Human Health	
VBMS 303	Principles and Prevention of Livestock Diseases	
VBMS 406	Introduction to the Principles of Biosecurity and Disease Transmission	

Other Advanced Management:

ASCI 450	Horse Management	
ASCI 455	Beef Cow-Calf Management	
ASCI 457	Beef Feedlot Management	

Zoo & Exotics:

NRES 125	Introduction to Zoo and Aquarium Science	
NRES 211	Introduction to Conservation Biology	
NRES 220	Principles of Ecology	
NRES 441	Zoo Keeping and Management	

Experiential Learning (must complete minimum of 4 credits) 4

Hands-on Skills Courses

ASCI 150 or ASCI 197	Animal Production Skills Animal Science Skills	2
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Off Campus Industry Exposure: 2-3

Complete minimum of 2 credits associated with on-site industry exposure (internship, study tours, competitive teams)

Study Tours:

AGRI 310	Study Tours in International Agriculture	
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Competitive Teams:²

ASCI 361	Equestrian Team Horsemanship/Equitation	
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Internship Extension, Research or Teaching³

ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
ASCI 395D	Research Experiences	
ASCI 395E	Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience	
ASCI 499H	Honors Thesis	

Business, Communication, & Education Courses 9

Select at least 1 communication/education course from the following:

ALEC 136	Fundamentals of Agricultural and Environmental Sciences Communication	
ALEC 207	Communicating Science with Public Audiences	
ALEC 260	Introduction to Digital Media in Agricultural and Environmental Sciences	
ALEC 330	Foundations of Cooperative Extension	
NRES 322	Environmental Education Curricula	
NRES 434	Environmental Education and Interpretation	

Select at least 1 business course from list provided.

Free Electives 12-18

Credit Hours Subtotal: 35-42

Total Credit Hours 54-61

¹ CHEM 105A/CHEM 105L and CHEM 106A/CHEM 106L do not provide adequate preparation for advanced chemistry or graduate school within the life sciences. If you desire this advanced training, you are strongly encouraged to take CHEM 109A/CHEM 109L and CHEM 110A/CHEM 110L. Many graduate programs also require organic chemistry. CHEM 251 and CHEM 253 are recommended.

² Credit granted only for those who compete on traveling UNL teams; junior college judging credit NOT accepted. Limited to 2 credits.

³ Pre-experience learning plan must be completed and approved BEFORE experience begins. Internship credit will NOT be awarded for internships or work experience previously completed. An oral poster presentation is required.

Equine Science Option

Designed for students with a specific interest in the equine area. For students interested in pursuing a career in the equine industry this option provides a combination of general animal sciences with a concentrated study of equitation, evaluation, nutrition, reproduction, and management of equines.

Departmental Requirements

Natural Sciences (ACE 4) 8

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

CHEM 106A Chemistry in Context II
& CHEM 106L and Chemistry in Context II Laboratory
or CHEM 110A General Chemistry II
and General Chemistry II Laboratory
& CHEM 110L

Equine Disciplinary Courses ²

ASCI 340	Animal Physiological Systems	3
or ASCI 240	Physiology of Domestic Animals	
ASCI 271	Companion Animal and Equine Behavior	3
ASCI 322	Equine Nutrition	2
ASCI 342	Equine Reproduction	2
ASCI 445	Equine and Canine Exercise Science	3

ACE 10

ASCI 450 Horse Management

Other Advanced Disciplinary & Management Courses 2-3

Select 1 course from the following:

Nutrition:

ASCI 321 Companion Animal Nutrition
ASCI 421 Advanced Animal Nutrition
ASCI 422 Advanced Feeding and Feed Formulation

Breeding & Genetics:

ASCI 431 Advanced Animal Breeding
ASCI 432 Genome Analysis

Reproduction:

ASCI 441 New Techniques in Reproductive Biology
ASCI 442 Endocrinology

Physiology & Health:

ASCI 443 Physiology of Animal Cells and Tissues

ASCI 444 Domestic Animal Immunology

VBMS 303 Principles and Prevention of Livestock Diseases

VBMS 406 Introduction to the Principles of Biosecurity and Disease Transmission

Behavior & Welfare:

ASCI 370 Animal Welfare

PSYC 461 Animal Learning & Cognition

Meat Science:

ASCI 310 Fresh Meats

ASCI 410 Processed Meats

ASCI 411 HACCP and Food Safety Systems for the Food Industry

Other Advanced Management:

ASCI 455 Beef Cow-Calf Management

ASCI 457 Beef Feedlot Management

ASCI 458 Advanced Companion Animal Biology

Experiential Learning (must complete minimum of 4 credits) 7-8

Hands-on Skills Courses 3

ASCI 197 Animal Science Skills

ASCI 260 Basic Equitation

or ASCI 360 Advanced Equitation

Select 1 additional Equine focused skills course (1 credit) from the Skills Courses list. See Advisor

ASCI 260 Basic Equitation 2

or ASCI 360 Advanced Equitation

Equine Judging Course 2

ASCI 300E Principles of Horse Evaluation and Judging 2

Off-Campus Industry Exposure 2-3

Study Tours

AGRI 310 Study Tours in International Agriculture

ASCI 311A Equine Industry Study Tour

Competitive Teams ³

ASCI 361 Equestrian Team Horsemanship/Equitation

ASCI 400E Advanced Horse Evaluation and Judging

Internship, Extension, Research or Teaching ⁴

ASCI 395A Experiential Learning for Career Development in Animal Sciences - Industry Experiences

ASCI 395B Extension and Service Experiences

ASCI 395D Research Experiences

ASCI 395E Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience

ASCI 499H Honors Thesis

Credit Hours Subtotal: 42-44

Business, Communication & Education Courses

Select 9 credits from either of both of the following categories: 9

Business - see Business Course Listing

Communication & Education

ALEC 136 Fundamentals of Agricultural and Environmental Sciences Communication

ALEC 207	Communicating Science with Public Audiences	
ALEC 260	Introduction to Digital Media in Agricultural and Environmental Sciences	
ALEC 330	Foundations of Cooperative Extension	
Free Electives		13-17
Credit Hours Subtotal:		22-26
Total Credit Hours		64-70

- ¹ CHEM 105A/CHEM 105L and CHEM 106A/CHEM 106L do not provide adequate preparation for advanced chemistry or graduate school within the life sciences. If you desire this advanced training, you are strongly encouraged to take CHEM 109A/CHEM 109L and CHEM 110A/CHEM 110L. Many graduate programs also required organic chemistry. CHEM 251 and CHEM 253 are recommended.
- ² Within the ASCI core, Equine option students must take ASCI 450.
- ³ Credit granted only for those who compete on traveling UNL teams; junior college judging credit NOT accepted. Limited to 2 credits.
- ⁴ Pre-experience learning plan must be completed and approved BEFORE experience begins. Internship credit will NOT be awarded for internships or work experience previously completed. An oral or poster presentation is required.

Food Animal Systems Option

This option is designed for students interested in careers related to the production and management of beef cattle, dairy cattle, horses, poultry, and swine. Although students may emphasize a particular industry or production system, the option provides a balanced study of animal nutrition, meat animal products, reproductive physiology, breeding and genetics, and business management of animal production systems. Completion of this option provides excellent preparation for those wishing to be involved in production agriculture and the abundance of allied industries that support animal agriculture.

Departmental Requirements

Food Animal Systems Option

Natural Sciences

Chemistry

CHEM 105A & CHEM 105L	Chemistry in Context I and Chemistry in Context I Laboratory	
or CHEM 109A & CHEM 109L	General Chemistry I and General Chemistry I Laboratory	
CHEM 106A & CHEM 106L	Chemistry in Context II and Chemistry in Context II Laboratory	
or CHEM 110A & CHEM 110L	General Chemistry II and General Chemistry II Laboratory	

Animal Health

Select 1 course from the following list:		
BIOS 111	Introduction to Microbiology and Human Health	4
BIOS 312	Microbiology	3
VBMS 303	Principles and Prevention of Livestock Diseases	3
VBMS 406	Introduction to the Principles of Biosecurity and Disease Transmission	2

Food Animal Systems Disciplinary Courses

Meat Science:		
ASCI 200	Animal and Carcass Evaluation	3
ASCI 210L	Principles of Animal Products Laboratory	1
Animal Physiology:		
ASCI 340 or ASCI 240	Animal Physiological Systems Physiology of Domestic Animals	3
Nutrition:		
Select 1 course from the following list:		
ASCI 320 or ASCI 321	Animal Nutrition Companion Animal Nutrition	3
Other Disciplinary & Animal Science Management Courses		6
Select 2 from the following:		
AGRO/PLAS & Range Science:		
PLAS 153	Soil Resources	
PLAS 240	Forage Crop and Pasture Management	
PLAS 245	Introduction to Grassland Ecology and Management	
PLAS 340	Range Management and Improvement	
PLAS 440	Great Plains Ecosystem	
Behavior/Welfare:		
ASCI 370	Animal Welfare	
Breeding/Genetics		
ASCI 431	Advanced Animal Breeding	
ASCI 432	Genome Analysis	
Reproduction:		
ASCI 441	New Techniques in Reproductive Biology	
ASCI 442	Endocrinology	
Meat Science:		
ASCI 310	Fresh Meats	
ASCI 411	HACCP and Food Safety Systems for the Food Industry	
Advanced AECN, FINA, ECON (300+) excluding AECN 388		
Advanced Animal Systems Management:		3
Select 2nd course that differs from the course used to fulfill ACE 10 requirement within the Core.		
ASCI 410	Processed Meats	
ASCI 450	Horse Management	
ASCI 455	Beef Cow-Calf Management	
ASCI 457	Beef Feedlot Management	
Experiential Learning ²		4
Hands-on Skills Courses:		1-2
ASCI 150	Animal Production Skills	
ASCI 456	Beef Seedstock Production and Sales	
ASCI 197	Animal Science Skills	
Off-Campus Industry Exposure		2-3
Complete minimum of 2 credits associated with on-site industry exposure (internships, study tours, competitive teams)		
Study Tours		
ASCI 311B	Meat Industry Study Tour	
ASCI 311E	Beef Industry Study Tour	
AGRI 310	Study Tours in International Agriculture	
Competitive Teams ³		

ASCI 300D	Principles of Meat Animal Evaluation	
ASCI 400A	Advanced Meat Grading and Evaluation	
ASCI 400B	Advanced Livestock Evaluation and Judging	
Internships, Extension, Research or Teaching ⁴		
ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
ASCI 395D	Research Experiences	
ASCI 395E	Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience	
ASCI 419	Meat Investigations	
ASCI 490A	Animal Science Internship - Beef Feedlot Management	
ASCI 499H	Honors Thesis	
GRAS 490	Internship Experience in Grazing Livestock Systems	
Business Courses: Select 3 courses from the business course list.		9-10
Free Electives		9-15
Credit Hours Subtotal:		56-65
Total Credit Hours		56-65

¹ CHEM 105A/CHEM 105L and CHEM 106A/CHEM 106L do not provide adequate preparation for advanced chemistry or graduate school within the life sciences. If you desire this advanced training, you are strongly encouraged to take CHEM 109A/CHEM 109L and CHEM 110A/CHEM 110L. Many graduate programs also required organic chemistry. CHEM 251 and CHEM 253 are recommended.

² Must complete minimum of 4 credits associated with Hands-on Skills and/or On-site Industry Exposure.

³ Credit granted only for those who compete on traveling UNL teams; junior college judging credit NOT accepted. Limited to 2 credits.

⁴ Pre-experience learning plan must be completed and approved BEFORE experience begins. Internship credit will NOT be awarded for internships or work experience previously completed. An oral or poster presentation is required.

Additional Major Requirements

Business Courses for all ASCI options:

Finance:

ACCT 200	Accounting for Business Decisions
AECN 275	Agribusiness Entrepreneurial Finance
AECN 301	Farm Accounting, Analysis, and Tax Management
AECN 420	International Food and Agricultural Trade
AECN 452	Agricultural Finance
AECN 453	Agricultural and Rural Property Appraisal
ECON 303	An Introduction to Money and Banking
ENTR 275	Agribusiness Entrepreneurial Finance
ENTR 388	Business Systems in Entrepreneurship
FINA 260	Personal Finance
FINA 300	Financial Decision Making

Management:

AECN 201	Farm and Ranch Management
AECN 265	Resource and Environmental Economics I
AECN 316	Agribusiness Management
AECN 401	Advanced Farm Management and Linear Programming
AECN 416	Advanced Agribusiness Management
AECN 474	Cooperatives
ENTR 121	Introduction to Entrepreneurship and Innovation
ENTR 321	Foundations of Entrepreneurship
ENTR 322	Family Business
MNGT 300	Management Essentials For Contemporary Organizations
MNGT 360	Managing Behavior in Organizations
MNGT 361	Human Resource Management

Marketing:

AECN 220	International Agricultural Trade
AECN 225	Agribusiness Entrepreneurship in Food Products Marketing
AECN 235	Introduction to Commodity Marketing
AECN 325	Marketing of Agricultural Commodities
AECN 336	Grain Merchandising
AECN 420	International Food and Agricultural Trade
AECN 425	Agricultural Marketing in a Multinational Environment
AECN 435	Advanced Agricultural Marketing Management
AECN 436	Commodity Price Forecasting
ENTR 388	Business Systems in Entrepreneurship
MRKT 300	Contemporary Marketing
MRKT 341	Marketing
MRKT 345	Market Research
MRKT 346	Marketing Channels Management
MRKT 347	Marketing Communication Strategy
MRKT 350	Marketing Analytics
MRKT 425	Retailing Management

Law:

AECN 256	Legal Aspects in Agriculture
AECN 345	Policy Issues in Agriculture and Natural Resources
AECN 357	Natural Resource and Environmental Law
AECN 445	Agricultural and Natural Resource Policy Analysis
AECN 456	Environmental Law
AECN 457	Water Law
BLAW 300	Business, Government & Society
BLAW 371	Legal Environment

Requirements for Minor Offered By Department

Animal Science Minor (18 credits)

Requirements for Minor

ASCI 100	Fundamentals of Animal Biology and Industry	3-4
or ASCI 120	Animal Biology	
ASCI 200	Animal and Carcass Evaluation	2-3
or ASCI 210	Principles of Animal Products for Today's Society	
ASCI 220	Feeds and Feeding	2
ASCI 270	Fundamentals of Animal Behavior and Welfare	2
Credit Hours Subtotal:		9
Basic Animal Management Requirements		
Select 3 hours from at least 2 of the following areas:		3
<i>Livestock Species Management (Beef & Dairy Cattle)</i>		
ASCI 250A	Basic Beef Cow-Calf Management	
ASCI 250B	Basic Beef Stocker and Feedlot Management	
ASCI 250M	Basic Dairy Management	
<i>Livestock Species Management (Non-bovine)</i>		
ASCI 250K	Basic Swine Management	
ASCI 250P	Basic Poultry Management	
ASCI 250R	Basic Small Ruminant Management	
<i>Companion Animals</i>		
ASCI 251A	Basic Companion Animal Management - Dog	
ASCI 251B	Basic Companion Animal Management - Cat	
ASCI 251E	Basic Companion Animal Management - Small Mammals	
ASCI 251J	Basic Companion Animal Management - Non-Domesticated/Specialty	
<i>Equine</i>		
ASCI 252B	Basic Equine Management	
Credit Hours Subtotal:		3
Advanced Animal Science ¹		
Select a total of 6 credits from any 300- or 400- level Animal Science (ASCI) Course (GRAS 490 may also apply) with the following exceptions.		6
A maximum of 2 credits may be counted from any of the following:		
ASCI 300A	Principles of Meat Evaluation, Grading and Judging	
ASCI 300B	Principles of Livestock Evaluation and Judging	
ASCI 300D	Principles of Meat Animal Evaluation	
ASCI 311A	Equine Industry Study Tour	
ASCI 311B	Meat Industry Study Tour	
ASCI 311E	Beef Industry Study Tour	
ASCI 381	Beef Industry Scholars - Practicum	

ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
ASCI 395D	Research Experiences	
ASCI 395E	Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience	
ASCI 400A	Advanced Meat Grading and Evaluation	
ASCI 400B	Advanced Livestock Evaluation and Judging	
ASCI 400E	Advanced Horse Evaluation and Judging	
ASCI 419 / FDST 419	Meat Investigations	
ASCI 481	Beef Industry Scholars - Beef Summit	
ASCI 482	Beef Industry Scholars - National Beef Industry Policy	
ASCI 490A	Animal Science Internship - Beef Feedlot Management	
ASCI 499H	Honors Thesis	
GRAS 490	Internship Experience in Grazing Livestock Systems	
Credit Hours Subtotal:		6
Total Credit Hours		18

¹ Independent study courses, ASCI 399 and ASCI 496 are excluded.

NOTE: The Animal Science Minor (18 credits) requires a 2.0 cumulative GPA in the minor.

Animal Science Minor (12 credits)

Twelve (12) credits of ASCI courses at the 300 level or above-excluding ASCI 399 Independent Study in Animal Science and ASCI 496 Independent Study in Animal Science.

Companion Animal and Equine Science Minor (18 credits)

The companion animal and equine science minor provides a specialized minor for students looking to work in those areas. This minor would be beneficial to students interested in working with companion animals and horses but with different majors such as veterinary medicine and biomedical sciences, agriculture education, and more.

The courses in the Companion Animal and Equine Science minor will develop the following skills:

1. Apply handling and training skills related to companion animals and/or horses.
2. Develop animal nutrition, growth, reproduction, behavior, and management recommendations related to companion animal and/or equine science.
3. Develop skills to evaluate companion animals and horses.
4. Propose solutions to problems in the companion animal and/or equine science fields.

This minor will be open to any University of Nebraska—Lincoln undergraduate who is not in the Animal Science majors.

Students must complete a minimum of 18 hours in Companion Animal and Equine courses. A minimum of 8 hours should be at the 300-level or above.

NOTE: Some courses have prerequisites that may not be included in the minor. Students should work with the instructor to determine if they are prepared to take courses without the prerequisites or if they need to choose a different course option.

Core Requirements

ASCI 171 or ASCI 260	Human-Companion Animal Interactions Basic Equitation	2
ASCI 271	Companion Animal and Equine Behavior	3
Select 3 credits from the following:		3
ASCI 251A	Basic Companion Animal Management - Dog	
ASCI 251B	Basic Companion Animal Management - Cat	
ASCI 251E	Basic Companion Animal Management - Small Mammals	
ASCI 251J	Basic Companion Animal Management - Non-Domesticated/Specialty	
ASCI 252A	Introduction to the Horse Industry and Management	
ASCI 252B	Basic Equine Management	
ASCI 320 or ASCI 321 or ASCI 322	Animal Nutrition Companion Animal Nutrition Equine Nutrition	2-3
Choose 7-8 additional hours from the following:		7-8
ASCI 202	Exploring Companion Animal Nonprofits and Businesses	
ASCI 240 or ASCI 340	Physiology of Domestic Animals Animal Physiological Systems	
ASCI 300E	Principles of Horse Evaluation and Judging	
ASCI 311A	Equine Industry Study Tour	
ASCI 342	Equine Reproduction	
ASCI 360	Advanced Equitation	
ASCI 370	Animal Welfare	
ASCI 450	Horse Management	
ASCI 399	Independent Study in Animal Science (Exploring Companion Animal Nonprofits and Business)	
ASCI 445	Equine and Canine Exercise Science	
ASCI 399	Independent Study in Animal Science (Dog Training and Behavior Laboratory)	
PSYC 461	Animal Learning & Cognition	
Credit Hours Subtotal:		18

Meat Science Minor (18 credits)

The primary student learning outcomes for the Meat Science minor are:

1. Develop a comprehensive understanding of evaluation of carcasses, harvest and fabrication techniques, fresh meat quality, meat processing, food safety, and other relevant topics.
2. Explore and evaluate ethical and societal considerations of the meat industry, including environmental impact, animal welfare, and effects on human health.

3. Critically analyze trends and challenges in the meat science field to propose potential solutions.
4. Effectively communicate topics related to the meat science field.

Meat Science Minor Requirements

The Meat Science minor will be open to any undergraduate currently enrolled at UNL. Students will work with their academic advisor to declare the Meat Science minor. Students must complete 18 credits from the approved course listing with a minimum of 6 credits being at the 300-level or above. NOTE: Some courses may have prerequisites not included in the minor. Students will need to work with their advisor to make an advanced plan or work with the instructor to determine if they are prepared to take the course.

ASCI 200	Animal and Carcass Evaluation	3
ASCI 210	Principles of Animal Products for Today's Society	2
ASCI 310	Fresh Meats	3
ASCI 410	Processed Meats	3
Complete 7 credits from the following list:		7
ASCI 300A	Principles of Meat Evaluation, Grading and Judging	
ASCI 300B	Principles of Livestock Evaluation and Judging	
ASCI 300D	Principles of Meat Animal Evaluation	
ASCI 311B	Meat Industry Study Tour	
ASCI 400A	Advanced Meat Grading and Evaluation	
ASCI 411	HACCP and Food Safety Systems for the Food Industry	
ASCI 419	Meat Investigations	
BIOS 111	Introduction to Microbiology and Human Health	
FDST 403	Food Quality Assurance	
FDST 405	Food Microbiology	
FDST 406	Food Microbiology Laboratory (Credit Hours Subtotal)	

Credit Hour Subtotal:

Total Credit Hours **18**

Nebraska Beef Industry Scholars (NBIS) Minor (20-21 credits)

The Nebraska Beef Industry Scholars minor is designed to develop graduates to become future leaders of the beef industry as they will:

- Understand issues that affect beef production and have the ability to develop solutions to beef industry problems.
- Understand interactions of the animal, plant, and social sciences affecting beef production and management.
- Develop a unique network with leaders of the beef industry.
- Have exceptional oral and written communication skills.
- Have exceptional leadership skills.
- Have outstanding technical knowledge in at least one area of expertise (beef production economics, beef feedlot engineering, live beef animal and carcass evaluation, beef nutrition, beef animal physiology, meat science, genetic improvement of beef

cattle, beef products, pre-veterinary animal science, range and forage science, etc.).

The NBIS minor is inherently multidisciplinary and actively engages faculty from animal science, agricultural economics, and agricultural leadership, education and communication (ALEC).

NBIS Minor Requirements

A minimum cumulative GPA of 3.0 for all minor related coursework must be obtained in order to complete the minor.

Total Requirements

ASCI 181	Beef Industry Scholars - Freshman Seminar	1
ASCI 281	Beef Industry Scholars - Issues	1
AECN 235 / MRKT 235	Introduction to Commodity Marketing	3
or AECN 225 / EAEP 225 / MRKT 225	Agribusiness Entrepreneurship in Food Products Marketing	
ASCI 311E	Beef Industry Study Tour	2
ALEC 350	Agriculture, the Environment & Science in the Media	3
or ALEC 207 / ADPR 207	Communicating Science with Public Audiences	
ASCI 381	Beef Industry Scholars - Practicum	1
ASCI 481	Beef Industry Scholars - Beef Summit	1
ASCI 482 / AECN 482	Beef Industry Scholars - National Beef Industry Policy	1
Select 2 hours of internship experience from the following:		2
ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
GRAS 490	Internship Experience in Grazing Livestock Systems	
AECN 495C	Internship in Agricultural and Public Policy	
Select one course from two of the following subject areas:		5-6
<i>Animal Science</i>		
ASCI 310	Fresh Meats	
ASCI 370	Animal Welfare	
ASCI 410	Processed Meats	
ASCI 455	Beef Cow-Calf Management	
ASCI 457	Beef Feedlot Management	
<i>Agricultural Economics</i>		
AECN 220	International Agricultural Trade	
AECN 301	Farm Accounting, Analysis, and Tax Management	
AECN 401	Advanced Farm Management and Linear Programming	
AECN 452	Agricultural Finance	
<i>Agricultural Leadership, Education and Communication</i>		
ALEC 407	Supervisory Leadership	
ALEC 455	Dynamics of Effective Leadership in Groups & Teams	
Credit Hours Subtotal:		20-21
Total Credit Hours		20-21

Animal Science Management Certificate

The courses in the Animal Science Management Undergraduate Certificate program will develop certificate awardees who:

1. Understand the biology and chemistry of the life sciences and apply the principles to animal nutrition, growth, reproduction, genetics and management of animals and their products.
2. Develop animal nutrition, growth, reproduction, genetics, and management recommendations related to the specific animal or animal product in the career paths related to their selected area of interest.
3. Propose solutions to problems in the production and/or management of animals or animal products specific to their area of interest.

This certificate program will be open to degree-seeking students at other two- and four-year institutions, University of Nebraska–Lincoln undergraduates who are not Animal Science majors and associate degree holders. The primary delivery of this program will be online. For current University of Nebraska–Lincoln students (not Animal Science majors) to be accepted into this undergraduate certificate program a student must have at least one semester of college-level biology and one semester of college-level chemistry credit. Courses must meet the University of Nebraska–Lincoln CASNR transfer guidelines to be accepted. Current students wishing to add this certificate to their Nebraska undergraduate degree program, should contact one of the certificate advisors and complete the application form. Upon verification of completion of the prerequisite requirements with the appropriate grade, the department will admit them into the certificate program.

Students must complete 18 credit hours of Animal Science from the required and optional courses listed below. At least 10 credit hours must be completed at the 300 level or higher. Students should complete two credits in an experiential learning project (ASCI 395A, ASCI 395B, or ASCI 395D) in order to complete the certificate.

Required Courses

Choose two from the following 100/200 level courses:		6-8
ASCI 100	Fundamentals of Animal Biology and Industry	
ASCI 210	Principles of Animal Products for Today's Society	
ASCI 213	Meat Specifications and Procurement	
ASCI 240	Physiology of Domestic Animals	
ASCI 271	Companion Animal and Equine Behavior	
Select up to 3 credits from the following:		3
ASCI 250A	Basic Beef Cow-Calf Management	
ASCI 250B	Basic Beef Stocker and Feedlot Management	
ASCI 250M	Basic Dairy Management	
ASCI 250P	Basic Poultry Management	
ASCI 250R	Basic Small Ruminant Management	
ASCI 251A	Basic Companion Animal Management - Dog	
ASCI 251B	Basic Companion Animal Management - Cat	
ASCI 251E	Basic Companion Animal Management - Small Mammals	

ASCI 251J	Basic Companion Animal Management - Non-Domesticated/Specialty	
ASCI 252A	Introduction to the Horse Industry and Management	
	or ASCI 252E Basic Equine Management	
Choose three or four from the following 300/400 level courses:		8-10
ASCI 310	Fresh Meats	
ASCI 321	Companion Animal Nutrition	
ASCI 322	Equine Nutrition	
ASCI 342	Equine Reproduction	
ASCI 370	Animal Welfare	
ASCI 410	Processed Meats	
ASCI 411	HACCP and Food Safety Systems for the Food Industry	
ASCI 421	Advanced Animal Nutrition	
ASCI 422	Advanced Feeding and Feed Formulation	
ASCI 450	Horse Management	
Choose one of the following experiential learning courses:		2
ASCI 395A	Experiential Learning for Career Development in Animal Sciences - Industry Experiences	
ASCI 395B	Extension and Service Experiences	
ASCI 395D	Research Experiences	
Credit Hours Subtotal:		21
Total Credit Hours		21

ASCI 42 Animal Science Professional Development Experience**Prerequisites:** Permission**Description:** Cooperative education in an established or organized international or professional development experience program in Animal Science.**Credit Hours:** 0**Max credits per semester:****Max credits per degree:****Grading Option:** Pass No Pass**ASCI 100 Fundamentals of Animal Biology and Industry****Description:** Overview of the industries in animal science; fundamentals of animal biology related to their application in those industries; and trends and current issues related to production and consumption of animal products important for human welfare.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Prerequisite for:** ASCI 100L; ASCI 220**Course and Laboratory Fee:** \$20**ASCI 100L Fundamentals of Animal Biology and Industry Laboratory****Prerequisites:** Previous or concurrent enrollment in ASCI 100**Description:** Introductory animal science laboratory designed to introduce basic principles of animal biology and management.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**ASCI 101 Animal Sciences Orientation Seminar****Description:** Embrace the importance of an animal science degree in today's industry and in the state of Nebraska. Weekly topics will include discussions with Animal Science faculty, academic success resources, interpersonal and leadership development and academic and co-curricular planning.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Pass No Pass**Offered:** FALL**Prerequisite for:** ASCI 201**ASCI 120 Animal Biology****Description:** Animal science phenomena are utilized to illustrate general biology concepts such as cellular structure and function, metabolism, and energy flow.**Credit Hours:** 4**Max credits per semester:** 4**Max credits per degree:** 4**Grading Option:** Graded with Option**Offered:** FALL**Prerequisite for:** ASCI 240; ASCI 243**ACE:** ACE 4 Science**ASCI 150 Animal Production Skills****Notes:** Some out-of-class responsibilities will be required.**Description:** Introductory course in skills related to proper care and management of production animals. Laboratory sessions develop fundamental skills of animal husbandry.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**Offered:** SPRING**Course and Laboratory Fee:** \$30**Experiential Learning:** Fieldwork**ASCI 171 Human-Companion Animal Interactions****Description:** Roles of companion animals in society (therapy, research, and entertainment). The responsibilities of humans in these relationships.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**ASCI 181 Beef Industry Scholars - Freshman Seminar****Notes:** Letter grade only.**Description:** Introduction to the Nebraska and United States beef industry. Discussion of issues by invited beef industry leaders and on-site visits of industry organizations.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded**Offered:** SPRING**Prerequisite for:** ASCI 281

ASCI 197 Animal Science Skills

Description: Specific hands-on skills important to the animal science industry. Develop skills and training needed for future careers in animal related fields.

Credit Hours: 1-3

Min credits per semester: 1

Max credits per semester: 3

Max credits per degree: 12

Grading Option: Graded with Option

ASCI 200 Animal and Carcass Evaluation

Description: Comparative evaluation of animals and their carcasses and products. Basic animal growth and development and characteristics of beef, pork, lamb, and goat used to determine carcass value. Federal and industry product standards. Introduction to the usage and interpretation of USDA market reports used to determine market value of animals and their products.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

Course and Laboratory Fee: \$25

ASCI 201 Professional Development for Careers in Animal Science

Prerequisites: ASCI 101 or PVET 101

Description: Identify potential careers related to animals and develop career goals and experiential learning plans.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

Offered: SPRING

ASCI 202 Exploring Companion Animal Nonprofits and Businesses

Description: Explore career options in the companion animal industry with nonprofits or other companion animal businesses.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

ASCI 210 Principles of Animal Products for Today's Society

Notes: ASCI 100 or FDST 101 or FDST 131 recommended

Description: Learn about edible and inedible products sourced from animals with a particular emphasis on the production of red meat and how animal-sourced products are utilized in today's society. Content will include humane harvest methods, fresh meat quality, further processing, preservation, consumer relations, poultry and egg production, dairy products, use of animal byproducts across industries, and important current topics.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Offered: FALL/SPR

Prerequisite for: ASCI 210L; ASCI 310

ASCI 210L Principles of Animal Products Laboratory

Prerequisites: Concurrent enrollment or previous credit in ASCI 210

Description: Learn about edible products sourced from animals with a particular emphasis on red meat. Content covered will include humane harvest, carcass evaluation and fabrication, retail cuts, meat quality research skills, and meat cookery.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

Offered: FALL/SPR

Course and Laboratory Fee: \$15

ASCI 213 Meat Specifications and Procurement

Crosslisted with: NUTR 213

Notes: For those students who have an interest in a career in Culinary Science, Meat Science, and/or Dietetics.

Description: Selecting and purchasing meat for the hotel, restaurant, institutional industry, and the retail markets.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

ASCI 220 Feeds and Feeding

Prerequisites: ASCI 100

Description: Identification and characteristics of feedstuffs and how they can be used to meet nutrient requirements of animals. Discussion of feed processing and impacts on feed quality. Diet formulation and diet assessment overview.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded

Offered: SPRING

Prerequisite for: ASCI 320; ASCI 321; ASCI 458

ASCI 240 Physiology of Domestic Animals

Prerequisites: BIOS 101 or LIFE 120 or ASCI 120; CHEM 105A and 105L or CHEM 109A and 109L; Previous or concurrent enrollment in ASCI 243.

Description: Physiology of animals in relation to their essential life processes, including maintenance, growth, nutrition, lactation, reproduction, and stress management

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: SPRING

Prerequisite for: ASCI 341; ASCI 342; ASCI 445; NUTR 450; NUTR 455; VBMS 303; VBMS 410

ASCI 243 Fundamental Animal Anatomy Laboratory**Prerequisites:** ASCI 120 or BIOS 101 and 101L or LIFE 120 and 120L**Description:** Anatomical organization of the nervous, muscle, cardiovascular, respiratory, digestive, urinary, reproductive, endocrine, and immune systems and its role in physiological function and health. Offers hands-on learning experiences through dissections, clinical demonstrations, and interactive multimedia.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** FALL/SPR**Prerequisite for:** ASCI 240**Course and Laboratory Fee:** \$50**ASCI 250A Basic Beef Cow-Calf Management****Notes:** ASCI 100 recommended.**Description:** Basic principles of life cycle cow-calf management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 250B Basic Beef Stocker and Feedlot Management****Notes:** ASCI 100 recommended**Description:** Basic principles of post-weaning beef stocker and feedlot management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 250K Basic Swine Management****Notes:** ASCI 100 recommended**Description:** Basic principles of life cycle swine management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 250M Basic Dairy Management****Notes:** ASCI 100 recommended**Description:** Basic principles of life cycle dairy management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 250P Basic Poultry Management****Notes:** ASCI 100 recommended**Description:** Basic principles of life cycle poultry management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 250R Basic Small Ruminant Management****Notes:** ASCI 100 recommended**Description:** Basic principles of life cycle small ruminant (sheep and goats) management associated with typical production systems to optimize economic and efficient production.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**ASCI 251A Basic Companion Animal Management - Dog****Notes:** ASCI 100 recommended**Description:** Management and care of the dog. Explain basic biology, reproduction, and health concerns of the dog. Evaluate management practices related to care of dogs.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** FALL**ASCI 251B Basic Companion Animal Management - Cat****Notes:** ASCI 100 recommended**Description:** Management and care of the cat. Explain basic biology, reproduction, and health concerns of the cat. Evaluate management practices related to care of cats.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** FALL**ASCI 251E Basic Companion Animal Management - Small Mammals****Notes:** ASCI 100 recommended**Description:** Management and care of small mammals. Explain the fundamental aspects of small mammal biology, reproduction, and health considerations, elucidating their connection to overall care.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** FALL

ASCI 251J Basic Companion Animal Management - Non-Domesticated/Specialty

Notes: ASCI 100 recommended

Description: Principles and practices of non-domesticated companion animal (including fish, birds, reptiles, amphibians, and insects) care, including their unique needs, conservation, and ethical considerations.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

Offered: FALL

ASCI 252A Introduction to the Horse Industry and Management

Description: Provides an introduction to the equine industry including history and basic biology of the horse, proper care and acceptable management procedures, and current issues. An overview of basic equine anatomy and physiology will be discussed as it relates to managerial principles associated with proper hoof care, disease prevention, breeding and genetics, nutritional management, reproduction, and animal welfare.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

Course and Laboratory Fee: \$25

ASCI 252B Basic Equine Management

Description: Basic equine management will give students an introductory look into the history, anatomy, horse breeds equine anatomy and physiology as it relates to managerial principles associated with proper hoof care, disease prevention, nutritional management, and animal welfare.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

Offered: FALL

ASCI 254 Basic Swine Science

Notes: This course is taught by Iowa State University as part of the GPIDEA/Ag*IDEA course offerings, Registration with permission from your adviser and CASNR Online Education Office.

Description: Basic disciplines and concepts involved in swine production including: industry structure, trends and statistics; production phases and building; genetic improvement; reproduction; nutrition; health and bio-security; nutrient management; marketing and meat quality; and career opportunities in the swine industry.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded

Prerequisite for: ASCI 354J; ASCI 354K; ASCI 354M

ASCI 260 Basic Equitation

Prerequisites: Sophomore standing

Description: Study and application of basic equitation principles for the novice rider. Review of fundamental horse safety and horsemanship to include handling, grooming, equipping, riding western or English, and the relationship of riding to physical and mental well-being. Development of balanced seat, hands and posture at all the natural gaits of the horse. Emphasis will be on control of the horse through the use of the primary and secondary aids. Welfare and communication considerations in order to have effective horse-human relationships.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Prerequisite for: ASCI 360

Course and Laboratory Fee: \$125

ASCI 270 Fundamentals of Animal Behavior and Welfare

Description: Examine various ways humans use and interact with animals in society. Focus on fundamentals of animal behavior, animal welfare principles and issues.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded

Offered: FALL/SPR

Prerequisite for: ASCI 271; ASCI 370

ASCI 271 Companion Animal and Equine Behavior

Prerequisites: ASCI 270 or LIFE 121

Description: Companion animal and equine behavior. Application of behavior principles to describe normal and problem behaviors of common companion animals and horses.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: SPRING

ASCI 281 Beef Industry Scholars - Issues

Prerequisites: ASCI 181

Notes: Letter grade only

Description: Nebraska beef industry and supporting organizations (the Nebraska Cattlemen and the Nebraska Beef Council). Tours, attending meetings, and discussion of issues by invited beef industry leaders.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

Prerequisite for: ASCI 311E

ASCI 300A Principles of Meat Evaluation, Grading and Judging

Description: Comparative evaluation of meat characteristics of beef carcasses, beef primal cuts, pork carcasses, pork primal cuts, and lamb carcasses. Federal grade standards for beef carcass and application of USDA Institutional Meat Purchase Specifications.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Offered: FALL

Prerequisite for: ASCI 400A

Experiential Learning: Fieldwork

ASCI 300B Principles of Livestock Evaluation and Judging**Prerequisites:** Junior standing. ASCI 200 recommended.**Notes:** Opportunity to become members of the University of Nebraska Livestock Judging Team.**Description:** Principles of livestock judging and presentation of oral reasons. Evaluation of body structure and composition differences in breeding and market livestock as related to their use in meat production. Live animal, performance records, genetic evaluations, and breeding livestock scenarios evaluated. Presentation of oral reasons to defend selection decisions.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**Offered:** FALL/SPR**Prerequisite for:** ASCI 300D; ASCI 400B**Experiential Learning:** Fieldwork**ASCI 300D Principles of Meat Animal Evaluation****Prerequisites:** ASCI 300B**Notes:** The University of Nebraska Meat Animal Evaluation Team will be selected from students in this course.**Description:** Further expertise in breeding animal, market animal, and carcass evaluation. Live animal and carcass grading and pricing.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded with Option**Offered:** SPRING**Experiential Learning:** Fieldwork**ASCI 300E Principles of Horse Evaluation and Judging****Notes:** Students will have an opportunity to become members of the University of Nebraska Horse Judging Team.**Description:** Conformation associated with equine structural form and performance standards. Evaluation of performance classes as governed by breed association standards and industry regulations. Presentation of oral reasons to defend selection decisions.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**Offered:** SPRING**Experiential Learning:** Fieldwork**ASCI 310 Fresh Meats****Prerequisites:** ASCI 210**Description:** Fresh meat from beef, pork, lamb, and poultry.

Characteristics of muscle, meat technology, preservation, merchandising concepts, and markets.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Course and Laboratory Fee:** \$40**ASCI 311A Equine Industry Study Tour****Description:** Provides exposure to the broad array of opportunities in the equine industry and increase the understanding of various disciplines within the horse industry.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**Offered:** SPRING**Course and Laboratory Fee:** \$300**Experiential Learning:** Fieldwork**ASCI 311B Meat Industry Study Tour****Description:** Study tour of livestock and/or meat/food processors.

Provide an understanding of the industry's operations and problems.

Credit Hours: 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded with Option**Course and Laboratory Fee:** \$325**ASCI 311E Beef Industry Study Tour****Prerequisites:** ASCI 281**Notes:** Supplements to the class include invited speakers. A summer tour is required. Letter grade only**Description:** Identify beef cattle related enterprises that represent the breadth of the cattle industry. Prioritize these enterprises as candidates for inclusion in the summer tour.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded**Offered:** SPRING**Prerequisite for:** ASCI 381**Experiential Learning:** Fieldwork**ASCI 320 Animal Nutrition****Prerequisites:** CHEM 106A or CHEM 110A and ASCI 220**Description:** Fundamentals of nutrition and feeding of domestic livestock, digestive anatomy, physiology and metabolism, nutrients and nutrient requirements, evaluation of diet formulations and methods of feeding.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING**Prerequisite for:** ASCI 321; ASCI 450; ASCI 455; ASCI 457**ASCI 321 Companion Animal Nutrition****Prerequisites:** ASCI 220 or ASCI 320 or NRES 311; CHEM 106A or CHEM 110A.**Description:** Digestive anatomy and physiology of companion animals including dogs, cats, small mammals, and exotic species. Unique nutrient requirements, pet food formulation, and regulations.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING

ASCI 322 Equine Nutrition

Notes: ASCI 320 recommended. Offered in odd numbered calendar years.

Description: Equine nutrition including digestive anatomy and physiology. Nutritional requirements of horses as related to growth, reproduction, and performance. The relationship of nutrition to disease and environment. Management practices and application of current equine nutritional research.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Prerequisite for: ASCI 450

ASCI 330 Animal Breeding and Genetics

Prerequisites: PLAS 215 or BIOS 201; STAT 218.

Description: Principles of animal genetics and genomics, and their application to improvement of livestock and companion animals. Topics include: characterization of allelic and genetic variation associated with animal performance, principles of selection, inbreeding and crossbreeding, advances in molecular genetics, and their applications to the development of breeding programs to enhance animal productivity and well-being.

Credit Hours: 4

Max credits per semester: 4

Max credits per degree: 4

Grading Option: Graded with Option

Offered: FALL

Prerequisite for: ASCI 455; ASCI 458

Course and Laboratory Fee: \$20

ASCI 340 Animal Physiological Systems

Prerequisites: LIFE 121 and 121L; CHEM 110A and 110L

Description: A comprehensive look at the major physiological systems that comprise the mammalian body. Anatomical organization and functionality of the nervous system, muscle, cardiovascular system, respiratory system, digestive system, urinary system, reproductive system, endocrine system, and immune system.

Credit Hours: 4

Max credits per semester: 4

Max credits per degree: 4

Grading Option: Graded with Option

Offered: FALL

Prerequisite for: ASCI 341; ASCI 445; VBMS 410

ASCI 341 Physiology and Management of Reproduction

Prerequisites: ASCI 240 or 340

Description: Comparative anatomy and physiology of reproduction in domestic animals. Endocrine regulation of reproductive function, patterns of reproduction, economic consequences of sub-optimal reproductive performance, environmental influences on reproductive efficiency, application of selected techniques for controlling reproduction. Laboratory provides application of techniques used in reproductive management.

Credit Hours: 4

Max credits per semester: 4

Max credits per degree: 4

Grading Option: Graded with Option

Offered: FALL

Prerequisite for: ASCI 455; ASCI 458

Course and Laboratory Fee: \$80

ASCI 342 Equine Reproduction

Prerequisites: ASCI 240 or 340 or BIOS 213.

Notes: ASCI 341 recommended

Description: Anatomy and physiology of stallion and mare reproductive systems. Estrous detection systems, artificial and natural breeding techniques, infertility, semen collection and processing, reproductive management, and record keeping.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Offered: SPRING

ASCI 354A Swine Breeding & Gestation

Notes: This course is taught by North Carolina State University and is part of the GPIDEA/AgIDEA courses offerings. Registration with permission from your advisor and CASNR Online Education.

Description: Concepts related to: reproductive physiology and endocrinology of boars and sows; genetic selection programs; development programs for future replacement gilts and boars; semen collection, evaluation, and preparation; detection of estrus and artificial insemination; pregnancy diagnosis; feeding and house programs for gestating sows; environmental management; records; diseases; and development of quality assurance programs for identifying and solving reproductive problems.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

ASCI 354B Swine Farrowing Management

Notes: This course is taught by the University of Missouri and is part of the GPIDEA/AgIDEA course offerings. Registration with permission from your advisor and CASNR Online Education Office.

Description: Advanced integration and application of reproductive management concepts during farrowing and lactation. Identification of production trends; formulation of strategies to improve productivity; and parturition and neonatal management.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

ASCI 354D Swine Nursery Management

Notes: This course is taught by Penn State as part of the GPIDEA/Ag*IDEA course offerings. Registration with permission from your advisor and CASNR Online Education Office.

Description: Overview of the critical management, housing, and financial considerations relevant to the successful operation of a swine nursery, grow-finish, or wean to finish enterprise, including: nutrient requirements; building and facility management; and marketing.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

ASCI 354E Employee Management for Swine Industry

Notes: This course is taught by an institutional member of the GPIDEA/AgIDEA consortium. Registration is with permission from your advisor and CASNR Online Education Office.

Description: Effective employee management in swine production units. Assist students in understanding the principles, policies, and practices related to procurement, development, maintenance, and utilization of employees.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

ASCI 354F Swine Environment Management

Notes: This course is taught by Iowa State University as part of the GPIDEA/AgIDEA consortium. Registration with permission from your advisor and CASNR Online Education Office.

Description: Response of swine to thermal environment, ventilation system design and analysis, heating and cooling systems and examples of various designs for all phases of production. Trouble shooting ventilation systems and energy analysis of production units.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

ASCI 354J Advanced Swine Science

Prerequisites: ASCI 254

Notes: This course is taught by Kansas State University and is part of the GPIDEA/AgIDEA consortium. Registration is with permission from your advisor and CASNR Online Education Office.

Description: An in-depth application of basic concepts covered in Basic Swine Science, focused on the scientific principles to the economical and sustainable production of pork. Detailed analysis of benchmarking, production systems, reproduction, pig flow, ventilation, and herd health are discussed. Become knowledgeable regarding the science, complexity, and technology applied in modern swine production businesses.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

ASCI 354K Swine Health and Biosecurity

Prerequisites: ASCI 254

Notes: This course is taught by Iowa State University and is part of the GPIDEA/AgIDEA consortium. Registration is with permission from your advisor and CASNR Online Education Office.

Description: Overview of standard biosecurity protocols and identification of behavior and clinical signs of illness in pigs. Treatment administration and prevention methods. Introduction to immune system function and basic swine disease transmission.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

ASCI 354M Marketing and Risk Management in the Swine Industry

Prerequisites: ASCI 254

Notes: This course is taught by North Carolina State University and is part of the GPIDEA/AgIDEA consortium. Registration is with permission from your advisor and CASNR Online Education Office.

Description: Describe industry structure, markets, and risk that characterize the US swine sector. Review futures and options markets and contracts and their usage to manage risks in US swine production.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded with Option

ASCI 360 Advanced Equitation

Prerequisites: Junior standing, ASCI 260 and/or permission.

Description: Study and application of maneuvers basic to performance excellence. Assigned student mounts expected to show satisfactory progress toward standards of excellence in Western and English performance.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Course and Laboratory Fee: \$100

ASCI 361 Equestrian Team Horsemanship/Equitation

Notes: May be repeated for a total of 4 credit hours.

Description: Application of equestrian horsemanship and equitation skills through practices and horsemanship competitions in the Intercollegiate Horse Show Association.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 4

Grading Option: Pass No Pass

ASCI 370 Animal Welfare

Prerequisites: ASCI 270

Description: Explore the origins of human responsibility to animals in domestication, and the historical, biological, ethical and social aspects of human-animal interaction in Western Culture.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: SPRING

ASCI 381 Beef Industry Scholars - Practicum

Prerequisites: ASCI 311E, ALEC 350

Notes: Letter grade only.

Description: Financial risk management, beef processing, animal health, and related emerging issues.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Graded

Offered: SPRING

Prerequisite for: ASCI 481

ASCI 391 Networking with Animal Science Industry Professionals

Prerequisites: Junior or Senior standing.

Description: Discussion and reflection of selected current topics significant to agriculture, animals, and animal systems. Concerns and issues of society as they relate to local, national, and international usage of animals.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 1

Grading Option: Pass No Pass

Offered: FALL/SPR

ASCI 395A Experiential Learning for Career Development in Animal Sciences - Industry Experiences

Description: Extension and application of the animal science curriculum within the context of industry (e.g., internship), extension and service, research, or teaching experience.

Credit Hours: 1-6

Min credits per semester: 1

Max credits per semester: 6

Max credits per degree: 6

Grading Option: Graded with Option

Prerequisite for: ASCI 482, AECN 482

Experiential Learning: Internship/Co-op

ASCI 395B Extension and Service Experiences

Description: Extension and application of the animal science curriculum within the context of industry (e.g., internship), extension and service, research, or teaching experience. A faculty adviser for the area of interest must be identified prior to registering for the course.

Credit Hours: 1-6

Min credits per semester: 1

Max credits per semester: 6

Max credits per degree: 6

Grading Option: Graded with Option

Prerequisite for: ASCI 482, AECN 482

Experiential Learning: Internship/Co-op

ASCI 395D Research Experiences

Description: Extension and application of the animal science curriculum within the context of industry (e.g., internship), extension and service, research, or teaching experience. A faculty adviser for the area of interest must be identified prior to registering for the course.

Credit Hours: 1-6

Min credits per semester: 1

Max credits per semester: 6

Max credits per degree: 6

Grading Option: Graded with Option

Experiential Learning: Research

ASCI 395E Experiential Learning for Career Development in Animal Sciences - Undergraduate Teaching Experience

Description: Extension and application of the animal science curriculum within the context of industry (e.g., internship), extension and service, research, or teaching experience.

Credit Hours: 1-6

Min credits per semester: 1

Max credits per semester: 6

Max credits per degree: 6

Grading Option: Graded with Option

Offered: FALL/SPR

Experiential Learning: Student Teaching/Education Practicum

ASCI 399 Independent Study in Animal Science

Prerequisites: Permission.

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: 1-5

Min credits per semester: 1

Max credits per semester: 5

Max credits per degree: 12

Grading Option: Graded with Option

ASCI 400A Advanced Meat Grading and Evaluation

Prerequisites: ASCI 300A

Notes: Must be an active member of the current semester's Meat Judging Team.

Description: Comparative evaluation of the meat characteristics of beef, pork, and lamb that affect product merit and the scientific basis of the factors that influence the relative value. Federal meat grades and their application, industry grading system and their application, and application of Institutional Meat Purchase Specifications. Application of the above topics, as well as critical decision making and written justification of meat product merit, practiced in-depth.

Credit Hours: 1

Max credits per semester: 1

Max credits per degree: 2

Grading Option: Graded with Option

Offered: FALL/SPR

ASCI 400B Advanced Livestock Evaluation and Judging

Prerequisites: ASCI 300B or equivalent experience.

Notes: The University of Nebraska Senior Livestock Judging Team will be selected from students in this course.

Description: Livestock judging and evaluation applying principles learned in ASCI 300B. Field trips to commercial and purebred livestock operations and exhibitions. Network with producers to learn varied livestock production philosophies. Develop a proficiency in brief, concise oral presentation of reasons for making a decision.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Offered: FALL/SPR

Course and Laboratory Fee: \$100

Experiential Learning: Fieldwork

ASCI 400E Advanced Horse Evaluation and Judging

Prerequisites: Permission

Notes: ASCI 300E recommended. Departmental consent required. The University Horse Judging Team will be selected from students in this course. Field trips are a major component of the course.

Description: Advanced horse judging and analysis. Evaluate conformation and score multiple performance events. The development and presentation of concise oral reasons to defend placing decisions.

Credit Hours: 1-2

Min credits per semester: 1

Max credits per semester: 2

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

Experiential Learning: Fieldwork

ASCI 410 Processed Meats**Crosslisted with:** ASCI 810**Prerequisites:** ASCI 210 or FDST 205.

Description: Science and technology of modern meat processing. Utilization of meat, non-meat ingredients, and processing techniques and their impact on processed meat characteristics. Laboratory provides hands-on application with the preparation, development, and evaluation of processed meats products.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING**ACE:** ACE 10 Integrated Product**Course and Laboratory Fee:** \$80**ASCI 411 HACCP and Food Safety Systems for the Food Industry****Prerequisites:** An understanding of food production and processing operations. Recommended: ASCI 310, 410, and FDST 205.

Description: Principles, implementation, sanitation, and standard operating procedures that function to support the Hazard Analysis and Critical Control Point (HACCP) System. Food safety hazards and their relationship to food borne illness in the meat and food industry.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ASCI 419 Meat Investigations****Crosslisted with:** ASCI 819, FDST 419, FDST 819**Prerequisites:** ASCI 210

Description: Conduct independent research and study meat industry problems in processing, production, storage, and preparation of meat and meat products.

Credit Hours: 1-3**Min credits per semester:** 1**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ASCI 421 Advanced Animal Nutrition****Crosslisted with:** ASCI 821**Prerequisites:** ASCI 320

Description: Advanced course dealing with the nutrition of domestic animals. In-depth coverage of nutrients, nutrient metabolism, and nutrient requirements. Biochemical and physiological functions of nutrients in life processes.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Prerequisite for:** ASCI 925, NUTR 925; ASCI 926, NUTR 926; ASCI 927, NUTR 927**ASCI 422 Advanced Feeding and Feed Formulation****Crosslisted with:** ASCI 822**Prerequisites:** ASCI 320 or equivalent.

Description: Feeding practices for domestic animals. Applied animal nutrition and feed formulation.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ASCI 431 Advanced Animal Breeding****Crosslisted with:** ASCI 831**Prerequisites:** ASCI 330

Description: Application of genetic principles to animal breeding. Critical examination of current and potential selection programs and crossbreeding systems. Determination of performance objectives. Expected responses to selection methods and dissemination of improvement in an industry.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ASCI 432 Genome Analysis****Crosslisted with:** ASCI 832**Prerequisites:** PLAS 215 and BIOC 401 or equivalent

Description: Theoretical and practical aspects of: structure and function of eukaryotic genomes; genome sequencing and assembling, polymorphism and isoform detection and genotyping; gene and genome annotation; strategies used to identify genetic variants responsible for phenotypic differences; and personalized genomics, social and ethical aspects associated with genomic information.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**Offered:** SPRING**ASCI 441 New Techniques in Reproductive Biology****Crosslisted with:** ASCI 841**Prerequisites:** ASCI 341 or equivalent.

Description: Mammalian early embryonic development. Basic aspects of embryology and development biology. Modern technologies in animal reproductive biology, in vitro maturation and fertilization, embryo transfer, cloning, assisted reproductive technologies, transgenic animals, and embryonic stem cells.

Credit Hours: 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Course and Laboratory Fee:** \$100**ASCI 442 Endocrinology****Crosslisted with:** ASCI 842, BIOS 442, BIOS 842, VBMS 842**Prerequisites:** A course in vertebrate physiology and/or biochemistry.

Description: Mammalian endocrine glands from the standpoint of their structure, their physiological function in relation to the organism, the chemical nature and mechanisms of action of their secretory products, and the nature of anomalies manifested with their dysfunction.

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

ASCI 443 Physiology of Animal Cells and Tissues

Crosslisted with: ASCI 843

Prerequisites: ASCI 240 or ASCI 340 or BIOS 213

Description: Molecular, cellular, and tissue dependent functions of neurons, skeletal and smooth muscle, vasculature, and immune cells. Cellular regulation of important physiological processes including blood flow, gas exchange, inorganic solute homeostasis, acid-base balance, water balance, appetite control, and thermal regulation will also be studied. Understand cellular and molecular processes that ensure homeostasis and promote integration of physiological systems.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Offered: SPRING

ASCI 444 Domestic Animal Immunology

Crosslisted with: ASCI 844

Prerequisites: LIFE 120; LIFE 121; ASCI 240 or BIOS 213 or ASCI 340

Description: Learn the fundamental knowledge of the animal immune system, and how to utilize immunology to improve animal health and production. Become familiar with common immunoassays, immunological diseases and immunotherapy.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Offered: FALL

Groups: Biology, Psychology, & Politics

ASCI 445 Equine and Canine Exercise Science

Prerequisites: ASCI 240 or ASCI 340

Description: Physiological adaptations to athletic training in equine and canine athletes. Topics of emphasis include exercise-related adaptations in metabolism, locomotion, the cardiovascular system, musculoskeletal system, and endocrine system. The roles of nutrition and conditioning programs on exercise.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded

Offered: FALL

ASCI 450 Horse Management

Prerequisites: ASCI 320 or 322

Notes: ASCI 341 or 342 recommended

Description: Light horse production. Nutrition, reproduction, management, housing, and principle usage of light horses.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

ACE: ACE 10 Integrated Product

ASCI 451 Livestock Management on Range and Pasture

Crosslisted with: PLAS 445, AGRO 845, ASCI 851, RNGE 445, GRAS 445

Prerequisites: ASCI 250 and PLAS 240 or PLAS 340

Notes: AECN 201 recommended. Capstone course. All students required to participate in a one-week field trip in central or western Nebraska prior to beginning of fall semester. Therefore, students must notify instructor at time of early registration (Dates are given in class schedule.)

Description: Analyzing the plant and animal resources and economic aspects of pasturage. Management of pasture and range for continued high production emphasized.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

ACE: ACE 10 Integrated Product

Course and Laboratory Fee: \$300

ASCI 455 Beef Cow-Calf Management

Prerequisites: Senior standing or permission; ASCI 320; ASCI 330 or 341

Description: Integrated management specific to the beef cow-calf enterprise necessary to achieve biologic and economic efficiency.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: SPRING

ACE: ACE 10 Integrated Product

ASCI 456 Beef Seedstock Production and Sales

Prerequisites: Senior standing.

Notes: ASCI 330 recommended. Students are responsible for planning and conducting the annual UNL bull sale.

Description: Learn applied beef cattle genetics principles as they apply to marketing and selecting beef bulls. Supplemented with invited industry speakers to illustrate how these concepts are applied in practice and how different entities approach marketing seedstock. Learn of data collection required to evaluate bulls and how to construct a sale catalog and conduct a bull sale.

Credit Hours: 2

Max credits per semester: 2

Max credits per degree: 2

Grading Option: Graded with Option

Offered: SPRING

Experiential Learning: Fieldwork

ASCI 457 Beef Feedlot Management

Prerequisites: Senior standing or permission; ASCI 320

Description: Advanced preparation in the feeding of cattle for slaughter. Emphasis on the nutrition and management of feedlot cattle and related health and economic considerations. Covers the beef enterprise from weaning to market and relates closely to beef cow-calf production.

Credit Hours: 3

Max credits per semester: 3

Max credits per degree: 3

Grading Option: Graded with Option

Offered: FALL

ACE: ACE 10 Integrated Product

ASCI 458 Advanced Companion Animal Biology**Prerequisites:** ASCI 220, ASCI 330 or ASCI 341**Description:** Advanced companion and specialty animal management techniques. Assess and propose solutions to management and well-being concerns related to health care, nutrition, and behavior of companion animals.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**Offered:** SPRING**ACE:** ACE 10 Integrated Product**ASCI 481 Beef Industry Scholars - Beef Summit****Prerequisites:** ASCI 381**Notes:** Requires working with the Nebraska Cattlemen and the instructor to develop the summit. Letter grade only.**Description:** Identification of a major issue confronting the Nebraska beef industry. Organize a Nebraska summit meeting to discuss and bring the identified issue to resolution.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded**Offered:** FALL**Prerequisite for:** ASCI 482, AECN 482**ASCI 482 Beef Industry Scholars - National Beef Industry Policy****Crosslisted with:** AECN 482**Prerequisites:** ASCI 481; ASCI 395A or ASCI 395B or GRAS 490 or AECN 495C**Notes:** Requires attending the National Cattlemen's Beef Association (NCBA) annual convention and then, communicating the new policy and issues to local organizations and undergraduate student groups. Letter grade only.**Description:** Discuss and dissect issues from the NCBA convention researching the pros and cons of current and proposed policy.**Credit Hours:** 1**Max credits per semester:** 1**Max credits per degree:** 1**Grading Option:** Graded**Offered:** SPRING**Experiential Learning:** Fieldwork**ASCI 490A Animal Science Internship - Beef Feedlot Management****Prerequisites:** Acceptance into the Beef Feedlot Management Program.**Description:** Management internship in a beef feedlot. Organizational and financial structure of the beef feedlot and experience in making decisions related to: animal production, marketing, business management, and personnel management.**Credit Hours:** 1-3**Min credits per semester:** 1**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded with Option**ASCI 496 Independent Study in Animal Science****Crosslisted with:** ASCI 896**Prerequisites:** 12 hrs animal science or closely related areas and permission.**Description:** Individual or group projects in research, literature review, or extension of course work under the supervision and evaluation of a departmental faculty member.**Credit Hours:** 1-5**Min credits per semester:** 1**Max credits per semester:** 5**Max credits per degree:** 12**Grading Option:** Graded with Option**ASCI 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

- Nutritionist, Dekalb Feeds - Ely, IA
- Pet Care Technician Manager, Nebraska Animal Medical Center - Lincoln, NE
- 4-H Extension Assistant, Nebraska Extension - Omaha, NE
- Operations Management Associate, Cargill Meat Solutions - Schuyler, NE
- Animal Behaviorist, Capital Humane Society - Lincoln, NE
- Horse Trainer and Riding Instructor, Self-Employed - Lincoln, NE
- Cattle Health Assistant, Adams Land and Cattle Co. - Broken Bow, NE
- Farm Manager, Rock Creek Swine - Nebraska City, NE
- Animal Protein Manager, Cargill - Wichita, KS
- Herdsman/Cattle Manager, Rippe Gelbvieh - Hubbell, NE

Internships

- Beef Sales Intern, Cargill Meat Solutions - Wichita, KS
- Kentucky Equine Management Internship, Adena Springs - Paris, KY
- Intern, Henry Doorly Zoo - Omaha, NE
- Feedlot Intern, Rhea Cattle Co. - Arlington, NE
- Clydesdale Handler Intern, Anheuser-Busch - St. Louis, MO
- Animal Welfare Intern, Nebraska Humane Society - Omaha, NE
- Communications and Marketing Intern, American Hereford Association - Blue Rapids, KS
- Feedlot Intern, U.S. Meat Animal Research Center - Clay Center, NE
- Animal Care Intern, Willowbrook Wildlife Center - Glen Ellyn, IL
- Equine Racetrack Practitioner Intern, Arapahoe Park Racetrack - Aurora, CO



Graduate & Professional Schools

- Ruminant Nutrition, University of Nebraska-Lincoln - Lincoln, NE
- Professional Program of Veterinary Medicine, University of Nebraska-Lincoln - Lincoln, NE
- Animal Biology, University of California-Davis - Davis, CA
- Master's of Conservation Medicine, Tufts University - Medford, MA
- Range Management Program, Texas Christian University - Fort Worth, TX
- Animal Breeding and Genetics, University of Nebraska-Lincoln - Lincoln, NE
- Animal Science, Physiology, University of Nebraska - Lincoln, NE
- Master's of Science in Leadership Education: Leadership Development Emphasis, University of Nebraska-Lincoln - Lincoln, NE
- Master's of Agriculture Economics, Oklahoma State - Stillwater, OK
- Poultry Nutrition, University of Nebraska - Lincoln, NE