APS ANIMAL SCIENCE/AG EDUCATION

Division Chair
Interim Division Chair: Joanna Hergenreder, M.S., Associate Professor

Faculty
Doug Smith, Ph.d., Associate Professor
Alan Taylor, Assistant Professor, Experiential Learning Coordinator

Mission
The APS Animal Science/Ag Ed division is dedicated to embracing innovation and respecting tradition in development of individuals for the equine and livestock industries.

The APS Animal Science/Ag Ed major prepares students for lifelong careers in agriculture and its allied industries. Graduates of this major gain technical knowledge necessary for success in agriculture and obtain the necessary skills for lifelong learning and community leadership.

Associate of Applied Science Options
• Dairy Production
• Equine Industry Management
• Feedlot Management
• Livestock Industry Management
• Meat Science
• Poultry Production

Associate of Science Options (Transfer)
• Agriculture Education
• Animal Science
• Grazing Livestock Systems

Bachelor of Applied Science Degree
A to B Transfer Associate of Science degree from Nebraska College of Technical Agriculture and Bachelor of Applied Science Degree from University of Nebraska-Lincoln (UNL). Online bachelor’s degree completion option available.

Minor
• Agriculture Production Systems

Certificate
• Beef Production
• Equine Training Management

Internship
Students within the APS Animal Science/Ag Ed major complete a 12-week internship working full-time in the agriculture industry. Students are permitted to complete their internship after completing a minimum of 3 eight week instructional periods with a minimum 2.0 CGPA.

Ag Production Systems Core Courses
The following courses are required for all Associate of Applied Science degree options of the Ag Production Systems major.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ABM 2854</td>
<td>FARM &amp; RANCH MANAGEMENT</td>
<td>4</td>
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<tr>
<td>ACT 1103</td>
<td>ACCOUNTING I</td>
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<td>AGR 2983</td>
<td>CAPSTONE</td>
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<td>AIT 1003</td>
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<td>ASI 2906</td>
<td>INTERNSHIP</td>
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<tr>
<td>ECN 1103</td>
<td>INTRODUCTION TO AG ECONOMICS</td>
<td>3</td>
</tr>
<tr>
<td>or ECN 1203</td>
<td>MICROECONOMICS</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
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<td>22</td>
</tr>
</tbody>
</table>

Dairy Production option-Associate of applied science degree
This program provides students with the opportunity to study dairy production in a unique collaborative venture between two top rated academic institutions: the Nebraska College of Technical Agriculture and South Dakota State University. Students spend three semesters studying applied animal science and general agriculture at NCTA, and one intensive semester studying hands-on dairy production at SDSU. Participants will graduate from NCTA with an Associate of Applied Science Degree and a high level of skill and proficiency in dairy production.

Associate of Applied Science Core 17
Ag Production Systems Core 22
Dairy Production Courses (Choose from the following) 20
ASI 1253 NUTRITION
ASI 1304 ANIMAL MANAGEMENT
ASI 1351 ART INSEM BEEF CATTL
ASI 2313 RATION FORMULATION
ASI 2383 LARGE ANIMAL DISEASES
MKT 2203 AG MARKETING
South Dakota State University State Classes 17
Total Credit Hours 76

Equine Industry Management Option-associate of applied science degree

Associate of Applied Science Core
Complete requirements 17
Credit Hours Subtotal: 17
Ag Production Systems Core
Complete requirements 22
Credit Hours Subtotal: 22
Equine Industry Core
ASI 1253 NUTRITION 3
ASI 1263 BASIC EQUATION 3
ASI 1304 ANIMAL MANAGEMENT 4
ASI 1442 EQUINE PRACTICUM I 2
ASI 1501 EQUINE SAFETY 1
ASI 2203 FEEDS & FEEDING 3
ASI 2412 EQUINE MARKETING TECHNIQUES 2
ASI 2433 EQUINE INDUS MNGT I 3
ASI 2442 EQUINE PRACTICUM II 2
ASI 2443 EQUINE INDUS MNGT II 3
Credit Hours Subtotal: 26
**Equine Industry Specialization Focus**

Select 7 hours of the following: 7

- ABM 2603 AG LAW
- ASI 2313 RATION FORMULATION
- ASI 2363 INTERMEDIATE TRAINING
- ASI 2383 LARGE ANIMAL DISEASES
- ASI 2463 ADVANCED PERFORMANCE TRAINING
- ASI 2462 COLT STARTING
- ASI 2611 EQUINE REPRODUCTION I
- ASI 2621 EQUINE REPRODUCTION II
- MGT 2103 MGT CONCEPTS
- MKT 2103 RETAIL MARKETING
- VTE 1623 EQUINE LABORATORY DIAGNOSTICS
- VTE 1633 EQUINE DISEASES
- VTE 2623 FEEDING THE EQUINE PATIENT
- VTS 1403 ANATOMY AND PHYSIOLOGY
- VTS 1713 PHARMACY-ANESTHESIA

Credit Hours Subtotal: 7
Total Credit Hours: 72

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**Feedlot Management Option - Associate of Applied Science Degree**

**ASSOCIATE OF APPLIED SCIENCE CORE**

*Complete Requirements* 17
Credit Hours Subtotal: 17

**AG PRODUCTION SYSTEMS CORE**

*Complete Requirements* 22
Credit Hours Subtotal: 22

**Feedlot Management Core**

- ASI 1202 FEEDLOT PRACTICUM I 2
- ASI 1203 FEEDLOT SYSTEMS 3
- ASI 1213 LIVESTK & CARC EVAL 3
- ASI 1253 NUTRITION 3
- ASI 1302 FEEDLOT PRACTICUM II 2
- ASI 1304 ANIMAL MANAGEMENT 4
- ASI 2203 FEEDS & FEEDING 3
- ASI 2383 LARGE ANIMAL DISEASES 3
- ASI 2313 RATION FORMULATION 3
- MKT 2203 AG MARKETING 3

Credit Hours Subtotal: 29

**FEEDLOT SPECIALIZATION COURSES**

Select 7 hours 7

- ABM 2403 AG FINANCE
- ABM 2903 ENTREPRENEURSHIP
- ACT 1203 ACCOUNTING II
- AEQ 2303 EQUIP PREVENTATIVE MAINTENANCE
- AGR 2383 IRRIGATION MANAGEMENT
- ASI 1222 ADV LIVSTK EVAL/JUDG
- ASI 1312 LIVESTOCK JUDGING I
- ASI 1351 ART INSEM BEEF CATTL
- ASI 1501 EQUINE SAFETY
- ASI 2303 RANGE MANAGEMENT

**Livestock Industry Management Option - Associate of Applied Science Degree**

**Associate of Applied Science Core**

*Complete requirements* 17
Credit Hours Subtotal: 17

**Ag Production Systems Core**

*Complete requirements* 22
Credit Hours Subtotal: 22

**Livestock Industry Management Core**

- ASI 1203 FEEDLOT SYSTEMS 3
- or ASI 2753 BEEF PRODUCTION SYSTEMS 3
- ASI 1213 LIVESTK & CARC EVAL 3
- ASI 1253 NUTRITION 3
- ASI 1304 ANIMAL MANAGEMENT 4
- MKT 2203 AG MARKETING 3
- ASI 2383 LARGE ANIMAL DISEASES 3

Credit Hours Subtotal: 19

**Livestock Industry Specialization**

Select 11 credits of the following: 11

- ABM 2403 AG FINANCE
- ABM 2903 ENTREPRENEURSHIP
- ACT 1203 ACCOUNTING II
- AEQ 2303 EQUIP PREVENTATIVE MAINTENANCE
- AGR 2383 IRRIGATION MANAGEMENT
- ASI 1222 ADV LIVSTK EVAL/JUDG
- ASI 1312 LIVESTOCK JUDGING I
- ASI 1351 ART INSEM BEEF CATTL
- ASI 1501 EQUINE SAFETY
- ASI 2203 FEEDS & FEEDING
- ASI 2303 RANGE MANAGEMENT
- ASI 2312 LIVESTOCK JUDGING II
- ASI 2313 RATION FORMULATION
- ASI 2353 LIVESTOCK BREEDING
- ASI 2433 EQUINE INDUS MNGT I
- ASI 2443 EQUINE INDUS MNGT II
- ASI 2513 MEAT SCIENCE
- ASI 2773 ADVANCED REPRODUCTIVE PHYSIOLOGY
- MGT 2103 MGT CONCEPTS

Credit Hours Subtotal: 11

**Advisor Guided Electives**
Complete Requirements | 1  
Credit Hours Subtotal:  | 1  
Total Credit Hours    | 70  

**meat science option-associate of applied science degree**

**ASSOCIATE OF APPLIED SCIENCE CORE**

| Complete Requirements | 17  
Credit Hours Subtotal: | 17  
AG PRODUCTION SYSTEMS CORE | 22  
Credit Hours Subtotal: | 22  

**MEAT SCIENCE CORE**

| ASI 1203 FEEDLOT SYSTEMS | 3  
or ASI 2753 BEEF PRODUCTION SYSTEMS  | 3  
ASI 1213 LIVESTK & CARC EVAL | 3  
ASI 1253 NUTRITION | 3  
ASI 1304 ANIMAL MANAGEMENT | 4  
ASI 1412 MEAT EVALUATION I | 2  
ASI 2383 LARGE ANIMAL DISEASES | 3  
ASI 2512 MEATS EVALUATION II | 2  
ASI 2513 MEAT SCIENCE | 3  
ASI 2514 MEAT PROCESSING | 4  
ASI 2523 MUSCLE BIOLOGY | 3  
MKT 2203 AG MARKETING | 3  
Credit Hours Subtotal: | 33  

**ADVISOR GUIDED ELECTIVES**

| Complete Requirements | 3  
Credit Hours Subtotal: | 3  
Total Credit Hours | 75  

**Poultry Production Option- associate of applied science degree**

Students are admitted to the Nebraska College of Technical Agriculture and spend three semesters in Curtis. For one semester, students will attend Mississippi State University for intensive, hands-on commercial poultry production. Graduates receive an Associate of Applied Science degree from NCTA. They may enter the poultry industry immediately, or can transfer to a bachelor's of science in animal science at UNL or a bachelor’s of science in poultry science at MSU.

**Associate of Applied Science Core** | 17  
**Ag Production Systems Core** | 22  
**Poultry Production Courses** | 24  

| AEQ 1501 INTRODUCTION TO ELECTRIC CODE |  
AEQ 1513 AC CIRCUIT ANALYSIS |  
AEQ 2303 EQUIP PREVENTATIVE MAINTENANCE |  
ASI 1024 FUND OF ANIMAL BIO |  
ASI 1253 NUTRITION |  
ASI 1304 ANIMAL MANAGEMENT |  
ASI 2313 RATION FORMULATION |  
ASI 2383 LARGE ANIMAL DISEASES |  
ASI 2906 INTERNSHIP |  
MKT 2203 AG MARKETING |  
PO 3311 Commercial Poultry Production (Distance Learning from Mississippi State) |  
Credit Hours Subtotal: | 63  
One Semester - Off Campus |  
Mississippi State University Classes | 14  
Credit Hours Subtotal: | 14  
Total Credit Hours | 77  

**Agricultural Education Option- Associate of Science Degree (transfer)**

**Associate of Science Core**

| Complete requirements | 26  
Credit Hours Subtotal: | 26  

**Agricultural Education Specialization Focus Courses**

Select 24 hours of the following:

| ABM 2003 CRITICAL THINKING |  
ACT 1103 ACCOUNTING I |  
ACT 1203 ACCOUNTING II |  
AED 1103 INTRODUCTION TO SECONDARY AGRICULTURAL EDUCATION |  
AED 1233 PLANNING, LEADERSHIP AND EXPERIENTIAL PROGRAMS |  
AEQ 1103 SMALL ENGINES |  
AEQ 1203 WELDING |  
AGR 1201 SOILS LAB |  
AGR 1203 PRINCIPLES OF SOILS |  
AGR 2103 BUILDING CONSTRUCTION |  
ASI 1213 LIVESTK & CARC EVAL |  
ASI 1304 ANIMAL MANAGEMENT |  
ASI 2513 MEAT SCIENCE |  
ECN 1203 MICROECONOMICS |  
ECN 1303 MACROECONOMICS |  
Credit Hours Subtotal: | 24  

**Electives**

Advisor Guided Electives | 10  
Credit Hours Subtotal: | 10  
Total Credit Hours | 60  

**ANIMAL SCIENCE Option- ASSOCIATE OF SCIENCE DEGREE (transfer)**

**Associate of Science Core**

| Complete requirements | 26  
Credit Hours Subtotal: | 26  

**Animal Science Specialization Focus**

Select 24 hours of the following:

| ABM 2003 CRITICAL THINKING |  
ABM 2403 AG FINANCE |  
ACT 1103 ACCOUNTING I |  
ACT 1203 ACCOUNTING II |  
ASI 1024 FUND OF ANIMAL BIO |  
ASI 1213 LIVESTK & CARC EVAL |
### GRAZING LIVESTOCK option - ASSOCIATE OF SCIENCE DEGREE (transfer)

**Associate of Science Core**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ASI 1253</td>
<td>NUTRITION</td>
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</tr>
<tr>
<td>ASI 1304</td>
<td>ANIMAL MANAGEMENT</td>
<td></td>
</tr>
<tr>
<td>ASI 2203</td>
<td>FEEDS &amp; FEEDING</td>
<td></td>
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<tr>
<td>ASI 2513</td>
<td>MEAT SCIENCE</td>
<td></td>
</tr>
<tr>
<td>ASI 2383</td>
<td>LARGE ANIMAL DISEASES</td>
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</tr>
<tr>
<td>ASI 2773</td>
<td>ADVANCED REPRODUCTIVE PHYSIOLOGY</td>
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<td>ECN 1203</td>
<td>MICROECONOMICS</td>
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</tr>
<tr>
<td>ECN 1303</td>
<td>MACROECONOMICS</td>
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</tr>
<tr>
<td>MGT 2103</td>
<td>MGT CONCEPTS</td>
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</table>

Credit Hours Subtotal: 24

**Electives**

Advisor Guided Electives 10

Credit Hours Subtotal: 10

Total Credit Hours 60

### EQUINE TRAINING MANAGEMENT, CERTIFICATE

**Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>ASI 1263</td>
<td>BASIC EQUITATION</td>
<td>3</td>
</tr>
<tr>
<td>ASI 1501</td>
<td>EQUINE SAFETY</td>
<td>1</td>
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<tr>
<td>ASI 1442</td>
<td>EQUINE PRACTICUM I</td>
<td>2</td>
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<tr>
<td>ASI 2442</td>
<td>EQUINE PRACTICUM II</td>
<td>2</td>
</tr>
<tr>
<td>ASI 2462</td>
<td>COLT STARTING</td>
<td>2</td>
</tr>
<tr>
<td>ASI 2363</td>
<td>INTERMEDIATE TRAINING</td>
<td>3</td>
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<tr>
<td>ASI 2463</td>
<td>ADVANCED PERFORMANCE TRAINING</td>
<td>3</td>
</tr>
<tr>
<td>ASI 2412</td>
<td>EQUINE MARKETING TECHNIQUES</td>
<td>2</td>
</tr>
</tbody>
</table>

Credit Hours Subtotal: 18

**AED 1023 INTERPERSONAL SKILLS FOR LEADERSHIP**

**Description:** Introduction to the principles and practices of positive interpersonal relationships for leadership development. Self-awareness, awareness of others, effective interpersonal communication, and the building of trust relationships as a basis for understanding and developing leadership. An experiential approach, field projects and a supervised service project.

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

**AED 1101 EARLY FIELD EXPERIENCE**

**Description:** Early Field Experience in AED (I II) Required of all Ag Ed Departmental majors. Observing and/or performance of professional skills in agricultural education, extension education, agribusiness, journalism, and leadership.

Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

### Agriculture Production Systems, Minor

Students with majors other than Agriculture Production Systems can earn a minor in Agriculture Production by meeting the requirements of their major, plus taking:

<table>
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<tr>
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<th>Credit Hours</th>
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<tr>
<td>AGR 1103</td>
<td>CROP SCIENCE</td>
<td>3</td>
</tr>
<tr>
<td>or ASI 1304</td>
<td>ANIMAL MANAGEMENT</td>
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</table>

Select 12 hours of Agriculture Production Systems courses 1

Total Credit Hours 15

1 VTS 1713 PHARMACY-ANESTHESIA and VTS 2733 DISEASES OF VET MED can be used as part of the required twelve hours.

### Beef Production Emphasis, CERTIFICATE

**Total Required Core Courses**

Complete requirements 6
AED 1103 INTRODUCTION TO SECONDARY AGRISCIENCE EDUCATION
Description: Required of all Ag Ed Departmental majors. Observing and/or performance of professional skills in agricultural education, journalism and leadership focusing on agribusiness, industry training positions, secondary agricultural education instruction, extension education, advertising, public relations, broadcasting, news-editorial and international agricultural education.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

AED 1233 PLANNING, LEADERSHIP AND EXPERIENTIAL PROGRAMS
Description: Theory of experiential education to middle school and secondary agricultural education programs, especially leadership and career education. Development of Supervised Ag Experience (SAE), Young Adult/Farmer, FFA and alumni activities, appropriate to the community, school and student needs using electronic technology in learning how to teach Nebraska's agricultural education financial management system. Students will learn the theory of experiential education with examples as development of an (SAE) Supervised Agricultural Experience, alumni activities and other community opportunities.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

AED 2103 YOUTH PROGRAMS
Description: This course is designed to take a deeper look at youth programs across the country such as 4-H, FFA, FCCLA and many others.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

AED 2503 LIVESTOCK PRACTICUM
Description: This course is designed to assist students learn how to care and manage livestock (SAE) Supervised Agriculture Experience projects. The students will have the opportunity to work cattle, sheep, swine and goats from selection to show.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 1001 SUCCESS IN ANIMAL SCIENCE
Description: This course will provide students the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities. It will help them as the transition to college and understand the components of being successful not only during this time, but within the industry. They will formulate life and career goals, skills for academic success, skills for life success, and learn more about NCTA. The impact of their success on the industry will also be at the forefront of discussion points within this course.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

ASI 1011 INTRO TO ANIMAL SCI
Description: A course that deals with current issues facing the livestock industry, production trends, terminology, animal growth, structure & selection, breeds, and development.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

ASI 1024 FUND OF ANIMAL BIO
Description: Fundamentals of animal biology as it applies to the science of livestock production. Biological principles governing production and consumption of animal products are emphasized in both lecture and laboratory sessions.
Credit Hours: 4
Max credits per semester: 4
Max credits per degree: 4
Grading Option: Graded

ASI 1031 RODEO SEMINAR
Description: A course for first year students designed to help the student practice all of the men's and women's National Intercollegiate Rodeo Association (NIRA) events. This course will be taught through actual practice, video review and guest lectures.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 6
Grading Option: Graded

ASI 1201 SHOOTING SPORTS
Description: The purpose of this class is to offer a variety of trap shooting programs, encompassing leisure recreation and competitive shooting, including leagues and/or collegiate competition while providing a social network for knowledge and training in the shooting sports. Students will learn firearm safety. Students will become familiar with different firearms, their purpose and mode of action. This class may provide opportunity to earn Nebraska hunter safety card.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

ASI 1202 FEEDLOT PRACTICUM I
Description: Feedlot Practicum I will be in coordination with the Feedlot Systems class. Students will assist with the responsibilities of taking are of the NCTA feedlot. Duties will include feeding the cattle, conducting dry matters on feed ingredients, performing feedlot pen maintenance, monitoring animal health, and maintaining the general appearance of the feed yard and working facilities. Students will work 5-10 hours a week depending upon the number of students signed up for the course.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded
ASI 1203 FEEDLOT SYSTEMS
Description: The main emphasis will be to discuss current trends, problems, or issues related to the feedlot industry. Each profit center of a feedlot will be studied through an internship with a local feedlot. The lab portion will include practical application of common health and processing procedures found in the feedlot industry. It will incorporate low-stress cattle handling, as well as safety procedures. (Pre req: ASI 1253 & ASI 1304)
Credit Hours: 3
Max credits per degree: 3
Grading Option: Graded

ASI 1213 LIVESTK & CARC EVAL
Description: This course is a comprehensive study of the evaluation of livestock, including beef, lamb, pork, and poultry, and their carcasses and products. This will include study of animal growth and development, measures of animal performance, and use of performance records for selection. Measures of carcass traits and monetary value as well as federal and industry product standards will be reviewed. The relationship to production economics will be considered for all selection processes.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 1222 ADV LVSTK EVAL/JUDG
Description: An advanced course in livestock evaluation and judging designed to apply principles learned in ASI 1213. This course will teach and develop written and oral communication skills that enable the student to convey in a brief, concise presentation the results of their decisions. Logical and systematic decision making will be taught. This class will involve extensive field trips to livestock producers and travel to national livestock exhibitions. The livestock judging team will be selected from this class to represent NCTA at intercollegiate competitions. (Pre req: ASI 1213 or instructor permission)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 1241 RANCH HORSE I
Description: A course for first-year students designed to help the student and their horse learn and practice the skills necessary to be successful in the Collegiate Division of the American Stock Horse Association (ASHA) which includes four events: Stock Horse Pleasure, Trail, Reining, and Working Cow Horse. NCTA was one of the founding institutions of the ASHA Collegiate Stock Horse Versatility Education Program which organizes many of the competitions for the year. Collegiate ASHA has three different rider skill levels which provide each student the opportunity to compete against others at the same skill level whether you are a beginning rider or an accomplished rider. NCTA has a limited number of school horses available by instructor approval. This course will be taught through actual practice, video review, and guest lecture/clinicians.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

ASI 1253 NUTRITION
Description: A study of water, carbohydrates, fat, protein, vitamins and minerals as they apply to animal utilization. Lab will include problems involving water, protein, and TDN in rations.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 1263 BASIC EQUITATION
Description: (Pre req: ASI 1501) This course is a study and application of basic equitation principles for the novice rider. Basic horse handling practices, safety issues, and adapting dressage maneuvers towards Western and English performance is emphasized.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 1302 FEEDLOT PRACTICUM II
Description: Feedlot Practicum II will be a course offered during the spring semester so as to keep the feed yard maintained and operating effectively. Students will assist with the responsibilities of taking care of the NCTA feedlot. Duties will include feeding the cattle, conducting dry matters on feed ingredients, performing feedlot pen maintenance, monitoring animal health, and maintaining the general appearance of the feed yard and working facilities. Students will work 5-10 hours a week depending upon the number of students signed up for the course.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 1304 ANIMAL MANAGEMENT
Description: A course that deals with current issues facing the livestock industry, production trends, terminology, animal growth, structure and selection, breeds and development. Upon completion of course, students should be able to do each of the following: 1. Outline the basic management of beef cattle, dairy cattle, poultry, swine, and sheep. 2. Describe how biological principles of animal production influence animal management decisions. 3. Study managerial problems and provide feasible solutions given specific resource limitations. 4. Within each livestock industry, explain how the principles of business, nutrition, reproduction, breeding, herd health, and marketing are interrelated.
Credit Hours: 4
Max credits per semester: 4
Max credits per degree: 4
Grading Option: Graded

ASI 1312 LIVESTOCK JUDGING I
Description: A continuation of ASI 1213. (Pre req: ASI 1213 and ASI 1222)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded
ASI 1341 RANCH HORSE II
**Description:** A course for second-year students designed to help the student and their horse practice and refine the skills necessary to be successful in the Collegiate Division of the American Stock Horse Association (ASHA) which includes four events: Stock Horse Pleasure, Trail, Reining, and Working Cow Horse. NCTA was one of the founding institutions of the ASHA Collegiate Stock Horse Versatility Education Program which organizes many of the competitions for the year. Collegiate ASHA has three different rider skill levels which provide each student the opportunity to compete against others at the same skill level whether you are a beginning rider or an accomplished rider. NCTA has a limited number of school horses available by instructor approval. This course will be taught through actual practice, video review, and guest lecture/clinicians.

**Credit Hours:** 1
**Max credits per semester:** 1
**Max credits per degree:** 1
**Grading Option:** Graded

ASI 1351 ART INSEM BEEF CATTLE
**Description:** This course trains individuals in the techniques of artificial insemination of cattle.

**Credit Hours:** 1
**Max credits per semester:** 1
**Max credits per degree:** 1
**Grading Option:** Graded

ASI 1412 MEAT EVALUATION I
**Description:** Meats Evaluation I will be an introductory course where students will learn the basics of meats evaluation so as to compete in the collegiate competition. Students will meet 2-3 times a week in the classroom as well as for field trips to harvest facilities. Meats evaluation, yield and quality grade determination, and the writing of reasons to back up evaluation decisions will all be aspects of this introductory class.

**Credit Hours:** 2
**Max credits per semester:** 2
**Max credits per degree:** 2
**Grading Option:** Graded

ASI 1432 EQUINE CARE
**Description:** A study of the working horse, emphasizing utilization in the feedlot. Health, nutrition, and proper care of equipment will be covered. Animal safety as well as safety of personnel in the feedlot, will be evaluated. Common lameness problems and hoof trimming will be covered.

**Credit Hours:** 2
**Max credits per semester:** 2
**Max credits per degree:** 2
**Grading Option:** Graded

ASI 1442 EQUINE PRACTICUM I
**Description:** This course will introduce first year Equine Industry Management students to hands-on equine activities of care, feeding, grooming, and barn management. Students enrolled in this course will work at the horse barn with the NCTA horses.

**Credit Hours:** 2
**Max credits per semester:** 2
**Max credits per degree:** 2
**Grading Option:** Graded

ASI 1501 EQUINE SAFETY
**Description:** This horsemanship safety class will help develop safe habits for horse and rider when on the ground and in the saddle. A format of lectures and actual hands-on handling of horses both on the ground and in the saddle will be used.

**Credit Hours:** 1
**Max credits per semester:** 1
**Max credits per degree:** 1
**Grading Option:** Graded

ASI 1752 RAISING POULTRY FOR PROFIT: SMALL-SCALE PRODUCTION
**Description:** An overview of small-scale poultry production for meat and eggs. Topics include species, breeds, management of young and mature birds, housing, pasturing, feeding, breeding, harvesting, food safety, basic health care, and marketing.

**Credit Hours:** 2
**Max credits per semester:** 2
**Max credits per degree:** 2
**Grading Option:** Graded

ASI 1991 INDEPENDENT STUDY
**Description:** Individual or group projects in research, literature review, or extension of course work under the supervision and evaluation of a Major faculty member who is willing and available to contract with the student. (Pre req: Approval of project by Instructor, Division Chair, and Advisor)

**Credit Hours:** 1
**Max credits per semester:** 1
**Max credits per degree:** 1
**Grading Option:** Graded

ASI 2031 RODEO SEMINAR
**Description:** A course for second year students designed to help the student practice all of the men’s and women’s National Intercollegiate Rodeo Association (NIRA) events. This course will involve actual practice and video tape review.

**Credit Hours:** 1
**Max credits per semester:** 1
**Max credits per degree:** 6
**Grading Option:** Graded

ASI 2203 FEEDS & FEEDING
**Description:** The study of feedstuffs, feed processing, and feed additives. Lab will include feed evaluation, moisture determination and conversion, feed tag interpretation, ration evaluation, and balancing. (Pre req: ASI 1253 recommended)

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

ASI 2303 RANGE MANAGEMENT
**Description:** A study of pasture and range management as it applies to the production system. This class includes the identification of common range plants, and range sites along with determination of range condition from a plant survey. Balanced forage systems are studied including native range, introduced grass pastures, irrigated grass pastures, and the use of annual grasses and crop residues in livestock forage systems.

**Credit Hours:** 3
**Max credits per semester:** 3
**Max credits per degree:** 3
**Grading Option:** Graded
ASI 2312 LIVESTOCK JUDGING II
Description: A continuation of ASI 1312. (Pre req: ASI 1312)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2313 RATION FORMULATION
Description: A continuation of Feeds and Feeding with an emphasis on ration balancing for specific classes of cattle and swine. Computer ration balancing will be used. (Pre req: ASI 1253, ASI 2203, AIT 1053 or permission)
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2332 LIVESTOCK JUDGING III
Description: A continuation of ASI 2312. (Pre req: ASI 2312)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2353 LIVESTOCK BREEDING
Description: A course in the principles of genetics and hereditary characteristics applied to livestock production, including production records, selection, and design of mating systems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2362 ADVANCED EQUITATION
Description: This class addresses the study and application of equine and rider maneuvers basic to performance excellence. Students will be expected to show satisfactory progress toward standards of excellence in Western and English disciplines. (Pre req: ASI 1263 or permission, limited enrollment)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2363 INTERMEDIATE TRAINING
Description: Students will acquire skills in intermediate horsemanship (including equitation and training techniques) and green-breaking. Students, with the aid of the instructor, will set and achieve individual objectives.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2383 LARGE ANIMAL DISEASES
Description: Large Animal Diseases and Pharmacology is an upper level course designed to increase student knowledge in disease identification and treatment strategies. Students will learn about the basics of immunology, disease diagnosis and treatment, and herd health and biosecurity plan construction. There is also component to this course to provide students the opportunity to engage and observe necropsy in various species. Pre req: ASI 1304 Animal Management and one nutrition based course or permission.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2403 MONITORING TECHNIQUES AND DATA COLLECTION
Description: This course emphasizes the importance of keeping accurate range production records and how to gather, store and utilize data. It also, includes an in-depth use of current monitoring techniques used to gather data on rangelands.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2412 EQUINE MARKETING TECHNIQUES
Description: This class is designed to give students the experience of creating a sale from start to finish. It includes working with horses to creating the sale catalog.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2433 EQUINE INDUS MNGT I
Description: A study of the light horse production with emphasis on nutrition, reproduction, management, and principle usage of light horses. Courses such as horse production, Equine care, Advertising and Merchandising opens doors to a variety of careers in the horse industry.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2442 EQUINE PRACTICUM II
Description: This course will introduce second year Equine Industry Management students to hands-on equine activities of care, feeding, grooming, and supervisory barn management. Students enrolled in this course will work at the horse barn with the NCTA horses.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2443 EQUINE INDUS MNGT II
Description: This course of study is designed for students who wish to pursue a career in horse production. The curriculum involves both classroom and applied study primarily aimed at the production aspect of the horse industry. At the end of the program students will be tested to demonstrate competencies needed for success in the chosen area of horse production.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded
ASI 2453 SEEDSTOCK PREPARATION AND MARKETING
Description: This course is designed for students to develop the skills of marketing seedstock such as cattle, sheep, and swine. Students will learn various methods of preparing seedstock for live/video auctions. The student will have hands on experience of preparing livestock for sale.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2462 COLT STARTING
Description: This is an application in basic colt starting principles for the advanced rider. Basic young horse handling practices and safety issues will be studied and applied. (By Permission)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2463 ADVANCED PERFORMANCE TRAINING
Description: Students will acquire skills in the correction of bad habits and advanced training techniques leading toward an area of specialization. Students, with the aid of the instructor, will set and achieve individual objectives.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2512 MEATS EVALUATION II
Description: Meats Evaluation II will be a more focused course to prepare students for meat evaluation competition. This is when more difficult meat evaluation contests take place, so students will continue to meet 2-3 times a week in the classroom as well as for field trips to harvest facilities. Meats evaluation, yield and quality grade determination, and the writing of reason to back up evaluation decisions will all be aspects of this class, where material covered will build upon what was taught in Meats Evaluation I.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

ASI 2513 MEAT SCIENCE
Description: (Pre req: ASI 1304) This course covers physical and chemical aspects associated with structure and composition of meat. Conversion of muscle to meat and principles relative to fresh and processed meats, storage, microbiology, palatability, and nutritive values will be discussed in depth. Hormonal influence on growth, development, and final product will also be covered.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2523 MUSCLE BIOLOGY
Description: This course will provide an advanced education in understanding the muscles and the biology surrounding the muscles of livestock species for the purpose of providing high quality carcasses.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2503 LIVESTOCK ANATOMY AND PHYSIOLOGY
Description: Livestock Anatomy and Physiology is a combined lecture and laboratory course dealing with the anatomy and physiology of common domestic livestock. The course studies basic tissues utilizing a systems approach to the organs of the body. Also a review of basic cellular biology with the intent of applying it to individual organ tissues is covered.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2604 LIVSTCK ANAT & PHYSO
Description: Livestock Anatomy and Physiology is a combined lecture and laboratory course dealing with the anatomy and physiology of common domestic livestock. The course studies basic tissues utilizing a systems approach to the organs of the body. Also a review of basic cellular biology with the intent of applying it to individual organ tissues is covered.
Credit Hours: 4
Max credits per semester: 4
Max credits per degree: 4
Grading Option: Graded

ASI 2611 EQUINE REPRODUCTION I
Description: A study of the anatomy ad physiology of the stallion and mare, the hormones of reproduction, and breeding systems and methods, including artificial insemination. The student will also be introduced to breeding farm management. The student will also be introduced to breeding farm management. This is a lecture based, eight week focused course. There is no lab component withASI 2611.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded

ASI 2621 EQUINE REPRODUCTION II
Description: (Pre req: ASI 2611 Equine Reproduction I) A study and application of anatomy and physiology of the stallion and mare, the hormones of reproduction, and breeding systems and methods, including artificial insemination. In this course a variety of skills are studied and practiced, including such things as utilizing breeding instruments, preparing and conducting stall-side lab diagnostics, the AI process, care of the stallion, mare, and foal, as well as making sound breeding decisions.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Graded
ASI 2753 BEEF PRODUCTION SYSTEMS
Description: (Recommended pre req: ASI 1253 & ASI 2203) The economics, breeds, selection, nutrition, breeding and management of beef cattle. About 20% of the course will be lab.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2773 ADVANCED REPRODUCTIVE PHYSIOLOGY
Description: (Pre req: Anatomy & Physiology w/ 70%; Animal Management; Al of Beef Cattle.) The objective of this course is to promote an understanding of reproductive processes in domestic animals. The students will understand the processes of reproduction in the various livestock species.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

ASI 2864 NEBR RANCH PRACTICUM
Description: The Nebraska Ranch Practicum is a three-season, hands on educational program designed to give the participants the skill and education needed in today’s complex ranching industry. This unique class consists of eight, day long sessions, from June through January held at the West Central Research and Extension Center in North Platte and the Gudmundsen Sandhills Laboratory near Whitman, Nebraska. Students must register for this class as well as apply and be accepted into the program. This application is available at www.panhandle.unl.edu/ranchpracticum. (Pre req: Advisor permission only)
Credit Hours: 4
Max credits per semester: 4
Max credits per degree: 4
Grading Option: Graded

ASI 2906 INTERNSHIP
Description: The internship provides job experience in your field of study at an approved work location. Official agreements are entered into between the student, employer, and the college. Full-time employment for 2 weeks is equivalent to 1 credit hour. A written journal plus an oral presentation required upon returning from internship. (Pre req: Approval by Division Chair)
Credit Hours: 6
Max credits per semester: 6
Max credits per degree: 6
Grading Option: Pass No Pass

ASI 2992 INDEPENDENT STUDY
Description: Individual or group projects in research, literature review or extension of course work under the supervision and evaluation of a Major faculty member who is willing and available to contract with the student. The student will present his/ her independent study proposal to the Major Division Chair and faculty for their approval. (Pre req: Approval of project by Instructor, Division Chair, and Advisor)
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Grading Option: Graded

Program Outcomes
1. Students will be able to effectively communicate in oral and written form.
2. Students will be able to gather, assimilate and process information to reach sound logical conclusions.
3. Students will be able to apply economic principles of accounting, marketing and budgeting to agricultural enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study.
   - Students will be knowledgeable in the areas of modern livestock husbandry and management practices.
6. Learning outcomes specific to transfer options.
   - Students will demonstrate a basic knowledge in the areas of biology, chemistry, mathematics, and oral/written communication along with a basic understanding of agriculture consistent with standards set for baccalaureate degrees.

Equine Industry Management
- Students will be knowledgeable in the areas of modern livestock husbandry and management practices.

Livestock Industry Management
- Students will be knowledgeable in the areas of modern livestock husbandry and management practices.

Associate of Science Degree Transfer
Learning outcomes specific to APS transfer options.
- Students will demonstrate a basic knowledge in the areas of biology, chemistry, mathematics, and oral/written communication along with a basic understanding of agriculture consistent with standards set for baccalaureate degrees.