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# NEBRASKA COLLEGE OF TECHNICAL AGRICULTURE

Welcome to the 2021-22 Course Catalog for the Nebraska College of Technical Agriculture!

Throughout a vibrant 108-year history, our Aggie family of faculty and staff here in Curtis has greeted generations of students to this welcoming, rural campus. Together, we have forged common bonds and expansive opportunities in an educational community. You will realize this enrichment too!

When you begin classes in the fall of 2021, there will be a lot of things happening on campus – new technology, new faces, new construction, and landscaping. We all look forward to welcoming YOU to campus for the beginning of your Aggie experience. NCTA is where your passion becomes a career.

On behalf of Associate Dean Jennifer McConville and our NCTA faculty, I extend a hearty note of appreciation to each Aggie student. Thank you for making NCTA your choice for higher learning. You will find a warm, friendly, and fun atmosphere in Curtis and Frontier County!

Our NCTA Course Catalog is the in-depth guide for each facet of your student experience. From understanding campus policies and curriculum, to knowing the year's schedule of events, locating listings of academic divisions and courses, or finding the ideal student club or organization to join, all these resources are detailed in this easy-to use electronic format.

No more thumbing through hundreds of pages in a thick catalog. It's all right here, easily searchable and accessible. Please refer to your online catalog throughout the year.

Our Student Services team members in admissions, residence life, registration, advising, and recruiting are all on board to assist you with whatever you need. Student success is #1 at NCTA!

It is important to rely on your advisors to help you navigate your courses to ensure that you successfully fulfill your requirements for graduation. They want to get to know and understand your goals. Faculty advisors can best prepare you on your career path into the workforce. Their expertise is invaluable for advanced national boards or certifying exams, or as you transition into pursuit of a 4-year or higher degree program. Stay in contact with them.

While you are in our historic Ag Hall for classes, picking up a parking pass or perhaps securing campus employment at the business office, please stop by the Dean's Office Suite on Second Floor and say hello. We look forward to welcoming you to campus and meeting you in person.

Larry Gossen, Ph.D., NCTA Dean  
Jennifer McConville, Associate Dean

## Academic Calendar

### 2021-2022 Academic Calendar

\*\*CALENDAR IS SUBJECT TO CHANGE

#### August

23 Late Registration Begins (\$24 late Fee Assessed)

23	First Semester Classes Begin
27	Last day to enroll in fall classes
31	Last day to drop a full semester course and receive a 100% refund

#### September

3	Last day to drop a full semester course and receive a 75% refund
3	Last day to drop to remove a course from student's record
4	4 All course withdrawals noted with a grade of "W" on academic record
6	LABOR DAY (Student and Staff Holiday- NCTA Offices Closed)
10	Last day to drop a full semester course and receive a 50% refund
12	Last day to submit tuition and fees payment without penalty
17	Last day to drop a full semester course and receive a 25% refund - No refund after this date
30	Last day to DROP first 8-week course

#### October

15	FIRST 8-WEEK FINAL EXAMS
15	First 8-week session ends
18-19	FALL BREAK (Student Holiday- NCTA Offices Open)
20	Second 8-Week Session Begins

#### November

8	Registration Begins for Spring Semester 2022
19	Last day to DROP second 8-week and 16-week courses
24	STUDENT HOLIDAY (NCTA Offices Open)
24-25	THANKSGIVING VACATION (NCTA Offices Closed)
30	May/August Degree Applications Due

#### December

10	LAST DAY OF FALL CLASSES
13-16	FIRST SEMESTER FINAL EXAMS
15	END OF FALL SEMESTER (Student Holiday Break Begins)
24 1/2	HOLIDAY CLOSE DOWN (NCTA Offices Closed)

#### January

3	NCTA Opens from Holiday Close down
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10	Second Semester Classes Begin
10	Late Registration Begins (\$25 late registration fee assessed)
14	Last day to enroll in spring classes
17	MARTIN LUTHER KING JR. DAY (Student and Staff Holiday – NCTA Offices Closed)
18	Last day to drop a full semester course and receive a 100% refund
21	Last day to drop a full semester course and receive a 75% refund
21	Last day to file a drop to remove a course from student's record
22	All course withdrawals noted with a grade of "W" on academic record (through 4/13)
28	Last day to drop a full semester course and receive a 50% refund

## February

4	Last day to drop a full semester course and receive a 25% refund – No refund after this date
12	Last day to submit tuition and fees payment without penalty
18	Last day to DROP first 8-week course

## March

4	FIRST 8-WEEK FINAL EXAMS
4	First 8-Week Session Ends
7	Registration Begins for Summer Session 2022
8	Second 8-Week Session Begins
14-18	SPRING BREAK (STUDENT HOLIDAY – NCTA Offices Open)

## April

8	Registration Begins for Fall Semester 2022
13	Last day to DROP second 8-week and 16-week courses
27	LAST DAY OF SPRING CLASSES
28-29	SECOND SEMESTER FINALS

## May

2-3	SECOND SEMESTER FINALS
5	End of Spring Semester
5	COMMENCEMENT!
9	Summer Intercession Begins
15	December Degree Applications Due
27	Summer Intercession Ends
31	MEMORIAL DAY (NCTA Offices Closed)

## June

13	Summer Session Begins
16	Last day to drop a summer session course and receive a 100% refund
17	Last day to drop a summer session course and receive a 75% refund
24	Last day to drop a summer session course and receive a 50% refund

## July

1	Last day to drop a summer session course and receive a 25% refund – No refund after this date
4	INDEPENDENCE DAY HOLIDAY (NCTA Offices Closed)
22	Last day to DROP an 8-Week summer session course

## August

5	Summer Session Ends
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## General Information

*This is a Course Catalog for the Nebraska College of Technical Agriculture (NCTA). This catalog will serve as a reference during your time at NCTA. We hope the information contained will provide answers to your questions about NCTA.*

## Vision

The Nebraska College of Technical Agriculture will foster a student-centered learning environment with a national reputation for producing graduates who are in high demand by agriculture and related industries.

## Mission

The Nebraska College of Technical Agriculture is devoted to a statewide mission of preparing students for successful careers in agriculture, veterinary technology and related industries. The college provides open access to innovative technical education resulting in associate degrees, certificates and other credentials.

## Key Characteristics

- Nationally recognized education at the associate degree level
- Competitive academic and experiential teams
- Practical, career-applied, experiential education activities
- Tuition is low cost and equal for all
- Programs relevant to successful job attainment with competitive wages
- Interaction and support from agricultural industries and employers
- Dedicated faculty and staff
- Low student-to-faculty ratio
- Accessible technology, land and animal resources for hands-on learning
- Close working relationship with the Nebraska Extension, UNL Institute of Agriculture and Natural Resources (IANR) and the College of Agricultural Sciences and Natural Resources (CASNR)

## Facilities

The Nebraska College of Technical Agriculture occupies a 72-acre campus which adjoins the town of Curtis on the northeast. The facilities include Agriculture Hall (which houses the Associate Dean's and Dean's Offices, Business Office, Agribusiness Management Systems Division, General Education Division, a computer laboratory, and classrooms). The Livestock Teaching Center, completed in 2000, includes livestock classrooms, lab facilities and an arena with a 700-person seating capacity; the Education Center houses the Welcome Center, an auditorium, state of the art laboratories, a computer lab, Agronomy Office, along with Student Services Office including ADA/504 Counselor, Admissions, Recruitment, and Residence Life. Other buildings on campus include three permanent residence halls; a cafeteria; a deli, the Student Union/Activities Center; the Fitness Center, the Learning Resource Center; a Horticulture Systems complex (including two greenhouses, and a classroom building), an Agriculture Equipment complex (which includes two large equipment labs, a small engine lab, a welding lab, irrigation lab, and buildings for classroom, painting, storage and maintenance use); and a Veterinary Technology Teaching and Laboratory Complex. A total of 200,000 square feet of instructional classroom and laboratory space is utilized in the educational majors.

The college also operates a 562 acre farm which serves as a field laboratory. The farm includes grain storage facilities, cattle growing and finishing facilities, and a completely diversified dry land and irrigated farming operation.

## Accreditation

The Nebraska College of Technical Agriculture has been granted accreditation with the Higher Learning Commission. The American Veterinary Medical Association accredits the Veterinary Technology program. In addition, the College is approved to offer courses and majors for veterans benefits and training under the War Orphans Act.

The Higher Learning Commission  
30 North LaSalle St., Suite 2400  
Chicago, IL 60602-2504  
800-621-7440

## Location

The Nebraska College of Technical Agriculture is located in the community of Curtis with a population of approximately 800 people on the gentle rolling plains of southwest Nebraska, in the northwest part of Frontier County. Curtis is located 8 miles east of Highway 83 between the cities of North Platte and McCook. The trade area population is approximately 3,500. The Curtis area is primarily agricultural, devoted to the production of corn, wheat, milo, and livestock.

## Computing at NCTA

Information Systems at the Nebraska College of Technical Agriculture provides easy access for the large variety of campus users. Currently, the campus has three main computer labs and a smaller computer lab in each of the three dorms, comprised of PC systems of various speeds. All systems are capable of multimedia and are running Windows.

Most faculty on campus use laptop computers extensively in the classroom teaching environment. Most classrooms are equipped with multimedia data projectors that are implemented in virtually every class. Most faculty use Canvas to distribute notes, lectures and assignments. All faculty and staff can be issued an e-mail address.

Networking on campus consists of a 100/1000 Mbps Ethernet network. Most locations on campus have access to a "wireless" connection. The wireless network is available to all faculty, staff and students on campus with the proper equipment and online registration. The network has a high-speed link off campus providing firewalled access to the Internet and Internet2.

The Computer Usage Policy for NCTA and the University of Nebraska is available upon asking Information Systems personnel and is also printed in the Student Handbook.

## Catalog

The catalog should not be considered a contract between the Nebraska College of Technical Agriculture and any prospective student. The Nebraska College of Technical Agriculture reserves the right (without notice) to make changes in graduation requirements, costs, curriculum, course structure and content, the calendar of operations, and college personnel during the life of the catalog.

This college catalog will be in effect beginning with the 2021-22 academic year. Students should keep this catalog for referral throughout their academic career.

In accordance with the Family Education Rights and Privacy Act of 1974, NCTA may disclose public/directory information from the education records of a student who is in attendance at NCTA. Also, the student has the right to refuse to permit NCTA to disclose directory information. If a student wishes to have all public/directory information excluded as public information, the student must notify, in writing, the Registrar's Office no later than September 3.

The Nebraska College of Technical Agriculture does not discriminate in its academic, admissions or employment policies and abides by all federal and state regulations. NCTA is an affirmative action/equal opportunity institution. NCTA is in compliance with the Americans with Disabilities Act.

## Policies Information

### Student's Right to Know

In compliance with the Department of Education's Student Right-to-Know Act, all colleges and universities receiving Title IV funds are required to report various points of information to students, employees and prospective students.

The Student Right-to-Know Act requires an institution that participates in any federal student financial assistance program to disclose information about graduation or completion rates to current and prospective students. <https://ncta.unl.edu/housing-and-campus-life> (<https://ncta.unl.edu/housing-and-campus-life/>)

The following data is provided to fulfill the General Disclosure requirements relating to completion of graduation. Collection of data began in 1990 and is current through 2016. The Completion or Graduation Rate in 2019 for students who entered the Nebraska College of Technical Agriculture in 2012, on a full-time basis, was 64%.

### Clery Act

The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (commonly known as the Clery Act) is federal legislation designed to provide students, prospective students, and the public with uniform information from universities throughout the country

on criminal problems and police and security issues. This brochure meets all reporting requirements as set forth in the Clery Act. Criminal statistics are updated by October 1 of each year.

### **Crime Awareness and Campus Security Act of 1990**

Campus security and safety is an important factor of postsecondary education. The Crime Awareness and Campus Security Act of 1990 (<http://ncta.unl.edu/faculty-staff-resources> (<http://ncta.unl.edu/faculty-staff-resources/>)) is a federal law that requires colleges and universities to disclose information about campus crime and security policies. Colleges and universities that are eligible to receive Title IV funding must publish an annual report by October 1. The report must contain three years of crime statistics in various categories.

### **Student's Rights and Responsibilities**

In all cases, the Nebraska College of Technical Agriculture is included as part of the University of Nebraska and is under the control of the Board of Regents of the University of Nebraska.

### **Equal Educational Opportunity**

The Nebraska College of Technical Agriculture affirms its policy of administering all educational programs, related support services and benefits in a manner that does not unfairly discriminate on the basis of a student's or prospective student's race, age, color, disability, religion, sex, sexual orientation, ethnic origin, marital status, or veteran status for admission, academic performance and conduct in accordance with policies, rules and laws applicable to student conduct.

The Board of Regents Bylaws, Chapter 5, contains a series of policies entitled "Responsibilities and Rights of Students." A number of those policies are contained in this section, with others being incorporated into other applicable sections.

### **Statement of Responsibility**

All members of the academic community have the responsibility to create and support an educational environment, which will achieve the basic purposes of NCTA. Each member of the community should be treated with respect and dignity. Each has the right to learn. This right imposes a duty not to infringe upon the rights of others. The academic community should assure its members those opportunities, protections and privileges, which provide the best climate for learning. (Board of Regents-BOR Bylaws, Section 5.0)

### **Publicity of Rules Affecting Students**

NCTA shall publicize and keep current all rules, regulations and policies concerning students and ensure that they are readily available to all students and other interested persons. (BOR Bylaws, Section 5.2)

### **Admissions and Continued Enrollment Criteria**

NCTA shall publish the criteria for admission, academic progress, certificates and degrees for all programs of the Nebraska College of Technical Agriculture. Admission to NCTA and the privileges of the students shall not be denied to any person because of age, sex, race, color, national origin, or religious or political belief. (BOR Bylaws, Section 5.2)

## **Academic Evaluation**

The faculty members determine the character of the courses, which includes the content, instructional and grading procedures. Students shall be informed of the requirements, standards, objectives and evaluation procedures at the beginning of each individual course. Instructors should be available on a regular basis for consultation with students. Each student shall be given an unbiased evaluation of his/her performance and the specified grading procedure during the progress of the course, if requested. A student has the right to ask for clarification of the basis for his/her grade.

NCTA shall provide a faculty-student appeals committee for students who believe that evaluation of their academic progress has been prejudiced or capricious. Such procedure shall provide for changing of a student's evaluation upon the committee's finding that an academic evaluation by a member of the faculty has been improper. The procedure for this process is described under "Grade Appeals". (BOR Bylaws, Section 5.3)

## **Course Evaluation**

Students can contribute significantly to the evaluation of instruction. The faculty has the obligation to solicit student evaluation of its educational efforts and to make changes in accordance with its best judgment. To assist the faculty in the task of providing the best possible education, NCTA has a standing procedure through which students have an opportunity to report their perceptions of courses and the methods by which they are being taught. This procedure, however, shall protect members of the faculty from capricious and uninformed judgments. (BOR Bylaws, Section 5.3)

## **Statements on Student Learning and Improvement - Philosophy of Student Learning Assessment**

The Nebraska College of Technical Agriculture believes that the college can influence how well and how much students learn. As an institution of higher learning, the mission of the Nebraska College of Technical Agriculture "is dedicated to the development of innovative individuals for the agriculture industry and related science."

Academic assessment provides systemic, routine processes that allow the faculty and students to determine the degree that students are achieving the stated student learning outcomes. The following questions guide the assessment process.

1. How are students learning?
2. Are our students learning?
3. How much are students learning?
4. To what extent are students learning?

## **Student Records: Including Family Educational Rights & Privacy Act Annual Notice to Students**

The Nebraska College of Technical Agriculture complies fully with the Family Educational Rights and Privacy Act of 1974, as amended. This Act was designed to protect the privacy of education records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings. Students also have the right to

file complaints with the Family Educational Rights and Privacy Act Office concerning alleged failures by the institution to comply with the act.

## Kind of Information Maintained

Academic, behavioral, and “public directory” information is maintained on all enrolled students. Grade transcripts and files of graduates and withdrawn students are kept in the Registrar’s Office.

## Normal Access to Files

Access of non-public or non-directory information is granted to faculty and support staff personnel only for purposes related to their educational function and/or job responsibilities. Any access other than to the student or as mentioned above, is allowed only by written consent of the student.

When a student provides written consent for release of information to another college, business, or agency, the university office or department complying with the request will notify the college, business, or agency involved that it may not pass on the information obtained to the third party without the further consent of the student.

NCTA reserves the right to deny copies of records, including transcripts, not required to be made available by FERPA in any of the following situations:

- The student has unpaid financial obligations to the College.
- There is an unresolved disciplinary action against the student.
- The education record requested is an exam or set of standardized test questions. (An exam or standardized test which is not directly related to a student is not an educational record subject to FERPA’s access provisions.) Students who wish to gain access to their files should contact the Registrar’s Office.

## How to Obtain NCTA Transcripts

**Official Transcripts:** Submit your transcript request(s) online at <https://marketplace.unl.edu/ncta/transcript-request.html>. The cost of an official transcript is \$5 per transcript. Payment is made with a credit or debit card as part of the transcript request process.

**Unofficial Transcripts:** Log into your MyNCTA portal at <https://myncta.nebraska.edu>, then select the “Academics” tab, then “Unofficial Transcript”. Click on the “Transcript Type” dropdown and choose NCTA Unofficial Transcript, then “View Report” (blue button). From there you can print the unofficial transcript.

**Student transcripts and records are maintained in compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA).** Any release of non-directory student information to anyone but the students must be authorized, in writing, by the student.

## Challenge Procedures

Students who wish to challenge the accuracy of any document contained within a cumulative file should contact the director of the office which maintains that file. The director will hear the student’s reasons for the challenge and attempt to informally resolve or arbitrate any contested points or issues. If an informal disposition cannot be made, the student has the right to a hearing before an impartial board duly established for such purpose. Students desiring a hearing should contact the appropriate director to:

1. Request a hearing,
2. Establish a hearing date, and
3. Obtain copies of the hearing board’s rules or procedures.

## Public or Directory Information

The University of Nebraska/NCTA defines the following student information as public directory information.

- Student’s name
- Local address
- Permanent address
- Telephone numbers
- Year at NCTA
- Dates of attendance
- Major field of study
- Enrollment status (full-time, part-time)
- Participation in officially recognized activities and sports
- Weight and height of member of athletic teams
- Degrees, honors and awards received
- Previous educational institution attended

Students are advised that information other than public or directory information may be released in emergency or life-threatening situations.

Directory information will be available to the public upon request and may be included in student directories published electronically and in hard copy.

## Nondiscrimination Policy

The University of Nebraska-Nebraska College of Technical Agriculture (NCTA) is committed to creating a diverse and inclusive work and learning environment free from discrimination and harassment. NCTA is dedicated to creating an environment where everyone feels valued, respected and included. NCTA does not discriminate on the basis of race, ethnicity, color, national origin, sex (including pregnancy), religion, age, disability, sexual orientation, gender identity, genetic information, veterans status, marital status, and/or political affiliation in its programs, activities and employment. NCTA complies with all local, state and federal laws prohibiting discrimination, including Title IX, which prohibits discrimination on the basis of sex.

Students on each campus of the University of Nebraska shall be admitted and (shall) enjoy the programs and privileges of the University without regard to individual characteristics other than qualifications for admission, academic performance, and conduct in accordance with University policies and rules and law as applicable to student conduct.

This policy is enforced by the Nebraska College of Technical Agriculture in regards to the federal laws under Title IX of the Educational Amendment of 1972, Title VI of the Civil Rights Act of 1964, and section 504 of the Rehabilitation Act of 1973. Inquiries regarding compliance with these statutes may be directed to the Affirmative Action Office, c/o Office of the Chancellor, 308 Administration Building, University of Nebraska–Lincoln, telephone: 402-472-3417 or to the Director of the Office for Civil Rights, Department of Health, Education and Welfare, Washington D.C.

The following persons have been designated to handle inquiries regarding non-discrimination policies:

### Title IX or Discrimination Inquiries:

NCTA is dedicated to the prevention of sexual discrimination, sexual harassment and sexual misconduct, and providing a safe campus for its employees and students. If you have any concerns contact:

Jennifer McConville, Title IX Coordinator and Associate Dean for Finance, Operations and Student Services; 404 E. 7th; Curtis, NE; (308) 367-5259; jmconville2@unl.edu

### Disability or Discrimination Inquiries:

Kevin Martin, ADA/504 Compliance Coordinator; 404 E. 7th; Curtis, NE; (308) 367-5217; kmartin4@unl.edu

**Student Discrimination Grievance Procedures.** Any student with a grievance regarding discrimination on the NCTA campus by campus personnel should present the grievance to the Student Services Office. If the grievance is not resolved, it will be forwarded to the NCTA Title IX Committee for review. The Title IX Committee will conduct a complete investigation and recommend appropriate actions to be taken to the administration for NCTA.

**American Disabilities Act.** Qualified persons entering the NCTA campus, should come to the north side of the Agricultural Education Center. We encourage you to call 308-367-5217 in advance to assure personal help is available on arrival.

### NCTA Clean Air Policy

NO TOBACCO PRODUCTS MAY BE USED IN FACILITIES OR VEHICLES OF THE UNIVERSITY OF NEBRASKA EXCEPT AS SPECIFICALLY DELINEATED BELOW.

Use of tobacco products on the grounds of NCTA is allowed as long as such use is not within close proximity (defined as within 10 feet) of any facility or work site. All residence halls are smoke free.

Free consultations and information are available through Student Health Services which is located at the Curtis Medical Center for those students who wish to stop smoking.

Noncompliance with these provisions will be managed in accordance with existing personnel guidelines.

### University Of Nebraska Harassment Policy

**The University of Nebraska reaffirms that all women and men - students, staff, faculty and administrators - are to be treated fairly and equally with dignity and respect.** Any form of sexual harassment is prohibited. Sexual harassment is unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic standing.
2. Submission to, or rejection of, such conduct by an individual is used as the basis for employment decisions or academic decisions affecting such individuals, or
3. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working/academic environment

Questions about the filing of grievance are to be directed to:

Office of the Associate Dean  
Room 25 Ag Hall  
404 East 7th Street  
Curtis, NE 69025  
Phone: 308-367-5200

### NCTA Bullying Policy

The Nebraska College of Technical Agriculture is a community which encourages the intellectual and emotional growth of its members. We respect the contributions, perspectives and personal worth of all students, staff and faculty. In our interactions with each other, we demonstrate respect and support. As a result, behaviors perceived as bullying or harassment are not tolerated at NCTA.

*Bullying or harassing behavior* is defined as any pattern of gestures or written, electronic or verbal communications, or any physical act or any threatening communication, or any act reasonably perceived as being motivated by any actual or perceived differentiating characteristic, that takes place on any property owned or controlled by Nebraska College of Technical Agriculture, or during any activity in whatever place sponsored by, directed or controlled by Nebraska College of Technical Agriculture, and that also fulfills one of the following conditions:

- Places a student, faculty or staff member in actual and reasonable fear of harm to his or her person or damage to his or her property
- Creates or is certain to create a hostile environment by substantially interfering with or impairing a student's educational performance, opportunities or benefits

A *hostile environment* is defined as the condition wherein the victim subjectively views the conduct as bullying or harassing behavior and the conduct is objectively severe or pervasive enough that a reasonable person would agree it is bullying or harassing behavior.

It is the policy of NCTA that no student, faculty or staff member will be subjected to bullying or harassing behavior by any other student, faculty or staff member. Furthermore, no person should engage in any act of reprisal or retaliation against a victim, witness or anyone with information about an act of bullying or harassing behavior.

Any witness to bullying on campus is asked to report the instance to a suitable party. A *suitable party* is defined as a person with responsibility to prevent bullying or harassing behavior within or during a particular activity, class, building or function. In the case of a student being subjected to bullying or harassing behavior, a suitable party might be an instructor, residence hall staff or a counselor. In the case of a faculty or staff member being subjected to bullying or harassing behavior, a suitable party might be a dean, academic chair or a superior. It is the responsibility of the suitable party to follow up when receiving a report of bullying or harassing behavior.

Procedures for investigating reports of bullying or harassing behavior which involve students may be found in section R-20 in the Student Handbook. Procedures for investigating reports of bullying or harassing behavior involving employees may be found in college policy, board policy or other pertinent documents. The Dean's Office or the Human Resources office can provide assistance to employees wishing to initiate investigations of bullying or harassing actions against college employees.

### Affirmative Action/Equal Opportunity Policy

It is the policy of the University of Nebraska and the Nebraska College of Technical Agriculture, Curtis, Nebraska not to discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation in its educational programs, admissions policies, employment policies, financial aid, or other college administered programs. This policy is enforced by federal law under Title IX of the Education Amendments of 1972, Title VI of the Civil Rights

Act of 1964, and Section 504 of the Rehabilitation Act of 1973. Inquiries regarding compliance with these statutes may be directed:

#### **Title IX/Discrimination/Conduct**

Jennifer McConville  
Associate Dean  
404 E. 7<sup>th</sup>  
Curtis, NE 69025  
308-367-5259

#### **Student Disability or 504 Inquiries:**

Kevin Martin  
ADA/504 Compliance Coordinator  
404 E. 7<sup>th</sup>  
Curtis, NE 69025  
308-367-5217

#### **Employee Disability or Discrimination Inquiries:**

Becky Carter  
HR Specialist  
402-472-5893  
becky.carter@unl.edu

#### **University of Nebraska-Lincoln Office for Equity Access and Diversity Programs**

128 Administration Building  
Lincoln, NE 68588  
Telephone (402) 472-3417 or to the Director of the Civil Rights, Department of Health, Education and Welfare, Washington, D.C. All course offerings listed in this publication are contingent on approval of budget and adequate enrollment. The Nebraska College of Technical Agriculture reserves the right to change the information and regulations included in this catalog.

## **Insurance**

NCTA strives to provide a safe environment for its students, however, due to the inherent dangers associated with agriculture, students are encouraged to obtain adequate health and life insurance while attending NCTA.

## **Faculty/Staff Resources**

### **Parking Services**

Employees and students parking on the NCTA campus must purchase a parking permit annually every August with the start of the school year by completing the vehicle registration form.

Students with permits are allowed to park in the student designated parking areas only, not in the faculty/staff or employee parking areas. Faculty/Staff/Employee parking areas require a permit, which is different from the student permits.

A permit is required for each vehicle parked on campus (if you have 2 vehicles, you will need 2 permits).

Parking permits are the property of the University of Nebraska – NCTA and are issued to a specific individual. Ownership is not transferable. By obtaining a parking permit, the permit holder agrees to become familiar with and abide by the rules and regulations.

Please remove any previous year's permits. Vehicles will be ticketed without a valid parking permit.

Parking violations are issued, if you park in an undesignated area. Parking fines are \$25.00 payable in the Facilities Office in Ag Hall #22.

Upon receiving a violation, you have 15 days to pay. If the violation is not paid in 15 days, a hold is placed on the student's MyNCTA account. Holds prevent a student from registering for classes and/or checking out at the end of a semester. A hold can also prevent a student from participating in extra-curricular activities. You have 5 days to appeal the violation in writing to NCTA Parking Services (Facilities Office) with justification for overturning the violation. Within five days of your written appeal the NCTA Parking Services will send you a letter as to why or why not your appeal was granted. Please include the citation number on all correspondence.

In accordance with UNL-NCTA Parking Services policy, the following reasons are considered as frivolous and not valid as a basis for appeal:

- Lack of knowledge of the regulations, for example, new to campus or have not reviewed regulations;
- Other vehicles were parked improperly;
- Only parked illegally for a short period of time;
- Stated failure of parking officer to ticket previously for similar offenses;
- Late to class or appointment;
- Inability to pay the amount of the fine;
- No other place to park.

Permit holders are urged to protect their permits from theft by locking their vehicles. If a permit is lost or stolen, you are required to report the loss to the NCTA Facilities Office, in person, immediately. At that time a free temporary permit will be issued for two weeks. If the permit is not located within those two weeks, you will be required to purchase a new permit at the current price of the permit. If the original permit is recovered, the replacement fee will be refunded. The use of any unauthorized, stolen, counterfeit, altered, or reproduced permit will result in confiscation of the permit, revocation of parking privileges for one calendar year, a fine of \$50 and a report filed with the NCTA Dean.

## **Admissions Information**

### **Admission Requirements**

A high school diploma or the equivalent and the ACT/SAT, Accuplacer (Compass), or Asset assessment test are required for entrance into the Nebraska College of Technical Agriculture (NCTA). In order for you to be officially accepted without provision, you must submit a complete official high school transcript of grades or the equivalent and your test scores.

If you are accepted with a provision, the absent information must be submitted within your first semester or session on campus or you will be dismissed at the end of that semester or session.

### **Application Procedures**

To enroll at Nebraska College of Technical Agriculture:

1. Complete the online Application for Admission and pay the \$45.00 nonrefundable application fee, or submit a waiver.
2. Applicants must request that all FINAL official high school and/or college transcripts be sent to the Student Services Office.

Mail to:

**Nebraska College of Technical Agriculture**  
Office of Student Services  
404 East 7th Street



Curtis, NE 69025-9502

3. All students who attend the Nebraska College of Technical Agriculture are required to take the Asset, Accuplacer (Compass), ACT or SAT assessment test. Test scores are used for scholarships, advising, and guidance purposes. The college's ACT identification number is 2458.
4. Students are required to complete and submit the NCTA Health form along with required immunizations before attending classes.
5. Students should apply as early as possible to assure admittance to the major and classes of their choice.
6. Part-Time Students in High School:
  - a. Must be a high school junior or senior.
  - b. Obtain the recommendation of your high school principal or guidance counselor.
  - c. Apply online.

## International Application Procedures

<https://ncta.unl.edu/ncta-global> (<https://ncta.unl.edu/ncta-global/>)

1. Pay your fee and verify funds. The application fee and verification of funds need to be sent to NCTA by the following deadlines:
  - March 1 for Fall admittance
  - September 1 for Spring admittance
  - January 1 for Summer admittance

Please mail (Via postal service) all official documents to:

**NCTA Office of International Admissions**  
404 E 7th St  
Curtis, NE 69025

All students are required to demonstrate financial ability to pay for at least one year of academic and living expenses before being issued an immigration document (I-20).

All supporting financial documents must be in English or accompanied by a notarized English translation showing available liquidable funds. The financial documents cannot be older than three months at the time of submission to Nebraska College of Technical Agriculture in order to be considered valid. Appropriate documents reflecting financial ability include, but are not limited to, the following:

- A certified copy of your passport, or government issued photo ID.
- Bank Letter, stamped and signed by a bank official, and specifies the date, monetary currency, and name of the account holder.
- Signed letter from the U.S. Government, Home Government, International Organization, Company, or Employer on government or organizational letterhead specifying dates, amount, monetary currency, and terms of sponsorship.
- An individual sponsor who is not a U.S. citizen, U.S. Permanent Resident, or non-immigrant legally present in the U.S., must sign the CFIS Form and attach supporting financial documents.
- An individual sponsor who is a U.S. citizen, U.S. Permanent Resident, or non-immigrant legally present in the U.S., must submit a completed I-134 Affidavit of Support Form with supporting financial documents.

*Please note that these supporting financial documents will also be required at the U.S. Embassy or Consulate when you apply for your visa.*

2. Apply for admissions.

You will apply online at this website: <http://ncta.unl.edu/apply-global-students> (<http://ncta.unl.edu/apply-global-students/>).

During this process, you will:

- Set up your NUID number. It is important that you retain this NUID number for registration and enrollment. Registration and enrollment will happen in later steps of your admission to NCTA.
  - Submit official secondary school transcripts, which will be verified by NCTA.
  - Verify that your deposit has been paid.
  - Submit your TOEFL or IELTS scores. Students with a TOEFL score of 90 or above, or IELTS score of 6.0 with writing score of 5.5, will not be required to attend an English training program.
3. After your application is completed and your documents have been certified, you will receive a letter of acceptance.
  4. Set up your interview with the US Consulate to start I-20 paperwork.
  5. You will receive admissions information, including the following:
    - Instructions on MyNCTA
    - Release information (pictures, articles, etc.)
    - NCTA Policies
    - Orientation dates and times
    - WiFi instructions
    - Information on dorm rooms and dining services
    - Room assignments
    - Meal plan information

## Campus Visitors

You may schedule a tour online (<https://nctaunl.wufoo.com/forms/m1mlynr1juosnq/>). (<http://ncta.unl.edu/visit-ncta/>) Prospective students and any other interested people are invited and encouraged to visit the Nebraska College of Technical Agriculture Monday through Thursday at 10:30 a.m. or 1:30 p.m. Tours during the summer months may vary. For more information contact Linda Cole, 308-367-5240 or [lcole1@unl.edu](mailto:lcole1@unl.edu).

## Fees Information

### Financial Obligations

It is the responsibility of students to satisfy all financial obligations to NCTA. Failure by a student to pay a financial obligation to the University or to any department, division, or agency thereof, will result in denial of readmission, denial of transcripts, denial of registration for ensuing terms, and withholding of diplomas, and in addition, may result in dismissal and/or denial of grade reports, until such debt be paid in full. (RP-5.3.1)

## Student Fees

The student's on-line MyNCTA (<https://myncta.nebraska.edu/>) account will electronically notify with the email provided that the tuition and fees billing has been generated. It is the responsibility of each student to monitor their account and notify appropriate parties having payment responsibility. The "Activity Since Last Monthly Statement" screen will allow daily monitoring but a consolidated statement will be available by the 25th of each month. Payment deadlines are always the 12th of the month following the bill date.

A student must contract for both room and board at double occupancy rates unless conditions are met to waive. Room and board reservation

requires a \$250 security deposit to be held by NCTA until all conditions have been met. The room and board charges will be due in accordance to the above monthly billing schedule.

All fees and other charges may be changed at any time by the Board of Regents of the University of Nebraska.

### 2021-2022 Tuition

Nebraska Resident per credit hour	\$139.00
Non-Resident per credit hour	\$139.00
Dual Credit	\$69.50

### Fees

Academic/Student fee (per semester) Per Credit Hour	\$20.50
Registration Fee for Course Enrollment Per Semester	\$20

### Special Fees

Continuing Ed Course	\$25
Delivery Fee (per credit, if needed, up to \$25)	
Graduation Fee	\$25
Application Fee	\$45
Parking Permit (Annual: Administration, Faculty, Staff, Students)	\$20
Textbooks (average cost per semester)	\$500
Transcript Fee	\$5

## Financial Assistance

Financial assistance information is available through the Office of Financial Aid at 308-367-5207 or by emailing [nctafinancialaid@unl.edu](mailto:nctafinancialaid@unl.edu).

If you are or will be receiving financial assistance, it is important for you to carefully read the following Satisfactory Academic Progress Policy:

### Satisfactory Academic Progress Policy

Nebraska College of Technical Agriculture is required by federal regulations to establish a Satisfactory Academic Progress (SAP) policy students must meet to be eligible or maintain eligibility for federal and state financial aid. This includes but is not limited to grants, loans and federal work study. There are three components to the Satisfactory Academic Progress Policy which are:

1. pace
2. grades
3. time frame

These are monitored each semester.

#### Pace

A student must be making progress through his/her educational program at a pace of 67% or higher. Pace is calculated by dividing the cumulative number of successfully completed credit hours by the cumulative number of attempted credit hours. Credit hours that will not count as successfully completed include letter grades of F (Fail), I (Incomplete), NP (No Pass), W (Withdrawal), AU (Audit) or NR (Not Reported). A student that is able

to have one of the above listed grades changed to a grade of D or higher should contact the Financial Aid office to see if the change impacts the pace calculation. A repeat class will be funded only the second time taken provided the student is meeting the SAP policy.

### Grades

A student must maintain a minimum grade point average depending on the number of credit hours attempted:

- 1 through 17 credit hours: Cumulative Grade Point Average 1.5 or higher
- 18 through 35 credit hours: Cumulative Grade Point Average 1.75 or higher
- 36 and above credit hours: Cumulative Grade Point Average 2.0 or higher

### Time Frame

Students are permitted to receive financial aid only until the total number of credit hours attempted equals 150% of the length of his/her program. (see program descriptions in the NCTA course catalog) For a 76 credit program, the total allowed credit hours attempted would be  $76 \times 150\% = 114$  hrs. Transfer hours count toward the total number of credit hours attempted. A second course of study must also fall within this 150% time frame in order to receive federal financial aid.

### Warning

A student will be placed on financial aid warning for one semester if he/she fails to maintain the required cumulative GPA and/or fails to meet the 67% pace requirement. All aid will be paid during the warning semester. If standards are not met at the end of the warning semester, all aid will be suspended until eligibility is re-established.

### Suspension

A student will be placed on financial aid suspension and receive no federal or state financial aid if he/she fails to meet the Satisfactory Academic Progress requirements at the end of the warning semester.

### Regaining Eligibility after Suspension

A student that has had financial aid eligibility suspended has two options for regaining his/her eligibility:

1. A student may qualify for reinstatement of financial aid eligibility by enrolling at his/her own expense. A student must bring his/her cumulative GPA back to the level necessary for the number of hours attempted and bring his/her pace up to the 67% to meet the minimum requirements of the Satisfactory Academic Progress policy.
2. A student may appeal his/her financial aid suspension if extenuating circumstances (death of a relative, injury or illness of the student, or other special circumstances) exist. A Satisfactory Academic Progress Appeal form should be completed and must include supporting documentation of the extenuating circumstances. Examples: Letters from health providers, copies of medical bills showing health provider visits, or any other statements or documentation to support the extenuating circumstance that prevented the student from making satisfactory progress. Also include information about what has changed in the student's situation that would allow him/her to demonstrate satisfactory academic progress at the next evaluation.

If the Appeals Committee approves the appeal, the student is placed on Financial Aid Probation for the subsequent semester of enrollment. At the end of Financial Aid Probation, the student must meet the Satisfactory Academic Progress standards or meet the expectations of the Academic

Plan the Appeals Committee established to continue receiving financial aid.

## Planning and Assistance

In planning to attend the Nebraska College of Technical Agriculture, a student should expect the following typical expense items for each semester: tuition and general fees, room, board, books and supplies. In addition, allowances should be added to these figures for personal expenses, transportation and extra charges for special curriculums (such as Veterinary Technology lab jackets, supplies, and higher book costs, etc.) The Financial Aid Office will consider the total costs for attendance, including the items listed above, when making a financial aid commitment.

## Procedures for Applying for Financial Aid

To apply for all need-based financial assistance (Federal Pell Grant, Federal Supplemental Education Opportunity Grants (FSEOGs), Nebraska Opportunity Grant (NOG), Federal Student Loans, or Work Study), you and your parents must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA may be filed electronically at [www.fafsa.gov](http://www.fafsa.gov).

To avoid any delays in processing your FAFSA, please follow these helpful hints:

- File your tax returns electronically.
- File the FAFSA using IRS data retrieval process (IRS data will be available two weeks after filing your tax return electronically).
- Complete your FAFSA as soon as possible after October 1.
- Read the instructions carefully.
- Always use your correct Social Security number. Your Social Security number is the primary means of identifying your records.
- Designate the Nebraska College of Technical Agriculture as a recipient of the information on your FAFSA (federal school code is 007358).

After applying, regularly check your MyNCTA.[nebraska.edu](https://myncata.nebraska.edu) (<https://myncata.nebraska.edu/>) account for awards and requests of additional documents. Respond quickly and accurately to any requests for additional information. Some of the financial aid that is available will only be available to students who apply and submit any necessary documentation early in the award process. Notice of Awards and Acceptance will be found on MyNCTA after the verification process has been completed.

## Refund Policy

The Higher Education Amendments of 1998 state that when a student receives Title IV, HEA program funds to attend an institution and subsequently withdraws, drops out, or otherwise fails to complete the period of enrollment for which he or she was charged, ***the institution is required to make a refund of "unearned tuition, fees, room and board and other charges" assessed the student by the institution.*** Federal regulations require that the Student Services Office and Financial Aid Office determine the last day of attendance for all students who do not officially withdraw from the college. If the last date of attendance is not reported for each student, the law stipulates the mid-point of the payment period be used as the drop date, which could result in a substantial aid repayment penalty for the student.

The amount of Title IV grant and loan assistance the ***student must repay*** is calculated by determining the complement of the percentage

of assistance the student earned and applying it to the total amount of grant and loan assistance that was disbursed to the student for the period of enrollment as of the day the student withdrew. A printed example of the application of the refund policy is available upon request.

Title IV funds returned by the school or student are credited to outstanding Title IV loan balances for the student. If excess funds remain after repaying all outstanding loan amounts, the remaining amount is credited to grant programs beginning with the Pell Grant. It is NCTA's policy that a portion of the funds that it is required to return to comply with Title IV requirements may be charged back to the students for unpaid services payable to NCTA.

For students who withdraw from college before the end of each session, tuition fees and housing charges will be refunded based upon the following schedule:

Room and Board refunds are based on a 16-Week session.

## Withdrawal Time, Percentage of Tuition and Fees Refunded

16 Week Sessions (Fall and Spring Semesters)	
1st Week	100%
2nd Week	75%
3rd Week	50%
4th Week	25%
No refund after the end of the 4th week	
8 Week Session	
Prorated	
Summer Session	
1st Week	Prorated
No refund after the end of the 2nd week	

## Rehabilitation Benefits

Anyone 16 years of age or over with a permanent disability may be eligible for benefits if schooling will allow him/her to become employable within a reasonable length of time. Financial assistance provided may include cost of living expenses, books, tuition, and transportation during training. Further information may be obtained from your local State Department of Education, Division of Rehabilitation Services.

We strongly encourage students to work closely with rehabilitation counselors and have them maintain contact with the students' academic advisors.

## Selective Service Registration

Federal Law requires young men to register with the Selective Service System at any U.S. Post Office, or on-line. Young men are to register sometime during the period beginning 120 days prior to their 18th birthday until 30 days after their 18th birthday. No financial aid may be awarded until this requirement is met.

## Sources of Financial Assistance

- Federal Pell Grants
- Campus-Based Programs
  - Federal Supplemental Education Opportunity Grants (FSEOGs)
  - Federal Work Study (FWS)

- NOG – Nebraska Opportunity Grant
- Federal Perkins Loans
- Federal Direct Loans
  - Federal Subsidized Stafford Loans
  - Federal Unsubsidized Stafford Loans
  - Federal PLUS Loans

Grants (Pell Grants, FSEOG's, and NOG's) do not have to be repaid; loans (Perkins Loans, Federal Direct Loans, and PLUS loans) must be repaid. FWS provides students with income from part-time jobs. Federal Pell Grants are awarded through strict rules set by the Department. If a student is eligible on the basis of these rules, an eligible school pays the student his or her Federal Pell Grant using federal funds.

For the campus-based programs, the Department funds participating schools annually at a specified level. The school then awards these funds to students following federal guidelines. When those funds are spent, no more campus-based aid is available at that school. Therefore, the earlier an eligible student applies, the more likely he or she is to receive campus-based aid.

1. Perkins Loan - The Federal Perkins Loan Program provides long-term, low interest loans to students with established financial need. The maximum amount a student can receive is \$5,500 per year. Interest starts accumulating at the rate of 5% annually nine months after you leave college, repayment begins 12 months after you leave college. You may be allowed up to 10 years to repay the loan. NCTA, however, has a limited amount of Federal Perkins Loan money so eligible students must apply early to receive these funds.
2. Federal Direct Stafford Loans – There are two types of Federal Direct Stafford Loans – Subsidized and Unsubsidized. A student qualifies for a Federal Direct Subsidized Stafford Loan based on financial need, as determined under federal regulations. A student's need is not a factor in determining eligibility for a Federal Direct Unsubsidized Stafford Loan. It is possible for a student to have a Direct Subsidized and Direct Unsubsidized Stafford Loan for the same award year. A student can borrow a combination of loans based on the cost of education minus other financial aid up to maximum annual loan limits and/or cost of education. **Important** – Federal Direct Unsubsidized Stafford loans have many of the same terms and conditions as the Federal Direct Subsidized Stafford Loan (i.e., loan limits, origination/insurance fees, and deferments). However students are responsible for the interest during in-school, grace and deferment periods. Interest accruing during those periods may be paid or capitalized as agreed to by the borrower and the servicer.
3. Federal Direct PLUS Loans – The Federal Direct PLUS Loan Program assists eligible parents in meeting educational expenses. The Federal Direct PLUS Loan allows parents to borrow up to the cost of attendance minus other resources. The U.S. Department of Education is the lender and delivers the loan money to you through NCTA. Students must be attending school at least half-time to be eligible. PLEASE NOTE: Federal Direct PLUS Loan funds are applied ahead of all other financial aid funds your student may receive, regardless of when the PLUS Loan funds are applied.

## Scholarships

The Nebraska College of Technical Agriculture (NCTA) is committed to assisting current and potential students achieve their educational goals by offering scholarships that help pay for tuition, books and school related expenses. With the support of generous donors, scholarships can range from \$100 to \$2,500. To be eligible for scholarships students must

be accepted and enrolled as a student at NCTA. Monies received in the form of scholarships do not have to be repaid.

To be considered for a scholarship at the Nebraska College of Technical Agriculture a student must:

- Have a 2.5 CGPA (most scholarships require a 2.5 or higher)
- Complete the admissions process
- Take the ACT or SAT and have the scores sent to NCTA.

## Student Employment

Federal Work Study (FWS) - provides federal funds for work opportunities for students. To be eligible for this program, you must demonstrate financial need. By submitting a Free Application For Federal Student Aid (FAFSA) you will automatically be considered for FWS.

Part-time Employment - NCTA and surrounding area businesses (including farm and ranch operations) offer some part-time employment to students. Interested students should inquire at the NCTA Business Office.

## Veterans BENEFITS

NCTA cooperates with the Veterans Administration in providing for the education of veterans under United States Code. Veterans interested in utilizing benefits at NCTA should:

1. Contact NCTA's Veteran Certifying Official to inform them of intention to use VA benefits.
2. Apply for admission to NCTA and submit copies of your DD 214 form (discharge from active duty) if applicable.
3. Complete an "Application for Education Benefits" (VONAPP) at [www.benefits.va.gov/gibill/](http://www.benefits.va.gov/gibill/) (<http://www.benefits.va.gov/gibill/>) as soon as you are admitted.
4. Submit your NOBE (Notice of Basic Eligibility) form when received.
5. In order to receive monthly benefits, you must enroll in classes and report your NCTA enrollment to the NCTA VA Certifying Official prior to each semester and/or summer session you wish to receive benefits. The official will not assume that you want to receive benefits for any given term.
6. It is the responsibility of the VA student to notify the Certifying Official of any changes in the program such as changes in classes each semester, dropping individual classes, withdrawal from school, or the addition of classes. This must be done in writing on the appropriate form obtained from the certifying official.
7. A veteran and/or eligible person must make satisfactory progress toward an approved educational objective leading to employment. Veteran and/or eligible person Standard of Progress is determined utilizing the Satisfactory Academic Progress policy as listed in the college catalog consisting of overall grade point average, pace, program length, maximum time for completion, attendance and conduct.
8. To qualify as a full-time student in an associate degree program, veterans must take a minimum of 12 credit hours each semester, 9 hours for three-quarter time and 6 hours for one-half time.
9. If you are a veteran who previously received benefits at another institution, you must complete a "Request for Change of Place of Training" (VA Form 22-1995) and return it to the NCTA VA Certifying Official.

## Nebraska College of Technical Agriculture (NCTA) Chapter 31 (Vocational Rehabilitation) or Chapter 33 (Post 9/11 GI Bill®) Benefits Policy

A Covered Individual is any individual who is entitled to educational assistance under Chapter 31 or Chapter 33. Any Covered Individual is permitted to attend or participate in the course of education during the period beginning on the date on which the individual (under Chapter 33) or the VA Case Manager (under Chapter 31) provides a certificate of eligibility for entitlement to NCTA and ending on the earlier of the following dates:

1. The date on which payment from the VA is made to NCTA,
2. 90 days after the date NCTA certified tuition and fees following the receipt of the certificate of eligibility.

NCTA will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a Covered Individual borrow additional funds, on any Covered Individual because of the individual's inability to meet his or her financial obligations to the institution due to the delayed disbursement of funding from the Department of Veterans Affairs under Chapter 31 or 33.

Additionally, this requirement is limited to the portion of funds paid directly to NCTA by the VA.

For more information please visit: [https://benefits.va.gov/gibill/fgib/transition\\_act.asp#](https://benefits.va.gov/gibill/fgib/transition_act.asp#) ([https://urldefense.proofpoint.com/v2/url/?u=https-3A\\_\\_benefits.va.gov\\_gibill\\_fgib\\_transition-5Fact.asp-23&d=DwMFAG&c=Cu5g146wZdoqVuKp1NsYHeFX\\_rgokWhkLF8Eft-ww0&r=Emqz1f94MswVIKEV8vqC-g&m=2-VobJSbswoltUJeITbE62ZyOA8BCUY2\\_Fe19RPOdr8&s=6qKoIAdDgK539eV6MjVHLJEJYa7CCTrpfw1h9mKJ8&e=](https://urldefense.proofpoint.com/v2/url/?u=https-3A__benefits.va.gov_gibill_fgib_transition-5Fact.asp-23&d=DwMFAG&c=Cu5g146wZdoqVuKp1NsYHeFX_rgokWhkLF8Eft-ww0&r=Emqz1f94MswVIKEV8vqC-g&m=2-VobJSbswoltUJeITbE62ZyOA8BCUY2_Fe19RPOdr8&s=6qKoIAdDgK539eV6MjVHLJEJYa7CCTrpfw1h9mKJ8&e=))

## Academic Information

### Academic Bankruptcy

Academic Bankruptcy is available to NCTA students who have a GPA or CGPA of less than a 2.0 and have completed no more than two academic semesters.

To apply for Academic Bankruptcy, the following conditions must be met:

1. Prior to or by the end of the first week of a semester or summer session, an application for Academic Bankruptcy must be submitted to a committee consisting of the Academic Lead, the previous major Advisor and the new major Advisor if changing majors, or a faculty member from the major the student is enrolled in.
2. Following the Academic Bankruptcy application, all grades for the semester/session in which a student is enrolled for a minimum of 12 credit hours must be a 2.0 or above. If this requirement is met, all grades that are less than a 2.0 will be removed from grade consideration. If this requirement is not met, the student's grades will not be removed from grade consideration. Application for Academic Bankruptcy does not have any effect on eligibility for financial aid. All students on financial aid must continue to meet the "Standards of Progress".

### Academic Responsibility

Students are expected to be honest in all aspects of their college work.

The University of Nebraska Undergraduate Bulletin states: "The maintenance of academic honesty is a vital concern of the university community. Any student found guilty of academic dishonesty shall

be subject to both academic and disciplinary sanctions." Academic dishonesty includes, but it is not limited to the following:

- Cheating
- Fabrication and Falsification
- Plagiarism
- Abuse of Academic Materials
- Complicity in Academic Dishonesty
- Falsifying Grade Reports
- Misrepresentation to Avoid Academic Work

Academic judgments about a student's work (including questions of cheating) are the responsibility of the instructor. Normally, disagreements are resolved by means of the conference between the student and instructor. However, if a student feels (s)he is treated unjustly, (s)he can take their case to their Academic Lead (if the Academic Lead should be his/her instructor, (s)he may then present his/her case to the Chair of the Academic Council). The instructor must inform the student of this right. The student may make a further appeal to the NCTA Dean if (s)he is not satisfied with the Academic Lead's and Academic Council's responses.

One or more violations involving cheating may be cause for the student to be placed on probation or dismissed from college.

## Academic Standards

### Probation, Dismissal, and Withdrawal

**Good Academic Standing:** A cumulative grade point average (CGPA) of 2.000 or greater

**Academic Probation:** A temporary status due to low academic grades. Improvement in academic grades is needed for continued enrollment. A student is placed on probation due to one of the following conditions:

- Semester or Cumulative GPA is lower than 2.000
- Conditionally admitted as a transfer or new freshman
- Readmitted after leaving while on probation or when dismissed for academic reasons

**Academic Dismissal:** Termination of enrollment due to one of the following conditions:

- Semester GPA and Cumulative GPA is less than 2.000 at the end of two successive semesters.

If a student earns a 2.500 or higher GPA in the 2nd semester of Academic Probation, but the cumulative GPA is below 2.00 for 2 successive semesters, the student will be granted an additional or third semester on Academic Probation.

### Readmission Application Timeline Following Dismissal:

- One semester must lapse if academically dismissed.
- Two years must lapse if academically dismissed, readmitted, and failed a second time to earn the required grade point average.

**Appeal Process to Dismissal:** If circumstances were so unusual and out-of-the-ordinary that academic performance was significantly and temporarily impacted, the dismissal decision may be appealed. The appeal process is handled by the Associate Dean.

## Adding a Class

Students are encouraged to meet with their advisors and register for classes on MyNCTA (<https://myncta.nebraska.edu/>) prior to the start of the semester. Students may add classes before the semester starts and during the first week of a semester or session. However, students cannot register for classes until after financial obligations are satisfied.

Students may not add classes after the first week of each semester with the following exceptions:

1. For classes listed in the *Class Schedule* or *Schedule of Classes* as starting after the first week of the semester, students may register for the class during the first week of the class with permission of the instructor. Registering for a class after the official start of the semester may prevent students from receiving financial aid for that class.
2. In rare instances, an advisor may admit a student up until the end of the second week of the semester with written authorization of the Dean or Associate Dean. This exception is reserved to incidents of extreme hardship.

After adding a class, students are encouraged to check their MyNCTA (<https://myncta.nebraska.edu/>) account to determine the impact of the additional class on the student's financial obligation.

## Student Attendance Policy

Class attendance and participation is a primary requirement for success as a college student. Therefore, NCTA students are strongly encouraged to attend all classes. However, absence may occur under certain circumstances. The purpose of this policy is to outline procedures for addressing classroom absence.

### Absence for Approved College Activities

NCTA students are often presented with the opportunity to participate in approved college activities (hereafter referred to as "enrichment activities") which conflict with regularly scheduled classes. Examples of enrichment activities include field trips, attendance at special college lectures, and participation on college teams such as the crops judging team, the ranch horse team or the livestock judging team. Participation in enrichment activities is an important part of an NCTA education and it is one of the primary attributes that differentiates an NCTA education from that received at a more traditional lecture-based college.

Students are encouraged to participate in college sponsored enrichment activities, however they need to integrate these activities with the requirements of regularly scheduled classes. NCTA faculty understand the value of enrichment activities and accommodate reasonable student absence for participation in approved activities. Students participating in college sponsored enrichment activities which conflict with regular class hours may be excused from the classes they miss if certain conditions are met. However, the very nature of some classroom activities will not allow makeups even if the absence is excused. When a class and an approved enrichment activity create a time conflict, students may choose to attend the enrichment activity or to attend classes on the day of an enrichment activity.

To determine the impact of missing class to participate in enrichment activities, refer to your course syllabus for the attendance policy of each professor. Before missing class, students are required to visit with faculty about coursework they will miss. It is the student's responsibility to obtain assignments prior to the arranged absence. The student needs to inform faculty at least one week in advance before their absence. Faculty

is encouraged to accommodate the needs of students participating in college sponsored enrichment activities. At the discretion of the instructor, permission may or may not be given to make up missed class work and/or tests.

When faculty plan enrichment activities which may take a student out of a regularly scheduled class, faculty are responsible for alerting the campus, generally via email, to identify which students will be participating in the enrichment activity. If some students don't attend on the day of the activity, it's the responsibility of the faculty member to alert other faculty about this lack of attendance in a timely manner.

### Absence for Illness

Students with a contagious disease should not attend class. Students with serious illnesses will be excused from class activities after appropriate documentation is conveyed to faculty. When students are well enough to attend class, they should do so. Students are encouraged to discuss makeup procedures with faculty as soon as possible after the onset of the illness.

The Curtis Medical Center is available to NCTA students for the evaluation and treatment of illness. When scheduling appointments at the Curtis Medical Center, avoid scheduling a visit during a time which conflicts with your class schedule. If a visit to the Curtis Medical Center must be scheduled at a time that conflicts with class, students should secure a note from the Medical Center and deliver that note to faculty teaching the missed class. NCTA Student Attendance Policy July 2016

### Impact of Absence on Financial Aid

Missing class can affect financial aid. When students stop attending classes at NCTA, federal regulations require that the Office of Student Services and Financial Aid determine the last day of attendance for all students who do not officially withdraw from the college. If the last date of attendance is not reported for each student, the law stipulates that mid-point for that semester be used as the drop date, which could result in a substantial financial aid repayment penalty for the student.

### Leave of Absence

For unusual circumstances, a temporary leave of absence may be obtained. To receive authorization for a leave of absence due to illness, students will need to secure a written statement from the doctor as supporting documentation. A leave of absence does not relieve a student from meeting all course requirements. Refer to the Leave of Absence Request form found on the Common X: NCTA FORMS/STUDENT SERVICES FORMS

## Audit Registration

Students desiring to attend a course without taking examinations or receiving credit for the course may register in an audit status with permission of the course instructor and their advisor. Students who register for an audit course will pay all regular fees.

Students may change from audit to credit or credit to audit with permission of the course instructor and their advisor only within the first week of the session.

Students auditing a course will receive no credit and a grade of AU (Audit) will be noted on the transcript for the course.

Students receiving financial aid or veteran's benefits cannot count audited courses in determining course load.

## Certificate Program

The certificate programs vary in required credit hours.

All students enrolled in a certificate program must abide by NCTA's academic standards and the Standards of Progress for financial aid.

## Code of Conduct

Students are expected to conduct themselves as adults and responsible law-abiding citizens at all times. Misconduct either in college or off campus may result in students being officially warned, placed on probation, suspended or asked to leave college. Misconduct off campus which brings discredit to the college will be justification for probation and/or expulsion. As part of the student's conduct, reasonable cleanliness and appropriate dress is required.

## Commencement, Degrees and Certificates

An Associate of Applied Science Degree, Associate of Science Degree or Certificate is granted to students who meet all prescribed requirements. These include passing grades in each required course, having completed the minimum semester credit hours required for the major they are enrolled in, successful internship and a minimum accumulated average grade of 2.0 (C).

Students who expect to receive a degree or certificate must file an "Application for Degree" in the Office of Student Services according to the following criteria:

Completing Degree requirements in:

May	December 1
August	December 1
December	October 1st

All accounts must be paid in full, with no current or pending disciplinary actions and/or other necessities associated with commencement. A \$25 nonrefundable degree application fee must accompany the application for the degree. The fee applies only to the term marked on the application and is not transferable to another term. Caps and gowns are purchased from The Welcome Center.

## Course Repeats

If a student repeats a course in an effort to improve his/her level of competency, both grades will appear on the transcript, but only the grade received the second time is used in calculation of the accumulative GPA. This does not apply to courses with grades of a C (2.0) or above.

## NCTA Grade Table

Letter	Range	Points	Letter	Range	Points
A+	100.0 - 100.0	4.00	C+	73.3 - 76.3	2.33
A	90.0 - 99.9	4.00	C	70.0 - 73.3	2.00
A-	86.7 - 90.0	3.67	C-	66.7 - 70.0	1.67
B+	83.3 - 86.7	3.33	D+	63.3 - 66.7	1.33
B	80.0 - 83.3	3.00	D	60.0 - 63.3	1.00
B-	76.3 - 80.0	2.67	F	00.0 - 60.0	0.00

## Credit Hours

The maximum credit hour load a student can take per semester is 18 hours with a maximum credit hour overload of 21 with permission from their advisor.

## Credit Transfer

### Incoming Students

Those students who have had post-secondary education prior to attending the Nebraska College of Technical Agriculture may request that their transcripts be reviewed. This review is to determine if prior education may be used in meeting a student's NCTA degree requirements. In all cases, evaluations must be initiated by the student and each will be made on an individual basis. Inquiries on credit transfer are to be made to the incoming student's advisor. A minimum grade of 2.0 (C) is required on any course for which transfer credit is requested (only credit hours, not grades are transferred). Transferred credit has no effect on a student's NCTA grade point average.

NCTA maintains structures or practices that ensure the coherence and quality of the programs for which it awards a degree. Typically NCTA requires that, at minimum, 15 credits for the associate's degree be awarded at the college. Exceptions may be granted for approved arrangements with other accredited institutions, or through contractual relationships approved by the Higher Learning Commission.

## Dean's List and Honor Roll

At the end of the fall and spring semester, students who have shown outstanding academic achievement are placed on the Dean's List or Dean's Honor Roll based on the following criteria:

**Dean's List:** (a student must meet all of the following criteria)

- Earn a semester GPA of 4.00
- Complete a minimum of 12 credit hours, 9 of which must be letter graded (A), (NO P/F)
- Have no final grade of an I (incomplete)

**Dean's Honor Roll:** (a student must meet all of the following criteria)

- Earn a minimum semester GPA of 3.50
- Complete a minimum of 12 credit hours, 9 of which must be letter graded (A, B, C). (NO P/F)
- Have no final grades of D, F, or I (incomplete)

## Dropping a Class

During the 8-week modular semesters and/or 16-week semester, a student may drop a course on MyNCTA (<https://myncta.nebraska.edu/>) up until the last drop period. If the course is dropped during the first week of the session, the dropped course will not appear on the student's academic record.

If a student withdraws from a class after the first week and prior to the last drop period, a "W" will be recorded...no credit given...and the credit(s) will not be averaged into the student's GPA. No withdrawals will be allowed after the last drop period, which is two weeks before the start of finals.

Students withdrawing from ALL classes must drop their classes on MyNCTA (<https://myncta.nebraska.edu/>) and complete the check-out form from the Student Services Office. The same withdrawal policy for

dropping a course, as mentioned above, will be followed. A student may not withdraw from a course after the course has ended.

## Financial Obligations

It is the responsibility of the student to satisfy all financial obligations to NCTA before class enrollment can be completed, prior to release of records, and upon application for a degree. All fees and other charges may be changed at any time by the Board of Regents of the University of Nebraska.

## Grades

Grades of I (Incomplete), W (Withdrawal), N (No Pass, for P/NP course), AU (Audit), and P (Pass, for P/NP course) are not assigned grade points and therefore are not used in computation of a student's grade point average.

Students are given the opportunity and encouraged to discuss their grades with their Academic Lead/Advisor and/or their instructors.

## Grade Appeals

The NCTA Academic Council hears appeals from students on grades received within all college programs. The committee will hear such appeals, however, only after the student has followed the process listed.

- Appealed without satisfaction to the course instructor.
- Notified the Academic Lead, then the Associate Dean of the circumstances and filed an appeal with each.
- The student is to provide to the Academic Council a written statement stating the grounds of the appeal. Both the student and the course instructor will be given an opportunity to present materials to the NCTA Academic Council in the presence of each other.
- A student will have 30 days following the beginning of the next session to protest a posted grade from the previous session. If no protest is received the grade will stand. After that time any grade change will need to be approved by the Academic Council. This does not apply to Incompletes.

## Grade Point Average (GPA) Computation

Grade point averages are computed for each term and accumulated for the duration of attendance. Credit hours accepted for transfer from another institution are excluded in grade average computations. Withdrawals from courses resulting in a "W" and "I" are disregarded in the grade point average computations. All grades resulting in failure ("F") are used in computing averages.

## Holds/Service Indicators

Academic and administrative offices can place holds on your registration which prevent registering or changing your registration schedule. Holds are placed for a variety of reasons (academic, financial, etc.) Failure to meet a payment deadline will result in a financial hold which prevents adds for a registered student. If a hold was placed on your registration after you have registered, your registration will not be automatically cancelled. However, you will not have registration access to adjust your schedule for subsequent terms until the holds are cleared. If you have a hold you will not be able to participate in extra-curricular activities.

## Honor Graduates

Graduating students who have shown outstanding performance and dedication in their academics are honored with the following distinctions.

**Cum Laude – 3.50-3.74**

**Magna Cum Laude – 3.75-3.99**

**Suma Cum Laude – 4.00**

## Incomplete ("I") Courses

When unusual circumstances beyond the student's control, e.g., serious illness, etc., prevent the student from completing course requirements, the instructor should be notified as soon as possible during the semester. In such cases, the instructor may award the student an incomplete ("I") instead of a final grade at the end of the session/semester. The "I" is recorded on the student's grade report and transcript.

The student will be given one full semester to change a grade of incomplete (I) to a completed grade. This time interval may be shortened by the instructor. Any incomplete not completed by the end of the makeup semester will convert to failure ("F") on the student's grade report and will remain permanently on the student's transcript.

## Pass/No Pass Policy

All courses at NCTA are graded by letter, score, or percentage except for:

- Internships because there is no instructor to determine a score; internships are also not structured like courses.
- Developmental courses, because they are used to develop skills in preparation for courses that are applied to degrees.
- The S.T.A.R.S. course work is not designed to warrant a score. Students do not have the opportunity to choose whether a class is graded or pass/no pass.

## Student Eligibility

Students who participate in the following must meet the group's eligibility rules:

1. Members of Student Senate and Student Ambassadors
2. Students involved in extracurricular activities where they will be absent from class
3. Club Officers
4. All competitive and extracurricular activities
  - Ineligible students will be allowed to practice with their respective teams
  - Ineligible students will not be allowed to travel or suit up with the team

## Standards of Eligibility

Students must maintain a minimum 2.0 GPA for each semester and be enrolled a minimum of 12 credit hours per semester.

### Student Status

Weeks/Session	16	8
Full Time (credit hours)	12	6
3/4 Time (credit hours)	9	4.5
1/2 Time (credit hours)	6	3



## Withdrawal from NCTA

Withdrawal from college will be handled the same as a class withdrawal. Each course the student is enrolled in will be handled separately. Students will be charged tuition in accordance with the college refund policy. Failure to officially withdraw from College will result in a grade failure ("F") for all registered classes. Students, after withdrawing from class, must fill out the checkout form from the Registrar's Office. Students are responsible for dropping their classes on MyNCTA (<https://myncata.nebraska.edu/>).

## Student Activities and Organizations

### Ag Business Club

Membership in the Ag Business Club is offered to all NCTA students with an interest in business, regardless of their major. Through such means as guest speakers and business visitation, this club promotes an increased awareness of business activities in our economy and offers students the opportunity to establish a network of business contacts with area business. Further, the Ag Business Club promotes enhanced communications among students interested in agriculture business.

### Aggie Rodeo Association

All students on campus have the opportunity to become active members of the Aggie Rodeo Association. The purpose of the Association is to support the College Rodeo Team, as well as, participate in and attend livestock shows, and roping club events.

Aggie Rodeo Association members, who join the National Inter-Collegiate Rodeo Association, are eligible to become NCTA College Rodeo Team members and compete with the team in the NIRA Great Plains Region.

### Aggie Shooting Sports

This club offers 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.

### Ag mech Club

This club provides opportunities for professional development of students by learning about design and construction of projects, strengthen relationships between members through cooperation and teamwork and develop relationships with other professionals in the field of mechanics and engineering.

### Collegiate Cattlemen

Affiliated with the Nebraska Cattlemen, Nebraska Cattlewomen, and the National Cattlemen's Beef Association, this organization's mission is to alert members of current beef industry related issues. Beef industry leaders are invited to speak at meetings. Members tour area beef facilities and attend the Nebraska Cattlemen's Association Convention.

### Collegiate 4H/FFA

NCTA made history in the spring of 2005 when 27 students voted to pass a charter to form the first and only Collegiate FFA chapter in the state of Nebraska. The club has an extensive program of activities including plans to work with local high school chapters with activities, help those students fill out proficiencies and state degrees, help with workshops at Chapter Officer Leadership Training, coordinate pre-state practice

contests for local chapters and much more. Collegiate FFA allows members opportunities for professional growth, leadership development and service through a national website, travel opportunities and local projects. This club provides an opportunity for all students to continue their interest in 4-H activities by not only helping the local 4-H clubs, and assisting at the county fair but also in attending regional college 4-H meetings and expanding leadership skills.

### Farm Bureau Club

The Farm Bureau Club at NCTA is for any student interested in agriculture. The primary goal of the club is to educate students on the important issues facing agriculture in Nebraska and the U.S. Students are also exposed to process of developing agricultural policy and the role of Farm Bureau in the policy development process. Club activities include: guest speakers that highlight issues that are important to farmers and ranchers; field trips to learn more about the agricultural industry in Nebraska; and attending annual Nebraska Farm Bureau meeting each December and the Young Farmers and Ranchers conference each January. The club is supported by Nebraska Farm Bureau.

### Horticulture Club

Any student enrolled at NCTA is welcome to join the Horticulture Club. Activities include campus landscaping projects, community garden, and campus beautification.

### Intercollegiate Livestock Judging

NCTA is committed to excellence in the area of collegiate livestock judging. For those students interested in allocating the time and effort necessary for successful completion of this program, the benefits by far exceed knowledge acquired in form to function analysis of livestock. Leaders in the institution and livestock industry are aware this program is the most thorough training in the decision making process educators in any field have developed. Additional personal enhancement benefits developed in this program include commitment, self-confidence, perseverance, concentration and mental toughness, teamwork, and communications skills. As a result students completing this program are better prepared to meet life's challenges and are highly sought after by employers. Additionally, the educational benefit of traveling, interacting with producers of quality livestock, and competing in national contests provide students with valuable information and knowledge not always available in classroom settings. This program is available to any full time NCTA student and all highly motivated individuals are encouraged to enroll in the program.

### Phi Theta Kappa

Phi Theta Kappa is an honorary society whose purpose is that academic excellence among community and junior college students may be nurtured; that opportunity may be provided for leadership training; that an intellectual climate may be promoted for an interchange of ideas and ideals; and that scholars may be imbued with desire for continuing education. Membership is earned by qualifications, honor, and service.

### Ranch Horse Team

Ranch Horse Team is affiliated with American Stock Horse Association (ASHA). ASHA has a collegiate division with a College National Finals and has a strong commitment to education. There are 25 colleges and universities in the association with more joining every day. NCTA was one of the original founding institutions of ASHA Collegiate Division. ASHA has 3 different rider skill levels so that each individual is competing

against their own skill level whether you are a beginning rider or an accomplished rider. Most shows start with a training session. NCTA competes in approximately 8 shows a year, mostly in the spring. Besides showing horses, team members go through various horse training workshops to improve your skills in showing horses. Students do not need to have a horse or show horses to join the team.

## Safari Club

Safari Club is offered to any NCTA student and is intended for those students with an exotic animal, wildlife or ecological interest. With the guidance of the instructor, students plan an educational trip to learn more about exotic animals. Prior to this trip, the "safari" students set educational goals and compile research pertinent to their trip. A presentation, open to the public, is developed following the experience. There is limited enrollment.

## Student Senate

The purpose of the Student Senate is to promote unity, harmony, and fellowship between students, campus organizations, faculty, staff, and college administration. Regular meetings are held the first and third Tuesday of each month and special meetings are called when necessary. At meetings, Student Senate members discuss topics of concern. All campus activities are coordinated through the Student Senate. The Student Senate makes suggestions to improve student life on campus.

## STVMA (Student Technicians of Veterinary Medicine Association) (Vet Tech Club)

STVMA is a student run organization designed to help students prepare for active participation in state and national technician organizations. As a member of STVMA, students will enjoy social, educational, and community service activities.

## stock dog club

The purpose of this organization is to foster, promote and develop the use of stock dogs for the benefit of farmers, ranchers, students and other livestock owners and stock dog handlers. To introduce students to stock dog competitions, education in the daily care and conditioning of a stock dog and to sponsor sanctioned trials, educational events and demonstrations.

## Women in Ag

NCTA Women in Ag is open to all first and second year students in any major. The purpose of this organization is to promote women in agriculturally oriented areas of study and ag-related jobs upon graduation. Members have the opportunity to attend the Women in Ag Conference held in Kearney. Guest speakers will present information of various topics ranging from personal and social issues to professional interests.

## Churches in Our Community

- Berean Fundamental Church
- Christian Church (Maywood)
- First United Methodist Church
- Lonestar Cowboy Church (Farnam)
- St. James Catholic Church
- St. John's Lutheran Church

- United Church of Christ (Maywood)
- Vineyard Christian Fellowship

## Dances

Sponsored dances are held on campus each month. Admission may be required. All dances are to be concluded at 12 midnight.

## Curriculum

- General Education (p. 18)
- Agribusiness Management Systems (p. 22)
- APS Animal Science/AG Education (p. 26)
- APS Agronomy and Agricultural Mechanics (p. 38)
- Veterinary Technology Systems (p. 47)

## General Education

### faculty

**Eric Reed, Ph.D., Academic Lead, Associate Professor**

## MISSION

The mission of the General Education Division is to provide broad intellectual knowledge, awareness, and critical thinking skills in the liberal arts, humanities, and natural and social sciences directed toward the successful pursuit of students' personal and career goals as citizens and leaders in agriculture enterprises.

## PHILOSOPHY

General education is part of the academic experience that builds students' growth as citizens and professionals. General education instruction engages students in independent, critical, and creative thinking; promotes open-mindedness and understanding; gives confidence and inquisitiveness to challenge assumptions and explore ideas and values; promotes the passing of sound judgment; encourages the consideration of ethical and practical consequences of actions; and facilitates wisdom.

## Associate of Applied Science Curriculum

General Education Courses

<b>Written Communication; Critical Thinking</b>	<b>3</b>
3 hours required:	
ENG 1503	TECHNICAL COMMUNICATION I
ENG 1903	WRITING & INQUIRY
<b>Oral Communication</b>	<b>3</b>
3 hours required:	
SPC 1103	SALES COMM
SPC 1113	PUBLIC SPEAKING
<b>Quantitative Literacy</b>	<b>3</b>
3 hours required:	
ECN 1803	STATISTICS
MTH 1203	INTERMEDIATE ALGEBRA
MTH 1403	AGRICULTURAL MATHEMATICS
MTH 1503	COLLEGE ALGEBRA
MTH 2203	INTRODUCTION TO STATISTICS
VTS 1313	MATH FOR VET TECHS

<b>Problem Solving</b>	<b>4</b>
4 hours required:	
ASI 1024	FUND OF ANIMAL BIO
BIO 1104	GENERAL BIOLOGY & LAB
BIO 1313	PLANT SCIENCE
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY
BIO 1331	INTRODUCTION TO HORTICULTURAL SCIENCE LABORATORY
CHM 1014	CHEMISTRY IN CONTEXT I
CHM 1024	CHEMISTRY IN CONTEXT II
CHM 1104	GENERAL CHEM I
CHM 2104	GENERAL CHEM II
SCI 1204	TECHNICAL SCIENCE
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE
<b>Information Literacy; Intercultural Knowledge &amp; Competence</b>	<b>1</b>
1 hours required:	
ABM 1201	AG BUSINESS FOUNDATIONS
AGR 1661	AGRONOMY ORIENTATION
ASI 1001	SUCCESS IN ANIMAL SCIENCE
VTS 2241	CAREER STRATEGIES
<b>Civic Engagement</b>	<b>3</b>
3 hours required:	
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP
PSY 1103	HUMAN RELATIONS
Total Credit Hours	17

## Associate of Science Curriculum

### General Education Courses

<b>Written Communication; Critical Thinking</b>	<b>3</b>
3 hours required:	
ENG 1503	TECHNICAL COMMUNICATION I
ENG 1903	WRITING & INQUIRY
ENG 2203	WRITING & ARGUMENT
<b>Oral Communication</b>	<b>3</b>
3 hours required:	
SPC 1113	PUBLIC SPEAKING
<b>Quantitative Literacy</b>	<b>3</b>
3 hours required:	
ECN 1803	STATISTICS
MTH 1203	INTERMEDIATE ALGEBRA
MTH 1503	COLLEGE ALGEBRA
MTH 2203	INTRODUCTION TO STATISTICS
<b>Problem Solving</b>	<b>8</b>
8 hours required:	
ASI 1024	FUND OF ANIMAL BIO
BIO 1104	GENERAL BIOLOGY & LAB
BIO 1313	PLANT SCIENCE
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY

BIO 1331	INTRODUCTION TO HORTICULTURAL SCIENCE LABORATORY
CHM 1014	CHEMISTRY IN CONTEXT I
CHM 1024	CHEMISTRY IN CONTEXT II
CHM 1104	GENERAL CHEM I
CHM 2104	GENERAL CHEM II
<b>Information Literacy; Intercultural Knowledge &amp; Competence</b>	<b>4</b>
HTY 1303	AMERICAN HISTORY AFTER 1877
Take one of the following:	
ABM 1201	AG BUSINESS FOUNDATIONS
AGR 1661	AGRONOMY ORIENTATION
ASI 1001	SUCCESS IN ANIMAL SCIENCE
VTS 2241	CAREER STRATEGIES
<b>Civic Engagement</b>	<b>3</b>
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP
Total Credit Hours	24

### BIO 1104 GENERAL BIOLOGY & LAB

**Description:** Examination of fundamental principles of plant and animal biology including cell biology, genetics, development, diversity, and ecology.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

### BIO 1313 PLANT SCIENCE

**Description:** Biology of plants grown for food, fiber, fun, or fuel. Plant life cycles in managed ecosystems, and their role in global carbon and water cycles. Mechanisms plants use to drive and control their growth, propagate, and change to compete with other organisms in their environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### BIO 1321 AGRONOMIC PLANT SCIENCE LABORATORY

**Description:** Growth, development, morphology, and staging of annual and perennial monocot and dicot plants produced for grain, forage and grazing. Evaluation of seed, grain and forage quality for plants of agronomic importance.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### BIO 1331 INTRODUCTION TO HORTICULTURAL SCIENCE LABORATORY

**Description:** Introduction to and practical experience in the production and usage of horticultural plants.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**CHM 1014 CHEMISTRY IN CONTEXT I**

**Prerequisites:** 1 year of high school algebra or 1 semester of a college math course.

**Description:** The extraordinary chemistry of ordinary things. The chemical model of solids, liquids, gases, molecules, and salts. How these models are used to explore chemical aspects of biological, social, or economic situation.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 1024 CHEMISTRY IN CONTEXT II**

**Prerequisites:** CHEM 1014: Introduction to Chemistry I.

**Description:** How organic chemistry and biochemistry complement one another. Chemical aspects of biological, social, or economic situations.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 1104 GENERAL CHEM I**

**Prerequisites:** Two years of high school algebra and one year of high school chemistry or two years of high school algebra and CHM 1014.

**Description:** Lecture and laboratory serving as an introduction to chemical reactions, the mole concept, properties of the states of matter, atomic structure, periodic properties, chemical bonding and molecular structure.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 2104 GENERAL CHEM II**

**Prerequisites:** CHM 1104: General Chemistry I

**Description:** Lecture and laboratory serving as an introduction to intermolecular forces, kinetics, chemical equilibrium, thermodynamics, and electrochemistry.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**ENG 103 INTRODUCTION TO COLLEGE READING AND WRITING**

**Description:** This course allows students who have not achieved minimum placement scores in writing and reading (minimum 18 ACT in English & minimum 18 ACT in Reading or equivalent) to develop skills in those areas before taking a required English course.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**Prerequisite for:** ENG 1503; ENG 1903

**ENG 1503 TECHNICAL COMMUNICATION I**

**Prerequisites:** 18 ACT Reading & 18 ACT English or ENG 103 or permission through English placement process

**Description:** This course emphasizes the principles and strategies of written communication about technical subject matter using various media. It is designed to prepare the student to present technical and scientific documents in a clear and informative manner.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** ENG 2203

**ENG 1903 WRITING & INQUIRY**

**Prerequisites:** 18 ACT Reading & 18 ACT English or ENG 103 or permission through English placement process

**Description:** A refinement of writing skills and critical reading, emphasizing the relationship between purpose and form, clarity, accuracy of expression, the development of the writer's voice and style, the elements of critical thinking, and the development of the research paper to prepare for university studies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** ENG 2203

**ENG 2203 WRITING & ARGUMENT**

**Prerequisites:** ENG 1503 OR ENG 1903

**Description:** A course for students seeking advanced work in reading and writing expository prose and in methods of research.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ENG 2223 BEGINNING CREATIVE WRITING**

**Description:** Introduction to the writing of poetry, fiction, and screenplays. Lectures and discussions emphasize the principles, processes, and techniques of creative writing. Students develop their ability to respond to literature and scripts through workshops, discussions and written assignments requiring them to analyze professional and peer works. Emphasis on literary (as opposed to "slick") writing.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**HTY 1303 AMERICAN HISTORY AFTER 1877**

**Description:** Examines the economic, political, social, and cultural development of the United States from the end of the Reconstruction era through the modern era. Through lectures, readings, assignments, and discussion, students will be asked to interpret and critically evaluate historical documents, perspectives, concepts, and events.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**MTH 1203 INTERMEDIATE ALGEBRA****Prerequisites:** Test Placement**Description:** Properties of real numbers, factoring, exponents and radicals, linear and fractional equations, linear and nonlinear inequalities, quadratic equations, and functions and graphs. This course may not be accepted in transfer toward the general education requirement for a baccalaureate degree.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**Prerequisite for:** MTH 1503**MTH 1403 AGRICULTURAL MATHEMATICS****Description:** A study of mathematics, geometry and algebra that are utilized in the agricultural industry. Problems will include examples from crop production, horticulture, livestock management and agricultural business.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**MTH 1503 COLLEGE ALGEBRA****Prerequisites:** 21 ACT in Math or equivalent test score; MTH 1203: Intermediate Algebra; or instructor permission**Description:** Functions, inverse functions, graphing of linear and quadratic functions, the conic sections, polynomial functions, rational functions, exponential and logarithmic functions, systems of equations, determinants and matrices, and higher degree equations.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**Prerequisite for:** MTH 2203; MTH 2252**MTH 2203 INTRODUCTION TO STATISTICS****Prerequisites:** 24 ACT in Math or equivalent test score; MTH 1503: College Algebra; or instructor permission**Description:** Frequency distributions, elementary probability theory, measures of dispersion and central tendency, normal distributions, confidence intervals, hypotheses testing, regression, and correlation.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**MTH 2252 TRIGONOMETRY****Prerequisites:** 24 ACT in Math or equivalent test score; MTH 1503: College Algebra; or instructor permission)**Description:** Designed for students who plan further study at the calculus level. Numerical trigonometry, trigonometric analysis, inverse trigonometric functions, and complex numbers.**Credit Hours:** 2**Max credits per semester:** 2**Max credits per degree:** 2**Grading Option:** Graded**PSY 1103 HUMAN RELATIONS****Description:** This course studies the psychology of humans and their relationships with others. Emphasis is placed on one's ability to get along with others in a working relationship.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**SPC 1103 SALES COMM****Description:** This course will instruct students in retail and service salesmanship, emphasizing the purpose of selling, the characteristics and functions of the salesperson, sales promotion, locating and qualifying prospects, and the steps in making a sale. Students are required to select a product, develop a sales manual and make a sales presentation.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded**SPC 1113 PUBLIC SPEAKING****Description:** This course contains a study of the methods of developing and presenting oral communications. It includes techniques in speech making and other methods of communicating orally in the business world.**Credit Hours:** 3**Max credits per semester:** 3**Max credits per degree:** 3**Grading Option:** Graded

## Associate of Applied Science Degree (A.A.S.) and associate of science (A.S.) Outcomes

Upon completion of the Associate of Applied Science degree students should be able to demonstrate the following skills and abilities (as defined by the Association of American Colleges & Universities VALUE Rubrics):

**Program Outcomes**

- 1. Written Communication.** Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.
- 2. Oral Communication.** Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.
- 3. Quantitative Literacy.** Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a “habit of mind,” competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

4. **Problem Solving.** Problem solving is the process of designing, evaluating and implementing a strategy to answer an open-ended question or achieve a desired goal.
5. **Civic Engagement:** Civic engagement is “working to make a difference in the civic life of our communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes.” (Excerpted from *Civic Responsibility and Higher Education*, edited by Thomas Ehrlich, published by Oryx Press, 2000, Preface, page vi.) In addition, civic engagement encompasses actions wherein individuals participate in activities of personal and public concern that are both individually life enriching and socially beneficial to the community.
6. **Critical Thinking:** Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.
7. **Information Literacy:** The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand. - Adopted from the National Forum on Information Literacy.
8. **Intercultural Knowledge and Competence:** Intercultural Knowledge and Competence is “a set of cognitive, affective, and behavioral skills and characteristics that support effective and appropriate interaction in a variety of cultural contexts.” (Bennett, J. M. 2008. Transformative training: Designing programs for culture learning. In *Contemporary leadership and intercultural competence: Understanding and utilizing cultural diversity to build successful organizations*, ed. M. A. Moodian, 95-110. Thousand Oaks, CA: Sage.)

## Agribusiness Management Systems

The Agribusiness Management Systems major supports the college mission by striving to develop students into competent citizens through general education and promoting involvement, innovation, and individuality in the agribusiness industry.

### Faculty

Mary Rittenhouse, Academic Lead, Associate Professor  
Jeremy Sievers, Associate Professor

### Career Opportunities

Agribusiness Management graduates are pursuing careers in agricultural management, marketing and finance in relevant industries.

### INTERNSHIP

Connecting the classroom to the student’s career, internships are required for the Agribusiness Management Systems Program. The internship will be a four (4) credit hour course and includes an eight (8) week, 320 hours, on-site training in an area of Agribusiness management of interest to the student.

### CAPSTONE

AGR 2983 CAPSTONE

This course is designed to culminate the student’s experience in their APS or AMS program and will focus on tying together functional aspects of a farm, ranch, or entrepreneurial venture. The class will culminate with a workable business plan, understand the legal and regulatory environment of their proposed enterprise, and be ready to move into

formation. Included in this plan will include facility design, applicable management plans, and a complete financial package for the proposed operation that will include a cash flow, net worth, one year and three year budget, and what-if analysis.

This course allows students an opportunity to integrate tools learned in their respective program.

## Agribusiness Management Systems - Associate of Applied science degree

### Associate of Applied Science Core

Complete requirements	17
Credit Hours Subtotal:	17

### Agribusiness Management Systems Core

ABM 2013	INTERNSHIP	3
or ASI 2906	INTERNSHIP	
ABM 2403	AG FINANCE	3
ABM 2603	AG LAW	3
ABM 2911	SEMINAR	1
ACT 1103	ACCOUNTING I	3
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
or ECN 1203	MICROECONOMICS	
MGT 2103	MGT CONCEPTS	3
ECN 1803	STATISTICS	3
MKT 2203	AG MARKETING	3
Credit Hours Subtotal:		25

### Management Required Courses

ABM 2854	FARM & RANCH MANAGEMENT	4
ACT 1203	ACCOUNTING II	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
ECN 1303	MACROECONOMICS	3
AGR 2983	CAPSTONE	3
Credit Hours Subtotal:		16

### Electives

Select 9 credit hours of the following courses. Six of those hours must be AMS courses. 9

ABM 2103	PERSONAL FINANCE	
ABM 2903	ENTREPRENEURSHIP	
AGR 1213	NATURAL RES MNGT	
AGR 2403	CROP MANAGEMENT	
ASI 1253	NUTRITION	
AGR 2353	PEST MANAGEMENT	
AGR 2383	IRRIGATION MANAGEMENT	
ASI 1304	ANIMAL MANAGEMENT	
AEQ 1103	SMALL ENGINES	
ASI 2773	ADVANCED REPRODUCTIVE PHYSIOLOGY	
ASI 2203	FEEDS & FEEDING	
AEQ 1103	SMALL ENGINES	
ASI 2303	RANGE MANAGEMENT	
AEQ 1203	WELDING	
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	
MKT 2103	RETAIL MARKETING	
VTE 2821	RADIATION SAFETY	

Credit Hours Subtotal:	9
Total Credit Hours	67

## Agribusiness Management Systems - Associate of science degree (transfer)

### Associate of Science Core

Complete requirements	24
Credit Hours Subtotal:	24

### AMS Required Courses

ABM 2403	AG FINANCE	3
ACT 1103	ACCOUNTING I	3
ACT 1203	ACCOUNTING II	3
ABM 2903	ENTREPRENEURSHIP	3
or AGR 2983	CAPSTONE	
ECN 1203	MICROECONOMICS	3
ECN 1303	MACROECONOMICS	3
MGT 2103	MGT CONCEPTS	3
MKT 2203	AG MARKETING	3
Credit Hours Subtotal:		24

### Electives

Select 15 hours of the following or by advisor approval (at least six must be AMS courses):

ABM 2013	INTERNSHIP	
ABM 2854	FARM & RANCH MANAGEMENT	
AGR 1103	CROP SCIENCE	
AGR 1203	PRINCIPLES OF SOILS	
ASI 1213	LIVESTK & CARC EVAL	
ASI 1304	ANIMAL MANAGEMENT	
ASI 2303	RANGE MANAGEMENT	
ASI 2513	MEAT SCIENCE	
MGT 2503	HUMAN RESOURCES MGT	
MKT 2103	RETAIL MARKETING	
Credit Hours Subtotal:		15

Total Credit Hours	63
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## Agribusiness Management Systems, Minor

### Required AMS Minor Courses

ABM 2103	PERSONAL FINANCE	3
ABM 2963	FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING	3
or ACT 1103	ACCOUNTING I	
ECN 1203	MICROECONOMICS	3
MGT 2103	MGT CONCEPTS	3
Credit Hours Subtotal:		12

### Agribusiness Management Courses

Select 12 hours of the following (nine must be 2000 level courses):

ABM 2003	CRITICAL THINKING	
ABM 2403	AG FINANCE	
ABM 2503	AGRICULTURAL DECISION ANALYSIS	
ABM 2854	FARM & RANCH MANAGEMENT	

ABM 2903	ENTREPRENEURSHIP	
or AGR 2903	INTERNSHIP	
ACT 1203	ACCOUNTING II	
ECN 1303	MACROECONOMICS	
ECN 1403	ECONOMICS OF WORLD FOOD AND AGRICULTURE	
MGT 2503	HUMAN RESOURCES MGT	
MKT 2103	RETAIL MARKETING	
MKT 2203	AG MARKETING	
SPC 1103	SALES COMM	
ABM 2991	INDEPENDENT STUDY (requires approval of division chair)	
Credit Hours Subtotal:		12
Total Credit Hours		24

## Agribusiness Management Systems, Certificate

### AMS Certificate Foundation Courses

ABM 1201	AG BUSINESS FOUNDATIONS	1
AIT 1003	SOFTWARE PRODUCTIVITY	3
ABM 2603	AG LAW	3
ABM 2854	FARM & RANCH MANAGEMENT	4
ACT 1103	ACCOUNTING I	3
ECN 1203	MICROECONOMICS	3
or ECN 1103	INTRODUCTION TO AG ECONOMICS	
ECN 1803	STATISTICS	3
SPC 1103	SALES COMM	3
MKT 2203	AG MARKETING	3
Credit Hours Subtotal:		26

### Electives

Select six hours of the following; 6 hours must be AMS Courses from the approved list below:

ABM 2103	PERSONAL FINANCE	
ABM 2403	AG FINANCE	
ABM 2503	AGRICULTURAL DECISION ANALYSIS	
ABM 2903	ENTREPRENEURSHIP	
ACT 1203	ACCOUNTING II	
AGR 1213	NATURAL RES MNGT	
AGR 2403	CROP MANAGEMENT	
AGR 2983	CAPSTONE	
ASI 1253	NUTRITION	
ASI 1304	ANIMAL MANAGEMENT	
ASI 2203	FEEDS & FEEDING	
ASI 2773	ADVANCED REPRODUCTIVE PHYSIOLOGY	
AEQ 1103	SMALL ENGINES	
AEQ 1203	WELDING	
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	
ECN 1303	MACROECONOMICS	
MGT 2103	MGT CONCEPTS	
MKT 2103	RETAIL MARKETING	
VTE 2821	RADIATION SAFETY	

Credit Hours Subtotal:	6
Total Credit Hours	32

**ABM 1201 AG BUSINESS FOUNDATIONS**

**Description:** The goal of this course is to help the student make a successful transition from high school to the College by providing the opportunity to explore the various Ag Business disciplines and associated campus and career opportunities. The student will be asked to take an active involvement in academic issues and topics such as the facilities and offerings provided by AMS and NCTA, requirements for successful course and program completion, and the values and skills that lead to professional and personal success. Students will be given the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**ABM 2003 CRITICAL THINKING**

**Description:** Living in the information age, it is imperative to be able to process, sort and analyze information, not just for usefulness but also for accuracy. This course is designed to equip students with the tools necessary to work with the amount of information available today and to make good decisions based on sound solutions in an ever-changing workplace.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2013 INTERNSHIP**

**Description:** Internship includes a mandatory 8-week job placement experience at an approved work location. Agreements are entered into between the student, the employer and the college. (Pre req: Approval by Division Chair, students are required to have a minimum CGPA of 2.0 before being allowed to go out on internship and must have completed two semesters)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**ABM 2103 PERSONAL FINANCE**

**Description:** Following the Dave Ramsey "Foundations in Personal Finances", College Edition, students will develop practical and relevant personal financial skills.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2403 AG FINANCE**

**Description:** An in-depth study of financial analysis and the financial institutions which serve agricultural businesses. For each particular type of financial institution, this course will study its sources of capital, its general loan criteria used to evaluate loan requests, and its financial performance. For ag borrowers, this course will also examine their financial condition, their projected cash flow and the importance of risk management. (Pre req: ACT 1103 and MTH 1203 or MTH 1503)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2503 AGRICULTURAL DECISION ANALYSIS**

**Description:** Introduction to quantitative decision-making methods for effective agribusiness management, emphasis on problem identification, model formulation and solution, interpretation and presentation of results. (Pre req: AIT 1003)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2603 AG LAW**

**Description:** The study of law that governs agriculture. To include estate planning, contracts, leasing, water rights, fencing rights, tortes, personal and liability for the producer and agribusiness. This course will include guest lectures from regional attorneys.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2854 FARM & RANCH MANAGEMENT**

**Description:** (Pre req: ECN 1203 or ECN 1103 and ACT 1103 or ABM 2963) Business management concepts which are involved in the decision-making process when organizing and operating a farming/ranching operation. Includes production economics, record keeping systems, financial budgets and analysis, crop and livestock enterprise analysis, depreciation, cash flow planning equity, and production efficiency indicators.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**ABM 2903 ENTREPRENEURSHIP**

**Description:** This course includes the skills and attitudes necessary for starting and maintaining a successful business: personal (self) assessment, government regulations, financing and marketing options, and writing a business plan. (Pre req: ACT 1103, MGT 2103, ACT 1203 or enrolled in ACT 1203)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2911 SEMINAR**

**Description:** Majors will be required to research, write and report on an agribusiness issue that pertains to their Option, and complete a presentation on their internship.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**ABM 2963 FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING**

**Description:** Business record systems for farming and ranching. Manual and computerized record keeping techniques to aid farm and ranch managers and small business owners in making management and production decisions and preparing tax returns.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded



**ABM 2991 INDEPENDENT STUDY**

**Description:** This course consists of elective individual or group projects. Projects may include research, continuing education programs, and group tours. The project is developed under the supervision and evaluation of a department faculty member who is willing and available to contract with the student. This class requires a written paper, and may require a presentation (up to the discretion of the supervising faculty member). Students may enroll in this course a maximum of 3 times, for a total of 3 credit hours. (Pre req: Approval of project by Instructor, Advisor, and Division Chair)

**Credit Hours:** 1-3

**Min credits per semester:** 1

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ACT 1103 ACCOUNTING I**

**Description:** This course is a study in the fundamentals of accounting concepts and procedures. Concepts include financial reporting and analysis.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ACT 1203 ACCOUNTING II**

**Description:** Continuation of Accounting I with emphasis given to financial statement analysis, costing systems, and the budgeting process. The managerial uses of accounting information for decision making are introduced. (Pre req: ACT 1103)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

- AMS students will be able to demonstrate computer skills.
- AMS students will be able to apply economic information to real world situations.
- AMS students will be able to think critically and demonstrate problem-solving skills.
- AMS students will be able to read, comprehend, and analyze basic financial statements and demonstrate basic accounting skills.
- AMS students will be able to effectively communicate in both an oral and written format.
- AMS students will be able to demonstrate skills enabling them to work effectively as individuals and in groups.

## Agribusiness Management Systems with Management Option, AAS

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ACT 1103	ACCOUNTING I	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
ECN 1803	STATISTICS	3
ABM 1201	AG BUSINESS FOUNDATIONS	1

ECN 1103	INTRODUCTION TO AG ECONOMICS	3
or ECN 1203	or MICROECONOMICS	
SPC 1103	SALES COMM	3
Credit Hours		16

**Spring**

MKT 2203	AG MARKETING	3
ABM 2603	AG LAW	3
ABM 2403	AG FINANCE	3
Adviser Guided Electives		6
Credit Hours		15

**Summer**

ABM 2013	INTERNSHIP	3
Credit Hours		3

**Second Year**

**Fall**

ENG 1503	TECHNICAL COMMUNICATION I	3
ABM 2854	FARM & RANCH MANAGEMENT	4
MGT 2103	MGT CONCEPTS	3
ABM 2911	SEMINAR	1
Chose from the following Science Course Science Course		4
ASI 1024	FUND OF ANIMAL BIO	
BIO 1104	GENERAL BIOLOGY & LAB	
BIO 1313	PLANT SCIENCE (lab require)	
CHM 1014	CHEMISTRY IN CONTEXT I	
CHM 1024	CHEMISTRY IN CONTEXT II	
CHM 1104	GENERAL CHEM I	
CHM 2104	GENERAL CHEM II	
SCI 1204	TECHNICAL SCIENCE	
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE	

Adviser Guided Electives		3
Credit Hours		18

**Spring**

ACT 1203	ACCOUNTING II	3
ECN 1303	MACROECONOMICS	3
AGR 2983	CAPSTONE	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Adviser Guided Electives		6
Credit Hours		18

Total Credit Hours

70

### Suggested Sequence of Study

## Agribusiness Management Systems with Transfer Option, AS

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ABM 1201	AG BUSINESS FOUNDATIONS	1
ACT 1103	ACCOUNTING I	3
ECN 1803	STATISTICS	3

ECN 1203	MICROECONOMICS	3
SPC 1113	PUBLIC SPEAKING	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Credit Hours		16
<b>Spring</b>		
MKT 2203	AG MARKETING	3
ACT 1203	ACCOUNTING II	3
ABM 2403	AG FINANCE	3
MTH 1503	COLLEGE ALGEBRA	3
ECN 1303	MACROECONOMICS	3
Adviser Guided Elective		2
Credit Hours		17
<b>Second Year</b>		
<b>Fall</b>		
English Course		3
ENG 1503	TECHNICAL COMMUNICATION I	
ENG 1903	WRITING & INQUIRY	
ENG 2203	WRITING & ARGUMENT	
Science Course		4
ASI 1024	FUND OF ANIMAL BIO	
BIO 1104	GENERAL BIOLOGY & LAB	
BIO 1313	PLANT SCIENCE	
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	
CHM 1014	CHEMISTRY IN CONTEXT I	
CHM 1104	GENERAL CHEM I	
CHM 1024	CHEMISTRY IN CONTEXT II	
CHM 2104	GENERAL CHEM II	
MGT 2103	MGT CONCEPTS	3
Advisor Guided Electives		6
Credit Hours		16
<b>Spring</b>		
HTY 1303	AMERICAN HISTORY AFTER 1877	3
ABM 2903	ENTREPRENEURSHIP	3
or AGR 2903	or INTERNSHIP	
Science Course		4
Advisor Guided Electives		6
Credit Hours		16
Total Credit Hours		65

## APS Animal Science/AG Education Faculty

Joanna Hergenreder, M.S., Academic Lead, Associate Professor  
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.

ABM 2854	FARM & RANCH MANAGEMENT	4
ACT 1103	ACCOUNTING I	3
AGR 2983	CAPSTONE	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
ASI 2906	INTERNSHIP	6
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
or ECN 1203	MICROECONOMICS	
Total Credit Hours		22

### 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.

<b>Associate of Applied Science Core</b>	<b>17</b>
<b>Ag Production Systems Core</b>	<b>22</b>
<b>Dairy Production Courses (Choose from the following)</b>	<b>20</b>
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	
<b>South Dakota State University State Classes</b>	<b>17</b>
<b>Total Credit Hours</b>	<b>76</b>

## Equine Industry Management Option-associate of applied science degree

<b>Associate of Applied Science Core</b>	
Complete requirements	17
Credit Hours Subtotal:	17
<b>Ag Production Systems Core</b>	
Complete requirements	22
Credit Hours Subtotal:	22
<b>Equine Industry Core</b>	
ASI 1253 NUTRITION	3
ASI 1263 BASIC EQUITATION	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
<b>Equine Industry Specialization Focus</b>	
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
<b>Total Credit Hours</b>	<b>72</b>

## Feedlot Management Option-Associate of Applied Science Degree

<b>ASSOCIATE OF APPLIED SCIENCE CORE</b>	
Complete Requirements	17
Credit Hours Subtotal:	17
<b>AG PRODUCTION SYSTEMS CORE</b>	
Complete Requirements	22
Credit Hours Subtotal:	22
<b>Feedlot Management Core</b>	
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
<b>FEEDLOT SPECIALIZATION COURSES</b>	
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 LVSTK EVAL/JUDG	
ASI 1312 LIVESTOCK JUDGING I	
ASI 1351 ART INSEM BEEF CATTL	
ASI 1501 EQUINE SAFETY	
ASI 2303 RANGE MANAGEMENT	
ASI 2312 LIVESTOCK JUDGING II	
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:	7
<b>ADVISOR GUIDED ELECTIVES</b>	
Complete Requirements	
<b>Total Credit Hours</b>	<b>75</b>

## 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	
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
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ABM 2403	AG FINANCE	
ABM 2903	ENTREPRENEURSHIP	
ACT 1203	ACCOUNTING II	
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE	
AGR 2383	IRRIGATION MANAGEMENT	
ASI 1222	ADV LVSTK EVAL/JUDG	
ASI 1312	LIVESTOCK JUDGING I	
ASI 1351	ART INSEM BEEF CATTLE	
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
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### Advisor Guided Electives

Complete Requirements	1
Credit Hours Subtotal:	1

Total Credit Hours	70
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## meat science option-associate of applied science degree

### ASSOCIATE OF APPLIED SCIENCE CORE

Complete Requirements	17
Credit Hours Subtotal:	17

### AG PRODUCTION SYSTEMS CORE

Complete Requirement	22
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Credit Hours Subtotal:	22
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### MEAT SCIENCE CORE

ASI 1203	FEEDLOT SYSTEMS	3
or ASI 2753	BEEF PRODUCTION SYSTEMS	
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
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### ADVISOR GUIDED ELECTIVES

Complete Requirements	3
Credit Hours Subtotal:	3

Total Credit Hours	75
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## 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
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Ag Production Systems Core	22
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Poultry Production Courses	24
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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)	
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Credit Hours Subtotal:	63
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### One Semester - Off Campus

Mississippi State University Classes	14
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Credit Hours Subtotal:	14
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Total Credit Hours	77
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## Agricultural Education Option- Associate of Science Degree (transfer)

### Associate of Science Core

Complete requirements	24
Credit Hours Subtotal:	24

### Agricultural Education Specialization Focus Courses

Select 24 hours of the following: 24

ABM 2003	CRITICAL THINKING
ACT 1103	ACCOUNTING I
ACT 1203	ACCOUNTING II
AED 1103	INTRODUCTION TO SECONDARY AGRISCIENCE 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	12
Credit Hours Subtotal:	12

Total Credit Hours 60

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

### Associate of Science Core

Complete requirements	24
Credit Hours Subtotal:	24

### Animal Science Specialization Focus

Select 24 hours of the following: 24

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
ASI 1253	NUTRITION
ASI 1304	ANIMAL MANAGEMENT
ASI 2203	FEEDS & FEEDING
ASI 2513	MEAT SCIENCE
ASI 2383	LARGE ANIMAL DISEASES
ASI 2773	ADVANCED REPRODUCTIVE PHYSIOLOGY
ECN 1203	MICROECONOMICS
ECN 1303	MACROECONOMICS

MGT 2103	MGT CONCEPTS	
Credit Hours Subtotal:		24
<b>Electives</b>		
Advisor Guided Electives		12
Credit Hours Subtotal:		12
Total Credit Hours		60

## GRAZING LIVESTOCK option- ASSOCIATE OF SCIENCE DEGREE (transfer)

### Associate of Science Core

Complete requirements	24
Credit Hours Subtotal:	24

### Grazing Livestock Systems Specialization Focus

Select 24 hours of the following: 24

ABM 2003	CRITICAL THINKING
ACT 1103	ACCOUNTING I
AGR 1201	SOILS LAB
AGR 1203	PRINCIPLES OF SOILS
ASI 1304	ANIMAL MANAGEMENT
ASI 2303	RANGE MANAGEMENT
ASI 2513	MEAT SCIENCE
ECN 1203	MICROECONOMICS
MGT 2103	MGT CONCEPTS

Credit Hours Subtotal: 24

### Electives

Select 12 hours of electives	12
Credit Hours Subtotal:	12

Total Credit Hours 60

## 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:

AGR 1103	CROP SCIENCE	3
or ASI 1304	ANIMAL MANAGEMENT	
Select 12 hours of Agriculture Production Systems courses <sup>1</sup>		12
Total Credit Hours		15

<sup>1</sup> 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
Credit Hours Subtotal:	6

### Emphasis Area

Select 12 hours of the following: 12

ASI 1213	LIVESTK & CARC EVAL
ASI 1253	NUTRITION
ASI 1304	ANIMAL MANAGEMENT
ASI 2203	FEEDS & FEEDING
ASI 2303	RANGE MANAGEMENT

ASI 2353	LIVESTOCK BREEDING	
ASI 2383	LARGE ANIMAL DISEASES	
Credit Hours Subtotal:		12
<b>Electives</b>		
Select 12 hours of electives		12
Credit Hours Subtotal:		12
Total Credit Hours		30

## EQUINE TRAINING MANAGEMENT, CERTIFICATE

### Required Courses

ASI 1263	BASIC EQUITATION	3
ASI 1501	EQUINE SAFETY	1
ASI 1442	EQUINE PRACTICUM I	2
ASI 2442	EQUINE PRACTICUM II	2
ASI 2462	COLT STARTING	2
ASI 2363	INTERMEDIATE TRAINING	3
ASI 2463	ADVANCED PERFORMANCE TRAINING	3
ASI 2412	EQUINE MARKETING TECHNIQUES	2
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

### 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 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 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 semester:** 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 bio-security 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 course 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 2514 MEAT PROCESSING**

**Description:** Meat processing is designed to show students how to properly process livestock carcasses. Understanding of HAACP, BQA, PQA, and management of the various species will be stressed. This is a career applied course which could lead to working in the processing industry or owning their own business.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**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 2603 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 and 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 with ASI 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; AI 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](http://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 2991 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:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**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.
5. Learning outcomes specific to livestock area options (Livestock Industry Management and Equine Industry Management).
  - 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

Learning outcomes specific to Livestock Industry Management and Equine Industry Management Options.

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

## Livestock Industry Management

Learning outcomes specific to Livestock Industry Management and Equine Industry Management Options.

- 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.

## eQUINE INDUSTRY MANAGEMENT

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ASI 1001	SUCCESS IN ANIMAL SCIENCE	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
ASI 1304	ANIMAL MANAGEMENT	4
ASI 1253	NUTRITION	3
ASI 1501	EQUINE SAFETY	1
ASI 1263	BASIC EQUITATION	3
ASI 1442	EQUINE PRACTICUM I	2
Credit Hours		17
<b>Spring</b>		
ASI 1024	FUND OF ANIMAL BIO	4
ACT 1103	ACCOUNTING I	3
ASI 2203	FEEDS & FEEDING	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
MTH 1403	AGRICULTURAL MATHEMATICS	3
Credit Hours		16
<b>Summer</b>		
ASI 2906	INTERNSHIP	6
Credit Hours		6
<b>Second Year</b>		
<b>Fall</b>		
ABM 2854	FARM & RANCH MANAGEMENT	4
ASI 2412	EQUINE MARKETING TECHNIQUES	2
ASI 2433	EQUINE INDUS MNGT I	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Advisor Guided Electives		6
Credit Hours		18
<b>Spring</b>		
AGR 2983	CAPSTONE	3
ASI 2443	EQUINE INDUS MNGT II	3
ENG 1503	TECHNICAL COMMUNICATION I	3
SPC 1103	SALES COMM	3
ASI 2442	EQUINE PRACTICUM II	2

Advisor Guided Electives	1
Credit Hours	15
Total Credit Hours	72

## Feedlot Management option

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ASI 1001	SUCCESS IN ANIMAL SCIENCE	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
ASI 1304	ANIMAL MANAGEMENT	4
ASI 1213	LIVESTK & CARC EVAL	3
ASI 1253	NUTRITION	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Credit Hours		17
<b>Spring</b>		
ASI 1024	FUND OF ANIMAL BIO	4
ACT 1103	ACCOUNTING I	3
ASI 2203	FEEDS & FEEDING	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
MTH 1403	AGRICULTURAL MATHEMATICS	3
Advisor Guided Electives		1
Credit Hours		17
<b>Summer</b>		
ASI 2906	INTERNSHIP	6
Credit Hours		6
<b>Second Year</b>		
<b>Fall</b>		
ABM 2854	FARM & RANCH MANAGEMENT	4
ASI 2383	LARGE ANIMAL DISEASES	3
ASI 1202	FEEDLOT PRACTICUM I	2
SPC 1103	SALES COMM	3
Advisor Guided Electives		6
Credit Hours		18
<b>Spring</b>		
AGR 2983	CAPSTONE	3
MKT 2203	AG MARKETING	3
ASI 1203	FEEDLOT SYSTEMS	3
ASI 1302	FEEDLOT PRACTICUM II	2
ASI 2313	RATION FORMULATION	3
ENG 1503	TECHNICAL COMMUNICATION I	3
Credit Hours		17
Total Credit Hours		75

## Livestock Management Summer Internship, ASSOCIATE OF APPLIED SCIENCE

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ASI 1001	SUCCESS IN ANIMAL SCIENCE	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
ASI 1304	ANIMAL MANAGEMENT	4
ASI 1213	LIVESTK & CARC EVAL	3
ASI 1253	NUTRITION	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Credit Hours		17
<b>Spring</b>		
ASI 1024	FUND OF ANIMAL BIO	4
ACT 1103	ACCOUNTING I	3
AIT 1003	SOFTWARE PRODUCTIVITY	3
MTH 1403	AGRICULTURAL MATHEMATICS	3
Advisor Guided Elective		3
Credit Hours		16
<b>Summer</b>		
ASI 2906	INTERNSHIP	6
Credit Hours		6
<b>Second Year</b>		
<b>Fall</b>		
ABM 2854	FARM & RANCH MANAGEMENT	4
ASI 2383	LARGE ANIMAL DISEASES	3
SPC 1103	SALES COMM	3
Advisor Guided Electives		6
Credit Hours		16
<b>Spring</b>		
AGR 2983	CAPSTONE	3
MKT 2203	AG MARKETING	3
ASI 2753	BEEF PRODUCTION SYSTEMS	3
or ASI 1203	or FEEDLOT SYSTEMS	
ENG 1503	TECHNICAL COMMUNICATION I	3
Advisor Guided Electives		3
Credit Hours		15
Total Credit Hours		70

## Animal science-associate of science, Transfer degree

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ASI 1001	SUCCESS IN ANIMAL SCIENCE	1
ASI 1304	ANIMAL MANAGEMENT	4
ASI 1213	LIVESTK & CARC EVAL	3

ASI 1253	NUTRITION	3
ENG 1903	WRITING & INQUIRY	3
ECN 1203	MICROECONOMICS	3
Credit Hours		17
<b>Spring</b>		
ASI 1024	FUND OF ANIMAL BIO	4
HTY 1303	AMERICAN HISTORY AFTER 1877	3
MTH 1503	COLLEGE ALGEBRA	3
ASI 2203	FEEDS & FEEDING	3
ECN 1303	MACROECONOMICS	3
Credit Hours		16
<b>Second Year</b>		
<b>Fall</b>		
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
MTH 2203	INTRODUCTION TO STATISTICS	3
ACT 1103	ACCOUNTING I	3
ASI 2383	LARGE ANIMAL DISEASES	3
ASI 2303	RANGE MANAGEMENT	3
Credit Hours		15
<b>Spring</b>		
CHM 1014	CHEMISTRY IN CONTEXT I	4
SPC 1113	PUBLIC SPEAKING	3
ASI 2513	MEAT SCIENCE	3
ABM 2854	FARM & RANCH MANAGEMENT	4
Credit Hours		14
Total Credit Hours		62

## Ag education -associate of science, Transfer degree

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
ASI 1001	SUCCESS IN ANIMAL SCIENCE	1
ASI 1304	ANIMAL MANAGEMENT	4
AED 1103	INTRODUCTION TO SECONDARY AGRISCIENCE EDUCATION	3
AEQ 1103	SMALL ENGINES	3
AEQ 1203	WELDING	3
ECN 1203	MICROECONOMICS	3
Credit Hours		17
<b>Spring</b>		
ASI 1024	FUND OF ANIMAL BIO	4
HTY 1303	AMERICAN HISTORY AFTER 1877	3
SPC 1113	PUBLIC SPEAKING	3
MTH 2252	TRIGONOMETRY	2
ENG 1903	WRITING & INQUIRY	3
Credit Hours		15
<b>Summer</b>		
ASI 2906	INTERNSHIP	6
Credit Hours		6

**Second Year****Fall**

MTH 2203	INTRODUCTION TO STATISTICS	3
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
ASI 1213	LIVESTK & CARC EVAL	3
Credit Hours		13

**Spring**

CHM 1014	CHEMISTRY IN CONTEXT I	4
AED 1233	PLANNING, LEADERSHIP AND EXPERIENTIAL PROGRAMS	3
ASI 2513	MEAT SCIENCE	3
ECN 1303	MACROECONOMICS	3
Credit Hours		13
Total Credit Hours		64

PLEASE NOTE: No more than 60 credit hours earned at a two-year college can be applied to a baccalaureate degree from UNL.

Student will receive a B.A.S. degree from University of Nebraska-Lincoln (UNL) Lincoln, Nebraska

## APS Agronomy and Agricultural Mechanics

### Faculty

**Brad Ramsdale, Academic Lead**, Ph.D., Associate Professor

**Dan Stehlik**, Lecturer

### Mission

The Agronomy-Agricultural Mechanics Division is dedicated to the development of innovative individuals in the agronomy, horticulture and agricultural equipment disciplines. These degree programs prepare students for lifelong careers in agronomy, horticulture, and ag equipment industries. Graduates gain technical knowledge necessary for success in their chosen career path and obtain skills for lifelong learning and community leadership.

NCTA's campus includes a farm laboratory with over 500 acres of crop and pasture land combined. The farm has three center-pivots including a state-of-the-art Reinke center-pivot irrigation system. Ag mechanics, welding and irrigation technology laboratories are fully equipped. Additionally, the NCTA greenhouse and high tunnel, Nebraska Statewide Arboretum affiliate site and campus ground, and the surrounding community provide living laboratories for horticulture students.

### Agronomy-Ag Mechanics Core Courses

The following courses are required for all Associate of Applied Science degree options.

AGR 2903	INTERNSHIP	3
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
or ECN 1203	MICROECONOMICS	

ABM 2963	FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING	3
or ACT 1103	ACCOUNTING I	
ABM 2854	FARM & RANCH MANAGEMENT	3-4
or MGT 2103	MGT CONCEPTS	
AGR 2983	CAPSTONE	3
Total Credit Hours		15-16

## Agricultural Equipment Management Option-Associate of Applied Science Degree

- Students will be able to safely operate, troubleshoot and maintain agricultural equipment.

### Associate of Applied Science Core

Complete requirements	17
Credit Hours Subtotal:	17

### Agronomy-Ag Mechanics Core

Complete requirements	15-16
Credit Hours Subtotal:	16

### Equipment Management Courses

Select 20 credits of the following: 20

AEQ 1071	INDUSTRIAL SAFETY
AEQ 1103	SMALL ENGINES
AEQ 1171	FARM EQUIP & SAFETY
AEQ 1203	WELDING
AEQ 1313	INTERMEDIATE WELDING
AEQ 1501	INTRODUCTION TO ELECTRIC CODE
AEQ 1503	DC CIRCUIT ANALYSIS
AEQ 1513	AC CIRCUIT ANALYSIS
AEQ 1651	HARVEST OPERATIONS
AEQ 2103	AG CHEMICAL APPLICATION
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE
AEQ 2213	ADVANCED WELDING
AEQ 2323	PRECISION FARM TECH
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS
AEQ 2801	REINKE CERTIFICATION

Credit Hours Subtotal: 20

### Electives

Advisor Guided Electives	17-18
Credit Hours Subtotal:	17

Total Credit Hours 70

## Agronomy Industry Management Option-Associate of Applied Science Degree

- Students will be able to apply economically sound and environmentally sustainable agricultural crop production practices in the Great Plains.

### Associate of Applied Science Core

Complete requirements	17
Credit Hours Subtotal:	17

<b>Agronomy-Ag Mechanics Core</b>	
Complete requirements	15-16
Credit Hours Subtotal:	16
<b>Agronomy Option Core</b>	
Complete requirements	23
See below:	
AGR 1091	CROP PRACTICUM I
AGR 1201	SOILS LAB
AGR 1203	PRINCIPLES OF SOILS
MKT 2203	AG MARKETING
AGR 1591	CROP PRACTICUM II
AGR 2091	CROP PRACTICUM III
AGR 2304	SOIL FERTILITY
AGR 2353	PEST MANAGEMENT
AGR 2383	IRRIGATION MANAGEMENT
AGR 2403	CROP MANAGEMENT
Credit Hours Subtotal:	23
<b>Agronomy Specialization</b>	
Select 6 credits of the following:	6
AEQ 1203	WELDING
AEQ 2103	AG CHEMICAL APPLICATION
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE
AEQ 2323	PRECISION FARM TECH
AGR 1103	CROP SCIENCE
AGR 1213	NATURAL RES MNGT
AGR 1891	CROPS JUDGING I
AGR 2892	CROPS JUDGING II
ASI 2303	RANGE MANAGEMENT
Credit Hours Subtotal:	6
<b>Electives</b>	
Advisor Guided Electives	8
Credit Hours Subtotal:	8
Total Credit Hours	70

## Diversified Agriculture Management Option-Associate of Applied Science Degree

- Students will be able to apply economically sound and environmentally sustainable agricultural crop production practices in the Great Plains.

<b>Associate of Applied Science Core</b>	17
<b>Agronomy-Ag Mechanics Core</b>	15-16
Credit Hours Subtotal:	33
<b>Diversified Agriculture Core</b>	
See below:	8
AGR 1203	PRINCIPLES OF SOILS
AGR 1201	SOILS LAB
ASI 1304	ANIMAL MANAGEMENT
Credit Hours Subtotal:	8
<b>Diversified Agriculture Specialization</b>	
Select two of the following:	6-7

AEQ 2323	PRECISION FARM TECH
AGR 2304	SOIL FERTILITY
AGR 2383	IRRIGATION MANAGEMENT
AGR 2353	PEST MANAGEMENT
AGR 2403	CROP MANAGEMENT
AEQ 2103	AG CHEMICAL APPLICATION
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS
Select two of the following:	6
ASI 1203	FEEDLOT SYSTEMS
ASI 1213	LIVESTK & CARC EVAL
ASI 1253	NUTRITION
ASI 2203	FEEDS & FEEDING
ASI 2303	RANGE MANAGEMENT
ASI 2353	LIVESTOCK BREEDING
ASI 2753	BEEF PRODUCTION SYSTEMS
Credit Hours Subtotal:	12
<b>Electives</b>	
Advisor Guided Electives	17
Credit Hours Subtotal:	17
Total Credit Hours	70

## Agronomy Option-Associate of Science Degree (transfer)

- 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.

<b>Associate of Science Core</b>	
Complete requirements	24
Credit Hours Subtotal:	24
<b>Agronomy Specialization</b>	
Select 24 credits of the following:	24
ABM 2854	FARM & RANCH MANAGEMENT
ACT 1103	ACCOUNTING I
AEQ 2323	PRECISION FARM TECH
AGR 1091	CROP PRACTICUM I
AGR 1591	CROP PRACTICUM II
AGR 2091	CROP PRACTICUM III
AGR 1201	SOILS LAB
AGR 1203	PRINCIPLES OF SOILS
AGR 2304	SOIL FERTILITY
ASI 2303	RANGE MANAGEMENT
AGR 2353	PEST MANAGEMENT
AGR 2383	IRRIGATION MANAGEMENT
AGR 2403	CROP MANAGEMENT
ECN 1203	MICROECONOMICS
ECN 1303	MACROECONOMICS
MKT 2203	AG MARKETING
Credit Hours Subtotal:	24
<b>Electives</b>	
Advisor Guided Electives	16

Credit Hours Subtotal:	16
Total Credit Hours	64

## Mechanized Systems Management Option-Associate of Science Degree (transfer)

### Associate of Science Core

Complete requirements	24
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### Mechanized Systems Management Core

ABM 2854	FARM & RANCH MANAGEMENT	
AEQ 1503	DC CIRCUIT ANALYSIS	
AEQ 1513	AC CIRCUIT ANALYSIS	
AGR 1201	SOILS LAB	
AGR 1203	PRINCIPLES OF SOILS	
AGR 2304	SOIL FERTILITY	
AGR 2403	CROP MANAGEMENT	
ASI 1304	ANIMAL MANAGEMENT	
ECN 1203	MICROECONOMICS	
ECN 1303	MACROECONOMICS	

Credit Hours Subtotal:	53
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### Electives

Advisor Guided Electives	11
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Credit Hours Subtotal:	11
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Total Credit Hours	64
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## Ag Chemical Application Certificate

- Students will be able to mix and apply agricultural chemicals safely and efficiently.
- Students will be able to interact professionally with colleagues and clients.

### Ag Chemical Application, Certificate

AEQ 2103	AG CHEMICAL APPLICATION	3
AEQ 2323	PRECISION FARM TECH	3
AGR 2353	PEST MANAGEMENT	3
Advisor Guided Electives (AGR or AEQ)		6
AGR 1881	APPLIED AGRICULTURAL EXPERIENCE	1-3
or AGR 2903	INTERNSHIP	

Total Credit Hours	16-18
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## agriculture certificate

- Provide foundational knowledge in crop and animal food production systems and a basic understanding of natural resource and agribusiness management.

AGR 1011	AGRICULTURAL CAREERS	1
AGR 1103	CROP SCIENCE	3
AGR 1213	NATURAL RES MNGT	3
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
ASI 1253	NUTRITION	3
Advisor Guided Electives		3

Total Credit Hours	16
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## Irrigation Technician Certificate

- Students will gain a foundational knowledge in electricity and mechanized irrigation systems in order to effectively and safely service, repair, troubleshoot, and install center-pivot systems.
- Students will be able to interact professionally with colleagues and clients.

### Irrigation Technician, Certificate

AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	1
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS	4
AEQ 2801	REINKE CERTIFICATION	1
SPC 1103	SALES COMM	3

Total Credit Hours	16
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## Welding Certificate

- Students will be able to perform welding and fabrication technical skills.
- Students will be able to interact professionally with colleagues and clients.

### Agricultural Welding, Certificate

AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1203	WELDING	3
AEQ 1313	INTERMEDIATE WELDING	3
AEQ 2213	ADVANCED WELDING	3
AGR 2903	INTERNSHIP	3

Total Credit Hours	13
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## Crop Production Certificate

- Students will gain a foundational knowledge in crop production related principles and practices.

### Required General Education Credits

Complete requirements	6
Credit Hours Subtotal:	6

### Crop Production Emphasis

Select 18 credits of the following:	18
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AEQ 1203	WELDING	
AEQ 2103	AG CHEMICAL APPLICATION	
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE	
AEQ 2323	PRECISION FARM TECH	
AGR 1201	SOILS LAB	
AGR 1203	PRINCIPLES OF SOILS	
AGR 2304	SOIL FERTILITY	
AGR 2383	IRRIGATION MANAGEMENT	
AGR 2353	PEST MANAGEMENT	
AGR 2403	CROP MANAGEMENT	

Credit Hours Subtotal:	18
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### Electives

Advisor Guided Electives	6
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Credit Hours Subtotal:	6
Total Credit Hours	30

## Diversified Agriculture Certificate

- Students will gain a foundational knowledge in crop and livestock production principles and practices.

### Required General Education Credits

Complete requirements	6
Credit Hours Subtotal:	6

### Diversified Agriculture Emphasis

Select 12 credits from AGR, AEQ, or ASI courses	12
Credit Hours Subtotal:	12

### Electives

Advisor Guided Electives	12
Credit Hours Subtotal:	12

Total Credit Hours	30
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### AEQ 1071 INDUSTRIAL SAFETY

**Description:** Designed to acquaint students with standard industry practices and emergency procedures and develop an awareness of job hazards. Students will prepare for a CPR/First Aid exam and receive some bulk handling equipment training (forklift/skid steer).

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### AEQ 1103 SMALL ENGINES

**Description:** A complete course in gasoline engine operation. It consists of operational theory and nomenclature including the internal components and its air, fuel, lubrication, and cooling system. This course will emphasize small and multi-cylinder gas and diesel engines.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1153 EQUIPMENT PRINCIPLES

**Description:** Students will be exposed to the basic principles of agricultural equipment including power trains, hydraulics, fuel systems and electricity. Alternative devices will be studied.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1171 FARM EQUIP & SAFETY

**Description:** An orientation into the safe operation of tractors, combines, balers, skid loaders, and other common farm equipment. Students will be expected to demonstrate their ability to safely operate several types of equipment.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### AEQ 1203 WELDING

**Description:** Develop fundamental skills and procedures for oxy/acetylene, arc, and wire feed welding in flat position. Included will be basic blueprint interpretation and weld symbols, with metal cutting and preparation techniques.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1313 INTERMEDIATE WELDING

**Description:** (Pre req: AEQ 1203 or equivalent) Develop skills in vertical, horizontal and overhead position arc and wire feed welding. Plasma Arc Cutting and a small assigned construction project are included. Use of a spool gun and TIG equipment will be introduced.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1501 INTRODUCTION TO ELECTRIC CODE

**Description:** Introduction to Nebraska state electrical law and the National Electric Code as they pertain to the working electrician.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### AEQ 1503 DC CIRCUIT ANALYSIS

**Description:** Fundamentals of DC electricity as applied to series, parallel, and series-parallel circuits. Diagnosis and troubleshooting of circuits with test equipment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1513 AC CIRCUIT ANALYSIS

**Description:** Fundamentals of AC electricity including alternating current theory, waveform quantities and characteristics, and network analysis. Diagnosis and troubleshooting simple circuits with proper test equipment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### AEQ 1651 HARVEST OPERATIONS

**Description:** The course will primarily focus on grain harvest operations. Grain combine setup and operation will be emphasized. Students will gain an understanding of factors influencing harvest efficiency including estimating harvest losses. Combine yield monitor operation will also be included.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AEQ 1713 CARPENTRY**

**Description:** Learning basic tools and techniques of carpentry as it would pertain to a farm and ranch, including selection, use and maintenance of hand and power tools; selection of wood construction materials; construction of joints; application of finishes; and using these basic skills to follow a plan in the construction of a functional project.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2103 AG CHEMICAL APPLICATION**

**Description:** A course to provide career based training for a commercial applicator of pesticides, fertilizers and other agricultural chemicals. A foundation for the safe and effective use of agricultural chemicals will be emphasized. Students will gain experience and knowledge in the calibration, operation and maintenance of agricultural chemical application equipment. Preparation for obtaining a commercial pesticide applicator license will be included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2211 HYDRAULICS**

**Description:** Basic study of hydraulic concepts, applications, and operation as applied to power equipment systems. This class also includes study of the diagnosis of power equipment with the emphasis on hydraulic problems.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AEQ 2213 ADVANCED WELDING**

**Description:** (Pre req: AEQ 1313 or equivalent) Students will develop skills using a spool gun and TIG welding, and additional arc and wire feed welding on a wide variety of metals. The second eight weeks is devoted toward preparation for American Welding Society certification.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2303 EQUIP PREVENTATIVE MAINTENANCE**

**Description:** A study of economic principles and principles of operation, adjustments, repair, maintenance, and tune-up of farm vehicles (automotive, tractors, and powered farm equipment vehicles).

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2323 PRECISION FARM TECH**

**Description:** A course designed to acquaint students with the basic skills of farm map creation, GPS hardware components, software choices, decision making skills and application of GPS/GIS in the agriculture industry for improved crop management and protection of the environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2404 MECHANIZED IRRIGATION SYSTEMS**

**Description:** Prerequisites: AEQ 1501, AEQ 1503, AEQ 1513.

Fundamentals of mechanized irrigation systems focusing on center-pivot components. Technical service and operation will be emphasized. Application of industrial electrical components and controls.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AEQ 2413 DIESEL ENGINE**

**Description:** A study of cost effective maintenance programs for agriculture power equipment. Included is nomenclature, operational theory, adjustment and maintenance of agriculture gasoline and diesel engines. Lab includes the disassembly of a diesel engine.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2604 WELDING APPRENTICESHIP**

**Description:** (Pre req: approval by Division Chair) The apprenticeship 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. The internship must last a minimum of 8 weeks averaging at least 40 hours per week. A written journal of daily work activities plus a 10 minute PowerPoint presentation are required upon completion. Students must submit a list of learning objectives prior to the apprenticeship and include discussion of these within their presentation. The student and employee will also complete a survey at the conclusion of the apprenticeship.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Pass No Pass

**AEQ 2801 REINKE CERTIFICATION**

**Description:** Prerequisites: AEQ 1501, AEQ 1503, AEQ 1513. Students will complete the Reinke Platinum PLUS Certified Technician training program. The course is an on-line training program developed by Reinke with integrated exams at the end of each training module. Students will be expected to complete the training sessions on their own time; however, faculty assistance will be available. To receive a Pass for the course, students must meet performance standards established by Reinke.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**AGR 1011 AGRICULTURAL CAREERS**

**Description:** Students will be exposed to the great diversity of careers that support the agricultural industry. Educational requirements to prepare for these agricultural careers will also be explored.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1073 INVASIVE PLANTS**

**Description:** Invasive plants can be found nearly everywhere on Earth. The flora of our planet is constantly being redistributed by either natural or human forces. The change in locations of plant species has affected, and continues to affect, ecosystems around the world. In this course, students will learn how invasive plants are able to establish in regions outside of their native range. Students will develop an understanding of the importance of invasive plants at the global scale and learn how species, which are fairly being in on ecosystem, can have significant negative impacts in others. The focus will be on how and why invasive plants become established and their impacts on ecosystems.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1091 CROP PRACTICUM I**

**Description:** This is the first course of a 3-course sequence that integrates students into the crop production on NCTA's farm laboratory. Students will work as a team to develop a crop management plan for one of NCTA's crop fields. The plan will include actual production practices, budgeting and marketing of the harvested crop. Crop planting and harvest will be conducted by the students and possibly some ag chemical applications. Due to farm size limitations, the practicum courses will be limited to just Agronomy majors.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1103 CROP SCIENCE**

**Description:** Students will develop a global understanding of the food, feed, and fiber system. Crop production strategies to maximize yield and quality while sustaining resources and the environment will be emphasized. Principles of crop growth and development, pest management and technology for crop production will be covered.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1116 AGRICULTURE APPLICATIONS**

**Description:** This course is designed for students to gain experience in handling conditions on the farm daily. Students will receive hands on experience.

**Credit Hours:** 6

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 1201 SOILS LAB**

**Description:** Laboratory activities dealing with physical, biological and chemical properties of soils that support plant growth.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1203 PRINCIPLES OF SOILS**

**Description:** A study of soil formation, physical, biological and chemical properties of soil with attention given to conditions that affect plant growth. Impacts of crop management on soil quality will be emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1213 NATURAL RES MNGT**

**Description:** A study of our natural resources with special emphasis on soil and water management including land classification, conservation practices, and protection methods used to conserve our natural resources, plus the role of government agencies in Natural Resource Management.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1591 CROP PRACTICUM II**

**Description:** This course is the second of a three course sequence that will be required for all agronomy majors. The 3-course practicum sequence will provide another direct assessment of the agronomy program learning outcome of "applying economically sound and environmentally sustainable agriculture crop production practices." The practicum courses will also increase student utilization of the college's farm laboratory.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1603 INTRODUCTION TO URBAN AGRICULTURE**

**Description:** An introduction to the history, definitions, principles, practices, and innovations of agricultural production in urban and pre-urban settings. Topics will include urban farming systems including traditional and emerging systems such as controlled environment and hydroponics, animal systems in urban settings, urban food systems, community gardens, policies regarding urban agriculture, food access and security, urban agriculture's role in community and society, agricultural marketing in urban setting, and sustainable urban agricultural best practices.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1661 AGRONOMY ORIENTATION**

**Description:** This course will provide students the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities. It will also include group activities to help formulate career goals, improve academic success skills, develop a resume and select and appropriate internship.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1881 APPLIED AGRICULTURAL EXPERIENCE**

**Description:** Instructor permission required for enrollment. The course will provide agricultural experiential learning activities that meet the specific needs of the academic program pursued. Learning experiences will emphasize hand's-on activities in the field or laboratory that reflects the student's chosen career. Experiences will be designed collaboratively between NCTA and any collaborating partners. Credit hours for the experience will be awarded to match the experience and meet requirement designated in the Credit Hour Policy.

**Credit Hours:** 1-6

**Min credits per semester:** 1

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 1891 CROPS JUDGING I**

**Description:** This course will cover all principles of agronomy to prepare students to compete in crops judging contests that operate under the North American Colleges and Teachers of Agriculture (NACTA) contest guidelines.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 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

**AGR 2002 WILDLIFE HABITAT MGT**

**Description:** A course that studies the most common Nebraska Wildlife species that are managed for harvest throughout the state. The habitat requirements and management techniques for each wildlife species will be covered. Current wildlife habitat support programs will be reviewed.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**AGR 2091 CROP PRACTICUM III**

**Prerequisites:** AGR 1591 Crop Practicum II

**Description:** This is the third of a 3-course sequence that integrates students into the crop production of NCTA's farm laboratory. Students will work as a team to develop a crop management plan for one of NCTA's irrigated crop fields. The plan will include actual production practices, budgeting and marketing of the harvested crop. Crop planting and harvest will be conducted by the students and possibly some ag chemical applications. Due to farm size limitations, the practicum courses will be limited to just Agronomy majors.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 2103 BUILDING CONSTRUCTION**

**Description:** A study of materials, techniques, and design used for farm and ranch facilities. Lab time will include the construction of Ag building, fences, and facilities on the NCTA campus.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2153 ORGANIC FOOD PRODUCTION**

**Description:** An introduction to the history, definitions, principles, and practices of organic food production. Topics include soil husbandry, integrated pest management, farming systems including diversified vegetables, perennial fruit, agronomic field crops, meat, egg, and milk production, organic certification, and marketing.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2201 COMMERCIAL AG CARRIER**

**Description:** A course of study designed to enable students to successfully obtain their CDL with all necessary endorsements. This course of study targets agricultural employees and producers. It is not intended for those seeking fulltime employment as commercial truck drivers. (Pre req: Must be a full time NCTA student)

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**AGR 2304 SOIL FERTILITY**

**Description:** Dynamics of essential plant nutrients in the soil environment. Sustainable and profitable fertility management of agronomic and horticultural crops will be emphasized. Characteristics of the fertilizer materials, fertilizer application methods and fertilizer rate calculations will be covered.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AGR 2353 PEST MANAGEMENT**

**Description:** Identification of plant pests, including morphology and life cycles of selected insects, weeds and diseases. Pest control methods will include chemical, physical, mechanical, cultural and biological techniques. Application of integrated pest management will be stressed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2383 IRRIGATION MANAGEMENT**

**Description:** Efficient irrigation management strategies of agronomic crops. Irrigation techniques, irrigation scheduling, equipment selection, and water use regulations will be covered. Sustainable utilization of our water resources will be emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2403 CROP MANAGEMENT**

**Description:** Integration of principles of crop and soil science, plant breeding, climatology and integrated pest management in the development and evaluation of crop management practices. Students will be able to apply economically sound and environmentally sustainable crop production strategies in the Great Plains.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2714 FARM BEGINNINGS**

**Description:** The Farm Beginnings Program consists of a series of sessions offered throughout the year by Nebraska Extension with cooperation from NCTA. The sessions focus on alternative agriculture and cover a variety of topics, including building networks, goal setting, whole farm planning, building your business plan, marketing, business and farm management and financials management. In addition to learning first-hand from successful farmers, participants will develop their own business plan as they progress through the course.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AGR 2892 CROPS JUDGING II**

**Description:** This course will cover all principles of agronomy to prepare students to compete in crops judging contests that operate under the North American College and Teachers of Agriculture (NACTA) contest guidelines.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 2903 INTERNSHIP**

**Description:** (Pre req: approval by Division Chair) 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. The internship must last a minimum of 8 weeks averaging at least 40 hours per week (NOTE: students must honor length agreed upon by employer). A written journal of daily work activities plus a 10 minute PowerPoint presentation are required upon returning from internship. Students must submit a list of learning objectives prior to the internship and include discussion of these with their presentation. The student and employer will also complete a survey at the conclusion of the internship.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**AGR 2983 CAPSTONE**

**Description:** This course is designed to culminate the student's experience in their APS or AMS program and will focus on tying together functional aspects of a farm, ranch, or entrepreneurial venture. The class will culminate with a workable business plan, understand the legal and regulatory environment of their proposed enterprise, and be ready to move into formation. Included in this plan will include facility design, applicable management plans, and a complete financial package for the proposed operation that will include a cash flow, net worth, one year and three year budget, and what-if analysis. This course allows students an opportunity to integrate tools learned in their respective program.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 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, Advisor, and Division Chair)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

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 in their chosen career pathway.
3. Students will be able to apply economic principles of accounting, marketing and budgeting to agronomy or agricultural mechanics enterprises.
4. Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)

## Ag Equipment

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AEQ 1203	WELDING	3
AEQ 1501	INTRODUCTION TO ELECTRIC CODE	1
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
AGR 1661	AGRONOMY ORIENTATION	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
SPC 1103	SALES COMM	3
Credit Hours		17
<b>Spring</b>		
AEQ 1071	INDUSTRIAL SAFETY	1
AEQ 1313	INTERMEDIATE WELDING	3
AEQ 2404	MECHANIZED IRRIGATION SYSTEMS	4
AEQ 2801	REINKE CERTIFICATION	1
ACT 1103	ACCOUNTING I	3

MTH 1403	AGRICULTURAL MATHEMATICS	3
ENG 1503	TECHNICAL COMMUNICATION I	3
Credit Hours		18
<b>Summer</b>		
AGR 2903	INTERNSHIP	3
Credit Hours		3
<b>Second Year</b>		
<b>Fall</b>		
AEQ 1103	SMALL ENGINES	3
AEQ 2213	ADVANCED WELDING	3
ABM 2854	FARM & RANCH MANAGEMENT	4
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
Credit Hours		17
<b>Spring</b>		
AEQ 2303	EQUIP PREVENTATIVE MAINTENANCE	3
AGR 2983	CAPSTONE	3
AEQ 2103	AG CHEMICAL APPLICATION	3
Electives		6
Credit Hours		15
Total Credit Hours		70

## Agronomy

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AGR 1203	PRINCIPLES OF SOILS	3
AGR 1201	SOILS LAB	1
AGR 1091	CROP PRACTICUM I	1
AGR 1661	AGRONOMY ORIENTATION	1
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
Electives		3
Credit Hours		16
<b>Spring</b>		
AGR 2304	SOIL FERTILITY	4
AGR 1591	CROP PRACTICUM II	1
AEQ 2323	PRECISION FARM TECH	3
ACT 1103	ACCOUNTING I	3
MTH 1403	AGRICULTURAL MATHEMATICS	3
SPC 1103	SALES COMM	3
Credit Hours		17
<b>Summer</b>		
AGR 2903	INTERNSHIP	3
Credit Hours		3

### Second Year

#### Fall

AGR 2353	PEST MANAGEMENT	3
AGR 2383	IRRIGATION MANAGEMENT	3
AGR 2091	CROP PRACTICUM III	1
ABM 2854	FARM & RANCH MANAGEMENT	4
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
ENG 1503	TECHNICAL COMMUNICATION I	3
Credit Hours		17
<b>Spring</b>		
AGR 2403	CROP MANAGEMENT	3
MKT 2203	AG MARKETING	3
AGR 2983	CAPSTONE	3
AEQ 2103	AG CHEMICAL APPLICATION	3
Electives		5
Credit Hours		17
Total Credit Hours		70

## Diversified Agriculture

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AGR 1203	PRINCIPLES OF SOILS	3
AGR 1201	SOILS LAB	1
AGR 1661	AGRONOMY ORIENTATION	1
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
ECN 1103	INTRODUCTION TO AG ECONOMICS	3
Electives		4
Credit Hours		16
<b>Spring</b>		
AGR 2304	SOIL FERTILITY	4
ACT 1103	ACCOUNTING I	3
MTH 1403	AGRICULTURAL MATHEMATICS	3
SPC 1103	SALES COMM	3
Electives		3
Credit Hours		16
<b>Summer</b>		
AGR 2903	INTERNSHIP	3
Credit Hours		3
<b>Second Year</b>		
<b>Fall</b>		
ASI 1304	ANIMAL MANAGEMENT	4
ASI 1253	NUTRITION	3
ABM 2854	FARM & RANCH MANAGEMENT	4
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3

Electives	3
Credit Hours	17
<b>Spring</b>	
ASI 2753	BEEF PRODUCTION SYSTEMS 3
MKT 2203	AG MARKETING 3
AGR 2983	CAPSTONE 3
Electives	6
ENG 1503	TECHNICAL COMMUNICATION I 3
Credit Hours	18
Total Credit Hours	70

## Agronomy Transfer Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AGR 1203	PRINCIPLES OF SOILS	3
AGR 1201	SOILS LAB	1
AGR 1091	CROP PRACTICUM I	1
AGR 1661	AGRONOMY ORIENTATION	1
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
ECN 1203	MICROECONOMICS	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Credit Hours		16
<b>Spring</b>		
AGR 2304	SOIL FERTILITY	4
AGR 1591	CROP PRACTICUM II	1
MTH 2252	TRIGONOMETRY	2
ECN 1303	MACROECONOMICS	3
ENG 1903	WRITING & INQUIRY	3
HTY 1303	AMERICAN HISTORY AFTER 1877	3
Credit Hours		16
<b>Second Year</b>		
<b>Fall</b>		
AGR 2353	PEST MANAGEMENT	3
MTH 2203	INTRODUCTION TO STATISTICS	3
AGR 2091	CROP PRACTICUM III	1
ABM 2854	FARM & RANCH MANAGEMENT	4
Electives		5
Credit Hours		16
<b>Spring</b>		
AGR 2403	CROP MANAGEMENT	3
CHM 1014	CHEMISTRY IN CONTEXT I	4
MKT 2203	AG MARKETING	3
SPC 1113	PUBLIC SPEAKING	3

Elective	3
Credit Hours	16
Total Credit Hours	64

## Mechanized Systems Management transfer

### Suggested Sequence of Study

Course	Title	Credit Hours
<b>First Year</b>		
<b>Fall</b>		
AGR 1201	SOILS LAB	1
AGR 1203	PRINCIPLES OF SOILS	3
AGR 1661	AGRONOMY ORIENTATION	1
BIO 1313	PLANT SCIENCE	3
BIO 1321	AGRONOMIC PLANT SCIENCE LABORATORY	1
ECN 1203	MICROECONOMICS	3
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Credit Hours		15
<b>Spring</b>		
AGR 2304	SOIL FERTILITY	4
MTH 2252	TRIGONOMETRY	2
ECN 1303	MACROECONOMICS	3
ENG 1903	WRITING & INQUIRY	3
Electives		4
Credit Hours		16
<b>Second Year</b>		
<b>Fall</b>		
AEQ 1503	DC CIRCUIT ANALYSIS	3
AEQ 1513	AC CIRCUIT ANALYSIS	3
MTH 2203	INTRODUCTION TO STATISTICS	3
ABM 2854	FARM & RANCH MANAGEMENT	4
ASI 1304	ANIMAL MANAGEMENT	4
Credit Hours		17
<b>Spring</b>		
AGR 2403	CROP MANAGEMENT	3
CHM 1014	CHEMISTRY IN CONTEXT I	4
SPC 1113	PUBLIC SPEAKING	3
AEQ 2323	PRECISION FARM TECH	3
HTY 1303	AMERICAN HISTORY AFTER 1877	3
Credit Hours		16
Total Credit Hours		64

## Veterinary Technology Systems Division Chair Faculty

**Barbara Berg, Academic Lead/Program Director**, LVT, Assistant Professor  
**Elizabeth Fraser, D.V.M.**, Assistant Professor  
**Judy Bowmaster Cole, LVT**, Assistant Professor

Ricky Sue Barnes Wach, D.V.M, Professor

## Veterinary Technology (ANIMAL HEALTH) Mission

The Veterinary Technology Systems division is dedicated to the development of innovative individuals for careers in the animal health industry. The focus of the Veterinary Technology Associate of Applied Science degree is to provide the hands-on skills and academic background needed for graduates to accept and be successful in career opportunities within the animal health industry, be lifelong learners and involved community members. NCTA maintains a wide variety of animals to provide the students with a consistent and broad background of experience.

## ASSOCIATE OF APPLIED SCIENCE DEGREE OPTIONS

- Veterinary Technician Option
  - Eligible to sit for the Veterinary Technician National Exam (VTNE) and become a licensed veterinary technician.
- Veterinary Assistant Option
- Animal Husbandry Option
- Animal Health Management Option
- Equine Health Care Option

## Certificates

- Animal Health Care Certificate

## Associate of Applied Science-Veterinary Technician Option

The focus of NCTA's Associate of Applied Science, Veterinary Technician Option is to provide the hands-on skills and academic background needed to accept career opportunities as an entry level veterinary technician. The program is American Veterinary Medical Association (AVMA) accredited with the curriculum based around the AVMA essential tasks and skill list. Veterinary Technology – Technician Option graduates are qualified to sit for the VTNE and become a licensed Veterinary Technician. NCTA maintains a wide variety of animals to provide the students with a consistent and broad background of experience. The program requires structured classes covering AVMA essential skills, an 8 week internship, passing the exit exam and a CGPA of 80%.

## Veterinary Technician Option Entrance Requirements

### Observation hours

Observation hours are a prerequisite for Facility Management class. Incoming students need to spend 20 hours observing or working with technicians and veterinarians in a veterinary practice. We want prospective technicians to know the work and hours that go into caring for the animals people love and care for. Most clinics are very happy to let you observe once you explain that you are pursuing veterinary technology as a career.

### Background classes

A strong background in math and science is recommended.

### ACT Score

An ACT Score of 18 or higher is recommended to enroll in and complete the Veterinary Assistant or the Technician Option Honors Program in two years. With an ACT score of less than 18, it is recommended that students plan to complete the program in 3 years. The Animal Husbandry,

Equine Health, and Animal Health Management Option are open to all students and can be completed in 2 years.

## Veterinary Technologist

A baccalaureate degree as a Veterinary Technologist can be pursued through a collaborative effort with NCTA's Veterinary Technician Option Degree and the University of Nebraska-Lincoln. Students interested should inform their advisor of their intent upon initial registration.

## Final Assessment – Veterinary Technician Option - Exit Exam

The Exit Exam is one required criteria for the Veterinary Technician Option. At the end of the student's last spring semester session, the Veterinary Technician Exit Exam is offered. To be eligible to take this exam the Vet Tech student must be able to have successfully completed (with the exception of internship) all required credit hours by the end of the semester. The entire comprehensive examination must be passed with an average grade of 70% or better and each section must be passed with a minimum grade of 60% or higher. A maximum of two sections may be repeated during the provided repeat time. Each student must complete the required classes, have a CGPA of 80% and pass the Exit Exam to graduate with the Veterinary Technician Option.

## Final Assessment – Veterinary Assistant

Upon successful completion of the Veterinary Assistant Option students will be able to demonstrate the academic background needed to enter the work force as an entry level assistant. This is assessed through the VT Exit Exam. The Exit exam is taken at the same time as Technician Option students but without passing grade requirements.

## Final Assessment - Veterinary Technology Animal Husbandry, Animal Health Care Management, Equine Healthcare

The 200 question written comprehensive final assessment is administered at the end of student's last on-campus semester/session.

## Veterinary Technology Handbook

All Veterinary Technology students should read the Veterinary Technology Student Handbook that can be found on the NCTA web page.

## Veterinary Technician Option and Licensing

To be eligible to work as or to refer to yourself as a veterinary technician in Nebraska, one must graduate from an AVMA accredited Veterinary Technology Program (Technician Option), pass the VTNE, and become licensed with the state. Each student must complete the required credit hours of classes, have a CGPA of 80% and pass the exit exam to graduate with the Veterinary Technician Option and be eligible to become a licensed technician.

## Veterinary Technician Option-Associate of applied science Degree

The Veterinary Technician Option requires the successful completion of all required classes, an 8 week internship, passing the exit exam and a CGPA of 80%.

<i>College General Education Core</i>	17
<i>Veterinary Technology Required Courses</i>	51
VTS 1301	MEDICAL TERMINOLOGY
VTS 1403	ANATOMY AND PHYSIOLOGY



VTS 1511	LARGE ANIMAL TECHNIQUES I	
VTS 1513	ANIMAL CARE	
VTS 1521	LARGE ANIMAL TECHNIQUES II <sup>(P)</sup>	
VTS 1542	FACILITY MANAGEMENT <sup>(P)</sup>	
VTS 1713	PHARMACY-ANESTHESIA <sup>(P)</sup>	
VTS 1822	RADIOLOGY I <sup>(P)</sup>	
VTS 2331	CLINICAL PRACTICES <sup>(P)</sup>	
VTS 2533	LARGE ANIMAL TECHNIQUES III <sup>(P)</sup>	
VTS 2563	FUR AND FEATHER	
VTS 2583	NURSING I <sup>(P)</sup>	
VTS 2593	NURSING II <sup>(P)</sup>	
VTS 2652	PARASITOLOGY <sup>(P)</sup>	
VTS 2662	HEMATOLOGY <sup>(P)</sup>	
VTS 2672	CLINICAL PATHOLOGY <sup>(P)</sup>	
VTS 2733	DISEASES OF VET MED <sup>(P)</sup>	
VTS 2823	RADIOLOGY II <sup>(P)</sup>	
VTS 2933	ANESTHESIOLOGY <sup>(P)</sup>	
VTS 2954	SURGERY PREPARATION <sup>(P)</sup>	
Nutrition-selection one 3 credit hour nutrition		
VTE 2423	CANINE & FELINE NUTRITION	
VTE 2623	FEEDING THE EQUINE PATIENT	
ASI 1253	NUTRITION	
<i>Internship</i>		<b>3</b>
VTS 2243	VETERINARY TECHNOLOGY INTERNSHIP	
Total Credit Hours		<b>71</b>

(P) denotes that there is a prerequisite class that must be passed with a 70% or above.

**Students with ACT Less Than 18 will need to take:**

ENG 103	INTRODUCTION TO COLLEGE READING AND WRITING	<b>3</b>
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and complete the program over 3 years instead of 2 years, taking 12 to 15 hours each semester

**Veterinary Assistant Option-Associate of applied science Degree**

The Veterinary Assistant Option requires the successful completion of all required classes, an 8 week internship and a CGPA of 70%.

The course work is the same as the Veterinary Technician Option above. Please see Veterinary Technician Option.

**Animal Husbandry Option-Associate of Applied Science Degree**

<b>Associate of Applied Science-General Education Core</b>		<b>17</b>
<b>Internship</b>		<b>3</b>
VTS 2243	VETERINARY TECHNOLOGY INTERNSHIP	
<b>Veterinary Technology Courses</b>		<b>3</b>
VTS 1822	RADIOLOGY I <sup>(P)</sup>	
	or VTE 2821 RADIATION SAFETY	
VTS 1542	FACILITY MANAGEMENT <sup>(P)</sup>	
	or ASI 1442 EQUINE PRACTICUM I	

<b>Veterinary Technology Classes (advisor guided)</b>		<b>31</b>
VT or APS Advisory guided classes		<b>14</b>
<b>Electives</b>		<b>3</b>
Total Credit Hours		<b>71</b>

**Students with ACT Less Than 18 will take:**

ENG 103	INTRODUCTION TO COLLEGE READING AND WRITING	<b>3</b>
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**Animal health management Option-Associate of Applied Science Degree**

<b>Associate of Applied Science-General Education Core</b>		<b>17</b>
<b>Veterinary Technology Internship</b>		<b>3</b>
<b>Required Veterinary Technology Courses</b>		<b>6</b>
VTS 1301	MEDICAL TERMINOLOGY	
VTS 1513	ANIMAL CARE	
VTS 1511	LARGE ANIMAL TECHNIQUES I	
VTE 2821	RADIATION SAFETY	
<b>Select One Nutrition Class</b>		<b>3</b>
ASI 1253	NUTRITION	
VTE 2423	CANINE & FELINE NUTRITION	
VTE 2623	FEEDING THE EQUINE PATIENT	
<b>Choose 18 Credit hours from the following (advisor guided):</b>		<b>18</b>
AEQ 1171	FARM EQUIP & SAFETY	
ASI 1253	NUTRITION	
ASI 1501	EQUINE SAFETY	
ASI 2353	LIVESTOCK BREEDING	
ASI 2611	EQUINE REPRODUCTION I	
VTE 1623	EQUINE LABORATORY DIAGNOSTICS	
VTE 1633	EQUINE DISEASES	
VTE 1643	EQUINE HEALTH RECORDS	
VTE 2423	CANINE & FELINE NUTRITION	
VTE 2623	FEEDING THE EQUINE PATIENT	
VTE 2811	ULTRASOUND	
VTS 1403	ANATOMY AND PHYSIOLOGY	
VTS 1513	ANIMAL CARE	
VTS 1521	LARGE ANIMAL TECHNIQUES II	
VTS 1542	FACILITY MANAGEMENT	
VTS 1713	PHARMACY-ANESTHESIA	
VTS 1822	RADIOLOGY I	
VTS 2733	DISEASES OF VET MED	
VTS 2533	LARGE ANIMAL TECHNIQUES III	
VTS 1822	RADIOLOGY I	
VTS 2563	FUR AND FEATHER	
<b>Select 24 Credit Hours from the following Business courses:</b>		<b>24</b>
ABM 2963	FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING	
ABM 2103	PERSONAL FINANCE	
ABM 2403	AG FINANCE	
ABM 2503	AGRICULTURAL DECISION ANALYSIS	
ABM 2854	FARM & RANCH MANAGEMENT	
ABM 2903	ENTREPRENEURSHIP	

ACT 1103	ACCOUNTING I
ECN 1103	INTRODUCTION TO AG ECONOMICS
ECN 1203	MICROECONOMICS
ECN 1303	MACROECONOMICS
ECN 1803	STATISTICS
MGT 2103	MGT CONCEPTS
MGT 2503	HUMAN RESOURCES MGT
MKT 2103	RETAIL MARKETING
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Total Credit Hours	71

## Equine Health Option-Associate of Applied Science Degree

<b>Associate of Applied Science-General Education Core</b>	<b>17</b>
<b>Veterinary Technology Internship</b>	<b>3</b>
<b>Required Veterinary Technology Courses</b>	<b>43</b>

ASI 1442	EQUINE PRACTICUM I
ASI 1501	EQUINE SAFETY
ASI 2433	EQUINE INDUS MNGT I
VTE 1623	EQUINE LABORATORY DIAGNOSTICS (P)
VTE 1633	EQUINE DISEASES
VTE 1643	EQUINE HEALTH RECORDS
VTE 2613	EQUINE SURGERY AND ANESTHESIA
ASI 2611	EQUINE REPRODUCTION I
VTE 2623	FEEDING THE EQUINE PATIENT
VTE 2643	EQUINE NURSING
VTS 1301	MEDICAL TERMINOLOGY
VTS 1403	ANATOMY AND PHYSIOLOGY
VTS 1511	LARGE ANIMAL TECHNIQUES I
VTS 1521	LARGE ANIMAL TECHNIQUES II (P)
VTS 1713	PHARMACY-ANESTHESIA (P)
VTS 1822	RADIOLOGY I (P)
VTS 2533	LARGE ANIMAL TECHNIQUES III (P)
VTS 2823	RADIOLOGY II (P)

**Choose 8 Credit hours from the following (advisor guided): 8**

ACT 1103	ACCOUNTING I
AEQ 1171	FARM EQUIP & SAFETY
ASI 1241	RANCH HORSE I
ASI 1253	NUTRITION
ASI 1263	BASIC EQUITATION
ASI 2412	EQUINE MARKETING TECHNIQUES
ASI 2443	EQUINE INDUS MNGT II
VTE 2021	SPECIAL INTEREST
VTE 2032	THE WORLD OF WORK
VTE 2342	SPANISH FOR ANIMAL HEALTH
VTE 2811	ULTRASOUND
VTS 2652	PARASITOLOGY (P)
VTS 2733	DISEASES OF VET MED (P)
VTS 2551	LARGE ANIMAL CLINICAL ROTATION

Total Credit Hours 71

## Animal Care Certificate

Select 12 hours from the following: 12

AEQ 1171	FARM EQUIP & SAFETY
ASI 1501	EQUINE SAFETY
VTS 1301	MEDICAL TERMINOLOGY
VTS 1313	MATH FOR VET TECHS
VTS 1511	LARGE ANIMAL TECHNIQUES I
VTS 1513	ANIMAL CARE
VTS 1542	FACILITY MANAGEMENT (P)
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE
VTS 2563	FUR AND FEATHER
VTE 1403	ANATOMY AND PHYSIOLOGY
VTE 2423	CANINE & FELINE NUTRITION
VTE 2101	DOG TRAINING
VTE 2522	EXOTIC PETS SELECTION & CARE
VTE 2532	BASIC BIRD BEHAVIOR AND TRAINING METHODS
VTE 2553	EXOTICS
VTE 2821	RADIATION SAFETY

Total Credit Hours 12

### VTE 1021 BASIC DOG GROOMING

**Description:** Basic Dog Grooming provides an introduction to professional grooming. The entire process will be demonstrated and practiced. It includes prepping, bathing, drying, grooming, cuts and finishing. Creative grooming patterns for mixed breeds and purebreds are taught. An introduction to the dynamics of running a successful pet grooming business is discussed as well.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### VTE 1111 STOCK DOG I

**Description:** A course for first-year students designed to help the student and their stock dog learn and practice the skills necessary to be successful in the low stress handling of livestock as well as in trial competition. This course will be taught by a variety of dog training philosophies with a concentration on stock dog handling. The class will also take advantage of training DVD's, guest clinicians and regular practices with various species of hoof stock. Max credits per semester: 1  
Max credits per degree: 2 Format: Lab

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 1401 ANATOMY & PHYSIOLOGY LAB**

**Description:** This class includes the clinical skills (labs) for VTE 1403 Anatomy. Basic body systems are studied at the tissue, organ and systems levels. Comparison of various species of common domestic animals is stressed. Laboratory exercises include a study of the skeletal system and dissection of dog and cat specimens. Availability of large animal organs for comparison is encouraged. The on-site instructor is responsible for lab instruction, grading of laboratory assignments and delivery of lab exams. The on-site instructor may develop an assignment (s) worth 50 points total to customize the class to their site.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 1403 ANATOMY AND PHYSIOLOGY**

**Description:** This on-line class studies basic body systems at the tissue, organ and system levels. Comparison of various species of common domestic animals is stressed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 1511 ANIMAL CARE LAB**

**Description:** This lab course contains the clinical skills corresponding to VTE 1512 Animal Care. Both VTE 1512 and VTE 1511 must be taken and passed with a 70% to take Nursing I.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 1512 ANIMAL CARE**

**Description:** This survey course introduces the student to canine and feline husbandry, including restraint, behavior, species and breed identification, basic technical techniques and the human-animal bond. Humane animal care and management is emphasized. The care, handling, feeding, basic nursing skills, normal values, administration techniques, basic grooming and sample collection are included. Both VTE 1512 and VTE 1511 must be taken and passed with a 70% to take Nursing I.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 1611 CONCEPTS IN BITS**

**Description:** Students explore theories and designs of bits in relation to mouth anatomy and discipline functions. History of bits to current industry trend will be explored with the goal of students gaining a thorough understanding of what a bits role is in riding.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 1621 CALVING ROTATION I**

**Description:** Pre req: VTS 1403 Anatomy & Physiology, VTS 2533 Lg Animal Techniques III, VTS 2593 Nursing II, or instructor permission. Students observe and assist in calving. Enrollment limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 1623 EQUINE LABORATORY DIAGNOSTICS**

**Description:** This course will help familiarize students interested in equine health with a variety of tests and equipment available for equine diagnostics. complete blood counts, biochemical tests, urinalysis and other evaluation techniques will be discussed and practiced in this course.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 1633 EQUINE DISEASES**

**Description:** In this course students study the causes of equine diseases and the principles of preventive veterinary medicine pertaining to equine. Study includes investigation of specific diseases and disease control measures as well as parasite management in the equine. Important zoonoses are covered. The course includes dosage calculations, and a survey of the common drug types used in equine medicine. Adverse drug reactions are discussed, labeling and packaging requirements, handling and storage of hazardous material and controlled drugs, preparing medications and vaccines, appropriate routes and methods of drug and vaccine administration are included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 1643 EQUINE HEALTH RECORDS**

**Description:** This course will introduce students to the paperwork and record keeping associated with the horse. Medical records, breeding records, coggins papers, insurance applications, health permits for transportation to events across state borders, and other equine related record keeping will be included in the course. Equine law applications and business issues are introduced as well.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2011 LIFETIME LEARNING**

**Description:** Continuing education topics designed for Veterinary Technicians to meet continuing education licensing requirements. This class may be repeated for additional CE hours and can be taken by technicians, assistants, and veterinary technology students.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**VTE 2021 SPECIAL INTEREST**

**Description:** In this elective class, the student pursues a subject of special interest to them. It may include but is not limited to research and/or group tours. The project is developed under the supervision and evaluation of a faculty member who is willing and available to contract with the student. (Pre req: VT faculty permission)

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2031 EMERGENCY MEDICINE**

**Description:** Pre req: VTS 2593 Nursing II with a grade of 70% (C) or higher. Students observe and assist in animal care at an emergency clinic for a minimum of 40 hours.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2032 THE WORLD OF WORK**

**Description:** Course involves a minimum of 80 hours of field experience at an approved location. This study is tailored to the needs of an individual. Statement of objectives will be required and progress notes will be checked. This class is developed by the student and under the supervision and evaluation of a faculty member. (Pre req: VT faculty permission)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2041 MAKING A DIFFERENCE**

**Description:** Make a difference in the lives of hundreds of unwanted animals. Do 40 hours of volunteer work at a humane society or animal shelter and receive college credit. Enrollment is limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2101 DOG TRAINING**

**Description:** This course includes principles and rationale of canine training. Basic behavior, exploration of techniques and basic training goals are included. Limited enrollment.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2111 STOCK DOG II**

**Description:** A course for second-year students designed to help the student and their stock dog learn and practice the skills necessary to be successful in the low stress handling of livestock as well as in trial competition. This course will be taught by a variety of dog training philosophies with a concentration on stock dog handling. The class will also take advantage of training DVD's, guest clinicians and regular practices with various species of hoof stock. Max credits per semester: 1

Max credits per degree: 2 Format: Lab

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 4

**Grading Option:** Graded

**VTE 2322 INTRO TO VET OFFICE**

**Description:** This class provides an introduction into the Veterinarian's office and the knowledge essential for working in this position. It focuses on the terminology used in the clinic that is important for communication with clients, technicians, and veterinarians. Terminology expands into knowledge of areas such as infectious diseases, surgery, client relationships, animal care, and vaccinations.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2342 SPANISH FOR ANIMAL HEALTH**

**Description:** A beginning Spanish course to help one become familiar with terms used when working with people and animals in agriculture and animal health.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2423 CANINE & FELINE NUTRITION**

**Description:** This is an introductory canine and feline nutrition course. The course provides identification and function of nutrients, understanding pet food labels, and nutritional applications for well and unwell pets. It takes into account the various life stages of dogs and cats and disease processes that diet can affect.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2522 EXOTIC PETS SELECTION & CARE**

**Description:** This course is designed to introduce students to the selection decisions and overall concerns of owning common exotic animal pets. Specifics about animal species, housing and nutrition requirements as well as expectations of pet behavior and interaction will be addressed within this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2532 BASIC BIRD BEHAVIOR AND TRAINING METHODS**

**Description:** This course will introduce students to the basics of bird behavior that influences training methods. The goal of the course is to help students of veterinary technology practice the best care for birds coming into the clinic by providing birds with cooperative skills via training methods. The philosophy of training without force and utilizing reinforcement will be discussed and utilized within the class.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2542 WALK THE WILD SIDE**

**Description:** Learn about the untamed side of veterinary technician medicine. Discover the positive impact Zoos and Wildlife Rehab centers can make. Work with endangered and rescued animals. Observe the business side of these operations. Do 80 hours of volunteer work at a zoo or wildlife rehab center and receive college credit. Enrollment is limited. (Pre req: Enrollment in Veterinary Technology)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2552 FACILITY MANAGEMENT II**

**Description:** Students study and assist with the daily work flow and management of animal facilities utilizing accepted animal welfare practices and standard operating procedures. Front office skill may be practiced and students have the opportunity to provide daily and special care for a selection of animals involved in the veterinary technology program. The course may include some weekend care of animals and facilities. The class is tailored to the student's interest and the division's needs. This class is offered as needed by students and must be prearranged with the division and class sponsor.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2553 EXOTICS**

**Description:** This course is designed as a continuation in learning to care for exotic animals that the veterinary technician may encounter in clinical practice. Species identification, housing requirements, nursing care, dietary needs, reproduction, and potential health problems will be discussed. Emphasis is usually placed on birds, reptiles, amphibians, small mammals, and alternative livestock species. The goal of this course is to provide the student with skills essential for entry-level positions as veterinary technicians working with non-domestic animals.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2573 SAFARI**

**Description:** This course of study is intended for students with a special interest in wildlife and/or exotic animals. With the guidance of the instructor, students plan the study trip to expand their knowledge in topics outside the scope of college courses. Prior to the "safari", students will set educational goals based on research pertinent to their trip.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2613 EQUINE SURGERY AND ANESTHESIA**

**Prerequisites:** Equine Nursing or concurrent enrollment

**Description:** This course will teach an understanding of and basic skills for operating room protocols and anesthesia. The class will cover anesthesia from standing sedation, to basic and commonly used drugs and the anesthetist's responsibilities for induction, through surgery and recovery. Local and general anesthesia techniques and principles will be covered. The surgery portion will cover identification of common instruments, how to prepare them for sterilization, surgical prep and surgery suite management. This information will be presented through lecture, lab and field trips.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2621 CALVING ROTATION II**

**Description:** Pre req: VTE 1621 Calving Rotation I. Students observe and assist in calving (if available). Necropsy and various other experiences may present themselves. Enrollment limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2623 FEEDING THE EQUINE PATIENT**

**Description:** This course will introduce students with an equine interest to the nutritional management of the equine patient. Diets and needs for specific classes of horses and the unique nutritional demands placed on horses during various disease processes will be included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2634 EQUINE DENTISTRY**

**Description:** Students gain an understanding in theories and techniques of equine dentistry. Dentistry methods from basic floating to complete mouth balancing using hand tools, and incisor work will be covered. Equine restraint techniques for unsedated work as well as pharmacologically aided methods will be covered. (Pre req: Must be a DVM, LVT, or a student who has completed 35 hours of an AVMA accredited program)

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**VTE 2643 EQUINE NURSING**

**Description:** Pre req: Large Animal Techniques II and ASI 1501 Equine Safety) This course provides information to enhance and focus a student's understanding of equine nursing concepts.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2743 VT OVERVIEW**

**Description:** This course is designed to provide a comprehensive review of the field of veterinary technology. It is intended for students that have completed the veterinary technology program and need to review specific areas before entering the work force or sitting for the national veterinary technician exam.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2811 ULTRASOUND**

**Prerequisites:** VTS 1403 Anatomy

**Description:** The principles of ultrasound are studied. The student is introduced to basic equipment care and use. Procedures are performed on small and large animals.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2821 RADIATION SAFETY**

**Description:** This online course is designed for veterinary assistants who are working in a private practice. The course covers the dangers of radiation and how to protect our patients and ourselves from potential harm. Rules and regulations as they apply to veterinary assistants and technicians are reviewed and a clinic safety plan is developed. Successful completion of this course will allow the individual to meet the State of Nebraska's Radiation Safety requirements.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1301 MEDICAL TERMINOLOGY**

**Description:** Medical Terminology introduces the student to basic words and word structure that are essential in reading and writing medical literature. This course is essential for anyone seeking a better understanding of veterinary medical and scientific terms.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1313 MATH FOR VET TECHS**

**Description:** This course is specifically designed to prepare students for the mathematics used on a daily basis in veterinary nursing as well as on national certification board exams. It includes concepts needed for computations in chemistry and veterinary clinical practice classes. Major subject areas and exercises address conversions within a measurement system and between measurement systems. Computations taught in this course focus on single and multiple step dosage problems and the diluting of stock solutions to desired concentrations.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1403 ANATOMY AND PHYSIOLOGY**

**Description:** Basic body systems are studied at the tissue, organ, and system levels. Comparison of various species of common domestic animals is stressed. Laboratory exercises include a study of the skeletal system and dissection of a typical mammal.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** VTE 2811

**VTS 1511 LARGE ANIMAL TECHNIQUES I**

**Description:** A course that deals with animal handling, current issues facing the livestock industry, production trends, terminology, animal growth, structure and selection, breeds, and development.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1513 ANIMAL CARE**

**Description:** This survey course introduces the student to canine and feline husbandry, behavior, species and breed identification, and the human-animal bond. Humane animal care and management is emphasized. The care, handling, nutritional needs basic nursing skills, normal values, and administration techniques, basic grooming and obtaining objective patient data. Effective and appropriate restraint techniques are stressed. Student must be able to lift and carry 50 lbs. to take this class. This is a lecture and lab class. A 70% or above in this class is required to take Nursing I.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1521 LARGE ANIMAL TECHNIQUES II**

**Description:** Prerequisite: VTS 1511 Large Animal Techniques I Specific animal physiology of large and small farm animals is studied. The course includes an introduction to nursing procedures required in veterinary practice for farm animals. Safe and effective methods of controlling various kinds of animals are discussed and practiced in a combination lecture and hands-on laboratory format. Equine, bovine, caprine, poultry, and porcine are covered, as well as other species.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1542 FACILITY MANAGEMENT**

**Description:** (Pre req: 20 hours of veterinary clinic observation and completing the NCTA Veterinary Technology Clinic Observation Hours Form) Students study the management of animal holding facilities and the implementation of accepted animal welfare practices. Each student will participate in weekly kennel rotations providing the opportunity to care for the wide variety of animals involved in the veterinary technology program. This includes weekend care.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 1604 INTRODUCTION TO LABORATORY SCIENCE**

**Description:** A study of biological and chemical principles and how they pertain to living systems. Through the application of fundamental biology and chemistry, students will survey the biological world in association with production, companion animals and human health. Topics include parasitology, hematology, bacteriology, virology and an overview of laboratory procedures. The goal of this course is to provide students with an introduction to the world of microbes as a foundation for an integrated approach to understanding and managing for optimal, as well as economic, animal health decisions.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**VTS 1713 PHARMACY-ANESTHESIA**

**Description:** Pre req: A 70% (C) or higher in VTS 1313 Math for Vet Techs. This course includes the study of pharmacokinetics, pharmacodynamics, dosage calculations, and a survey of the common drug types used in veterinary practice. Adverse drug reactions are discussed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1822 RADIOLOGY I**

**Description:** (Pre req: 18 years of age and passing of 60% (D) in VTS 1403 Anatomy & Physiology) The student is presented with an overview of radiation safety, the generation of x-rays, machine operation and maintenance, patient positioning, radio-graphic film exposure, film developing, CI imaging, care of darkroom equipment, evaluation of x-ray quality, and correction in techniques for producing an x-ray the veterinarian can use for diagnostic purposes. The laboratory portion is spent applying radiation safety principles and positioning of animals for radiography using various x-ray machines, film developing and computerized imaging storage techniques.. A grade of 70% (C) or higher in Radiology I is required to take Radiology II. Students must be able to lift and carry 50 lbs. and to perform the practical skills to do well in this class. It is important to remember that the hands-on skills in this class must be performed at an adequate entry skill level to do well in the class or on the job.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2241 CAREER STRATEGIES**

**Description:** This course will provide students the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities. It will include group activities to help formulate career goals, improve academic success skills, develop a resume and cover letter, select and prepare for an appropriate internship. The course provides preparation for future employment. Students will review OSHA standards and learn about types of performance reviews common in the work place. Goal setting skills will be sharpened by developing objectives and a way to accomplish them as well as a measure for recognizing success in each area chosen. Students will develop job seeking skills as they locate an internship site.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 2243 VETERINARY TECHNOLOGY INTERNSHIP**

**Description:** Pre req: Completion of or enrolled in VTS 2241 Career Strategies, a CGPA of 2.0 or higher, and successful completion of 24 credits in the chosen VTS option. The internship is for a period of 8 weeks. Internship may be done during school breaks that are of at least one week in length or upon completion of all course work. Internship locations and agreements must be approved. For the Veterinary Technician Option, internship must be done with a supervising veterinarian or veterinary technician designated by the veterinarian. Agreements may include more than one site. Official agreements are entered into between the student, the employer, and the college. Students identify learning objectives, design a methodology to accomplish them during the internship and must show substantial progress toward completion of these goals through weekly reports, pictures and evaluations. Students are encouraged to carry their own medical, disability, and liability insurance and receive pre-exposure Rabies vaccination.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**VTS 2331 CLINICAL PRACTICES**

**Description:** Pre req: VTS 2652 Parasitology, VTS 1822 Radiology I or VTE 2821 Radiation Safety Short Course and VTS 2583 Nursing I. This class provides practical experience and preparation for working in a veterinary clinic setting. The students will be working in the Dr. Walter Long Veterinary Technology Teaching Clinic where basic technician based services are offered to the clinic clientele consisting of NCTA student, faculty and staff owned animals. As a field experience, students work for a minimum of 64 hours during the semester.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 2533 LARGE ANIMAL TECHNIQUES III**

**Description:** Prerequisite: VTS 1521 Large Animal Techniques II with a grade of 70% (C) or above. This course includes nursing procedures, radiology, and surgery for production animals and equine. Safe and effective methods of controlling various kinds of livestock are discussed and practiced in a combination of lecture and hands-on laboratory format. Equine, bovine, ovine, caprine, porcine and poultry as well as other species may be covered.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2551 LARGE ANIMAL CLINICAL ROTATION**

**Description:** Pre req: grade of 70% (C) or better in VTS 1511 Large Animal Techniques I. Students will have several extended days (32+ hours) of experiential learning opportunities with various large animal clinics/operations in the area, where they will assist in physical exams, vaccinations, pregnancy checks, necropsies, surgeries, and other large animal procedures (as available).

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 2563 FUR AND FEATHER**

**Description:** This course is an introduction to the care of the smaller furred, feathered, and scaled animals that veterinary technicians may encounter in clinical practice. Species identification, housing requirements, dietary needs, reproduction, and potential health problems will be discussed. Emphasis will be placed on birds, rodents, small mammals, and reptiles housed at NCTA. This class includes a lecture and lab component.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2583 NURSING I**

**Description:** Pre req: A 70% (C) or higher in VTS 1313 Math for Vet Techs and VTS 1513 Animal Care. Basic animal nursing skills that are vital to the veterinary technician career are introduced. A large variety of skills are studied and practiced. This class includes a lecture and lab component. This class must be passed with a 70% (C) or higher to take Nursing II.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2593 NURSING II**

**Description:** Pre req: VTS 1542 Facility Mgt. and VTS 2583 Nursing I. This course is a continuation of Nursing I. Advanced animal nursing skills are studied and practiced. This class includes a lecture and laboratory component. This class is a pre req for VTS 1713 Pharmacy-Anesthesia.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2652 PARASITOLOGY**

**Description:** Pre req: VTS 1604 Intro to Laboratory Science with at least a 70% (C). Students study parasitic life cycles and parasite identification methods for both internal and external parasites of domestic animals, lab animals and birds. This class includes the collection and preparation of samples and diagnostic tests commonly used by veterinary technicians in the field and those available through commercial laboratory analysis. A survey of current therapy and products available for use will be included in this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2662 HEMATOLOGY**

**Prerequisites:** Parasitology with at least 70%

**Description:** Student will learn skills pertaining to the study of blood. Included in the class will be: principles of laboratory safety, proper operation and maintenance of clinical laboratory equipment (microscope, centrifuge, hemacytometer, refractometer, and hemoglobinometer) and preparation of microscopic slides (collection of samples, staining techniques, identification of blood elements, reporting of results, and identification of blood parasites). Correct techniques for performing total blood counts, hematocrits, differentials, reticulocyte counts, coagulation tests and hemoglobin determinations will also be included in this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2672 CLINICAL PATHOLOGY**

**Prerequisites:** Hematology with at least a 70%

**Description:** Students will continue laboratory testing in the areas of hematology (including blood chemistries); parasitology (including skin scraping analysis); bacteriological culturing, isolation and identification; urinalysis and sample submission.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2733 DISEASES OF VET MED**

**Description:** Pre req: VTS 1403 Anatomy and Physiology and VTS 1604 Intro to Laboratory Science. Students study the causes of animal diseases and the principles of preventive veterinary medicine pertaining to livestock, dogs, cats and laboratory animals. Study includes investigation of specific diseases and disease control measures including biosecurity as well as parasite management in animals. Important zoonoses are covered as well. The necropsy lab provides students the opportunity to learn proper necropsy technique, sample collection and submission for diagnostic tests and appropriate disposal procedures.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2823 RADIOLOGY II**

**Description:** Pre req: 60% (D) or higher grade in VTS 1822 Radiology I. This course is a continuation of Radiology I with emphasis placed on principles governing x-ray generation, establishment of technique charts, automatic film development, computerized imaging, exotic, equine, canine and feline radiographs and small animal contrast studies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2933 ANESTHESIOLOGY**

**Prerequisites:** A grade of 70% or currently enrolled in Radiology I, Nursing II, Pharmacology and Hematology

**Description:** Principles of small animal inhalation anesthesia, pre-anesthetics, induction and maintenance anesthesia are covered in this class. Pre-surgical patient evaluations, risk classifications, monitoring techniques, equipment, inhalation machines, systems and safety are all studied in both a lecture and lab format. A 70% or higher in Anesthesiology is a pre-requisite Surgery Prep.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2954 SURGERY PREPARATION**

**Description:** Pre req: 70% (C) or higher in VTS 2933 Pharmacy-Anesthesia and VTS 2662 Hematology. The student is introduced to the proper preparation of the surgical theater, instruments, equipment and the animal for aseptic surgery. Students perform all the supporting operating room tasks including pre-surgical screening, anesthesia, patient preparation, surgical assisting, suite set-up, pack preparation and recovery. Correct pre-operative and post-operative care of the patient is stressed. The lab is an integral portion of this course.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

## Program Outcomes For Veterinary Technician Option

1. Upon successful completion of the Veterinary Technician Option, students will be able to demonstrate proficiency in the essential skill tasks outlined by the American Veterinary Medical Association. The Skills List represents the complex role of the veterinary technician and encourages instruction in motor skills, critical thinking, entrepreneurship, and clinical application at the entry veterinary technician level in the following areas.



- Office and Hospital Procedures
- Pharmacy and Pharmacology
- Nursing Skills
- Anesthesia
- Radiology
- Surgical Prep & Nursing
- Parasitology, Hematology, and Clinical Pathology
- Animal Husbandry, Handling, Behavior, and Restraint
- Anatomy

- Upon successful completion of the Veterinary Technician Option, students will be able to demonstrate the academic background needed to pass a national Veterinary Technician National Exam (licensing). This is assessed through the VT Exit Exam and obtaining a 3.0 CGPA.

## Program Outcomes For Veterinary Assistant Option

- Students will be able to effectively communicate in oral and written formats.
- Upon successful completion of the Veterinary Assistant Option, students will be able to demonstrate proficiency in the essential skills and tasks outlined by the American Veterinary Medical Association. The skills list represents the complex role of the veterinary assistant and encourages instruction in motor skills, critical thinking, entrepreneurship and clinical application at the entry veterinary technician level in the following areas:

- Office and Hospital Procedures
- Pharmacy and Pharmacology
- Nursing Skills
- Anesthesia
- Radiology
- Surgical Prep and Nursing
- Parasitology, Hematology, and Clinical Pathology
- Animal Husbandry, Handling, Behavior, and Restraint
- Anatomy

## Program Outcomes For Animal Husbandry, Animal Health Management, Equine Health Care

- Students will be able to effectively communicate in oral and written formats.
- Students will be able to exhibit required knowledge and skills consistent with their chosen field of study. (Technical Competence)
  - Office and Hospital Procedures
  - Pharmacy and Pharmacology
  - Nursing Skills
  - Nursing
  - Animal Husbandry, Handling, Behavior, and Restraint
  - Anatomy

## Veterinary Technician Option Sequence of Study

Course	Title	Credit Hours
<b>Year 1</b>		
<b>Fall</b>		
VTS 1403	ANATOMY AND PHYSIOLOGY	3
VTS 1513	ANIMAL CARE	3
VTS 1511	LARGE ANIMAL TECHNIQUES I	1
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE	4
VTS 1313	MATH FOR VET TECHS	3
VTS 1301	MEDICAL TERMINOLOGY	1
VTS 1542	FACILITY MANAGEMENT	2
Credit Hours		17
<b>Spring</b>		
VTS 1521	LARGE ANIMAL TECHNIQUES II	1
VTS 1713	PHARMACY-ANESTHESIA	3
VTS 1822	RADIOLOGY I	2
VTS 2583	NURSING I	3
VTS 2652	PARASITOLOGY	2
VTS 2733	DISEASES OF VET MED	3
VTE 2423	CANINE & FELINE NUTRITION	3
Credit Hours		17
<b>Summer</b>		
VTS 2533	LARGE ANIMAL TECHNIQUES III	3
VTS 2563	FUR AND FEATHER	3
SPC 1103 or SPC 1113	SALES COMM or PUBLIC SPEAKING	3
Credit Hours		9
<b>Year 2</b>		
<b>Fall</b>		
VTS 2533	LARGE ANIMAL TECHNIQUES III	3
VTS 2823	RADIOLOGY II	3
VTS 2662	HEMATOLOGY	2
VTS 2933	ANESTHESIOLOGY	3
VTS 2331	CLINICAL PRACTICES	1
VTS 2241	CAREER STRATEGIES	1
ENG 1503 or ENG 1903	TECHNICAL COMMUNICATION I or WRITING & INQUIRY	3
Credit Hours		16
<b>Spring</b>		
<b>1st 8 weeks</b>		
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
VTS 2672	CLINICAL PATHOLOGY	2
VTS 2954	SURGERY PREPARATION	4
<b>2nd 8 Weeks</b>		
VTS 2243	VETERINARY TECHNOLOGY INTERNSHIP	3
Credit Hours		12
Total Credit Hours		71

## Animal Husbandry Option Suggested Sequence of Study

Course	Title	Credit Hours
<b>Year 1</b>		
<b>Fall</b>		
VTS 1313 or MTH 1503	MATH FOR VET TECHS or COLLEGE ALGEBRA	3
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE	4
Select 11 credit hours from:		11
VTS 1403	ANATOMY AND PHYSIOLOGY	
VTS 1513	ANIMAL CARE	
VTS 1511	LARGE ANIMAL TECHNIQUES I	
VTS 1301	MEDICAL TERMINOLOGY	
ASI 1253	NUTRITION	
VTE 1633	EQUINE DISEASES	
ASI 2433	EQUINE INDUS MNGT I	
Credit Hours		18
<b>Spring</b>		
VTS 1542	FACILITY MANAGEMENT	2
VTS 1822	RADIOLOGY I	2
SPC 1103	SALES COMM	3
Select 11 Credit Hours		11
VTS 1521	LARGE ANIMAL TECHNIQUES II	
VTS 1713	PHARMACY-ANESTHESIA	
ASI 2611	EQUINE REPRODUCTION I	
VTS 2583	NURSING I	
VTS 2652	PARASITOLOGY	
Credit Hours		18
<b>Year 2</b>		
<b>Fall</b>		
ENG 1503 or ENG 1903	TECHNICAL COMMUNICATION I or WRITING & INQUIRY	3
ASI 1442	EQUINE PRACTICUM I	2
VTS 2241	CAREER STRATEGIES	1
Select 12 credits of VTS or VTE courses		12
Credit Hours		18
<b>Spring</b>		
AED 1023	INTERPERSONAL SKILLS FOR LEADERSHIP	3
Select 11 credits of VTS or VTE courses		11
2nd 8 Weeks		
VTS 2243	VETERINARY TECHNOLOGY INTERNSHIP	3
Credit Hours		17
Total Credit Hours		71

## Equine Health Care Option Suggested Sequence of Study

Course	Title	Credit Hours
<b>Year 1</b>		
<b>Fall</b>		
VTS 1511	LARGE ANIMAL TECHNIQUES I	1
VTS 1313	MATH FOR VET TECHS	3
VTS 1301	MEDICAL TERMINOLOGY	1
VTS 1403	ANATOMY AND PHYSIOLOGY	3
ASI 1501	EQUINE SAFETY	1
VTS 1604	INTRODUCTION TO LABORATORY SCIENCE	4
ASI 1442	EQUINE PRACTICUM I	2
VTE 1643	EQUINE HEALTH RECORDS	3
Credit Hours		18
<b>Spring</b>		
VTS 1521	LARGE ANIMAL TECHNIQUES II	1
VTS 1713	PHARMACY-ANESTHESIA	3
VTS 1822	RADIOLOGY I	2
ASI 2611	EQUINE REPRODUCTION I	1
SPC 1103	SALES COMM	3
Advisor Guided Electives		7
Credit Hours		17
<b>Summer</b>		
VTE 2623	FEEDING THE EQUINE PATIENT	3
VTS 2243	VETERINARY TECHNOLOGY INTERNSHIP	3
Credit Hours		6
<b>Year 2</b>		
<b>Fall</b>		
VTS 2533	LARGE ANIMAL TECHNIQUES III	3
ENG 1503 or ENG 1903	TECHNICAL COMMUNICATION I or WRITING & INQUIRY	3
VTE 1633	EQUINE DISEASES	3
VTE 1623	EQUINE LABORATORY DIAGNOSTICS	3
ASI 2433	EQUINE INDUS MNGT I	3
VTS 2823	RADIOLOGY II	3
Credit Hours		18
<b>Spring</b>		
VTE 2613	EQUINE SURGERY AND ANESTHESIA	3
VTE 2643	EQUINE NURSING	3
VTS 2241	CAREER STRATEGIES	1
Select 5 credit hours from the following:		5
ASI 2443	EQUINE INDUS MNGT II	
VTE 1111	STOCK DOG I	
ASI 2442	EQUINE PRACTICUM II	
ASI 2442	EQUINE PRACTICUM II	
VTE 2111	STOCK DOG II	
VTS 2652	PARASITOLOGY	
VTE 2811	ULTRASOUND	
VTE 2032	THE WORLD OF WORK	

VTE 2021	SPECIAL INTEREST
Credit Hours	12
Total Credit Hours	71

## NCTA Honors Program

### Objectives

- To provide an enhanced and challenging learning opportunity for students of high quality.
- To provide further recognition for students with outstanding academic or leadership skills.

### Honors Program Eligibility Requirements

- Completion of 30 credit hours (2 semesters) with a cumulative GPA above 3.5 at NCTA
- Completion of 30 credit hours (2 semesters) with a cumulative GPA above 3.0 at NCTA and nominated by an NCTA faculty member.

### Program Overview

Eligible students will participate in the Honors Program during their 2nd year at NCTA. The program will consist of a 2 course sequence (each 1 credit hour), one course each semester of their 2nd year.

**Fall Semester** – HON 1001 HONORS SEMINAR I

**Spring Semester** – HON 2001 HONORS SEMINAR II

These courses will focus primarily on developing the student's leadership and critical thinking skills. Course content will include guest speakers, round-table discussions, and various learning activities. Possible topics would include:

- Networking
- Enhanced people skills
- Dealing with media and promotion of agriculture
- Adding value to your product or business
- Making a difference in your community, state, nation, world
- Science and the Scientific Method
- Food, society, and environmental issues: local to global scale

A key part of the overall program will be the **Honors Project**. The project will be planned and developed during the first course in the fall and then completed by the end of the second course in the spring. A final presentation of project results will be given to faculty and students. The project must fall into one of two categories:

1. **Research project.** Conducting an experiment in the student's area of interest. Ideally this project will be developed under co-advisors from NCTA and WCREC.
  - Example: compare the amount of spray drift from different nozzles using the wind-tunnel facility at WCREC.
2. **Creative activity.** The creative activity will be a project or event that is designed to promote the student's primary area of interest.
  - Example: create a Youtube video to promote agriculture such as the "I'm Farming and I Grow It" one by the Peterson brothers.

## Administration and Faculty

### NCTA Administration and Faculty Academic Credentials

**LARRY GOSSEN, Ph.D., Dean**

B.S., Kansas State University, Agricultural Education, 1977  
M.S., Kansas State University, Agricultural Education, 1982  
Ph.D., Kansas State University, Curriculum and Instruction, 2011

**JENNIFER McCONVILLE, Associate Dean**

A.A., Mid-Plains Community College 1998  
B.S., Bellevue University 2006  
M.B.A., University of Nebraska-Kearney 2011

**BARBARA BERG, Assistant Professor**

A.A.S., University of Nebraska School of Technical Agriculture 1973  
B.S., University of Nebraska-Kearney 2000

**JUDY BOWMASTER-COLE, Assistant Professor**

A.A.S., Nebraska College of Technical Agriculture 1992  
B.S., Bellevue University 1999

**ELIZABETH FRASER, D.V.M., Assistant Professor**

A.A., Garden City Community College 21989  
B.S., Kansas State University 1992  
D.V.M., Kansas State University 1995

**JOANNA HERGENREDER, Associate Professor**

A.A.S., Laramie County Community College 2004  
A.S., Laramie County Community College 2005  
B.S., University of Wyoming 2008  
M.S., Colorado State University 2011

**BRAD RAMSDALE, Ph.D., Associate Professor**

B.S., Kansas State University 1992  
M.S., Kansas State University 1995  
Ph.D., North Dakota State University 2000

**ERIC REED, Ph.D., Associate Professor**

B.A., University of Nebraska at Kearney 2002  
M.A., University of Nebraska at Kearney 2003  
M.A., University of Nebraska at Kearney 2006  
M.S., University of Nebraska at Omaha 2015  
Ph.D., Texas Tech University 2021

**MARY RITTENHOUSE, Associate Professor**

B.S., University of Nebraska-Kearney 1994  
M.B.A., University of Nebraska-Kearney 1997

**JEREMY SIEVERS, Associate Professor**

B.S., Wayne State College 1999  
M.S.E., Wayne State College 2001  
M.B.A., Eastern Illinois University 2005

**DOUGLAS SMITH, Ph.D., Associate Professor**

B.S., Sam Houston University 1998  
M.S., Sam Houston University 2003  
Ph.D., Texas A & M 2008

**DAN STEHLIK, Lecturer**

A.A.S., University of Nebraska School of Technical Agriculture 1975  
B.S., University of Nebraska-Lincoln 1986

**ALAN TAYLOR**, *Assistant Professor*

B.S., Utah State University 1988

M.S., University of Nebraska- Lincoln 2007

**RICKY SUE BARNES WACH, D.V.M.**, *Professor*

B.A., University of California–San Diego 1973

D.V.M., Colorado State University 1977

## Courses

### A

- Accounting (ACT) (p. 60)
- Agricultural Business Management (ABM) (p. 60)
- Agricultural Equipment (AEQ) (p. 62)
- Agricultural Information Technology (AIT) (p. 63)
- Agriculture (AGR) (p. 64)
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- Animal Science (ASI) (p. 67)

### B

- Biology (BIO) (p. 72)

### C

- Chemistry (CHM) (p. 73)

### E

- Economics (ECN) (p. 73)
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### H

- History (HTY) (p. 74)
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### M

- Management (MGT) (p. 74)
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- Mathematics (MTH) (p. 75)

### P

- Physical Activity Education (PAE) (p. 75)
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### S

- Speech (SPC) (p. 76)

### V

- Veterinary Technology (Electives) (VTE) (p. 76)
- Veterinary Technology (Systems) (VTS) (p. 79)

## Accounting (ACT)

### ACT 1103 ACCOUNTING I

**Description:** This course is a study in the fundamentals of accounting concepts and procedures. Concepts include financial reporting and analysis.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### ACT 1203 ACCOUNTING II

**Description:** Continuation of Accounting I with emphasis given to financial statement analysis, costing systems, and the budgeting process. The managerial uses of accounting information for decision making are introduced. (Pre req: ACT 1103)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Agricultural Business Management (ABM)

### ABM 1201 AG BUSINESS FOUNDATIONS

**Description:** The goal of this course is to help the student make a successful transition from high school to the College by providing the opportunity to explore the various Ag Business disciplines and associated campus and career opportunities. The student will be asked to take an active involvement in academic issues and topics such as the facilities and offerings provided by AMS and NCTA, requirements for successful course and program completion, and the values and skills that lead to professional and personal success. Students will be given the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### ABM 2003 CRITICAL THINKING

**Description:** Living in the information age, it is imperative to be able to process, sort and analyze information, not just for usefulness but also for accuracy. This course is designed to equip students with the tools necessary to work with the amount of information available today and to make good decisions based on sound solutions in an ever-changing workplace.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2013 INTERNSHIP**

**Description:** Internship includes a mandatory 8-week job placement experience at an approved work location. Agreements are entered into between the student, the employer and the college. (Pre req: Approval by Division Chair, students are required to have a minimum CGPA of 2.0 before being allowed to go out on internship and must have completed two semesters)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**ABM 2103 PERSONAL FINANCE**

**Description:** Following the Dave Ramsey "Foundations in Personal Finances", College Edition, students will develop practical and relevant personal financial skills.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2403 AG FINANCE**

**Description:** An in-depth study of financial analysis and the financial institutions which serve agricultural businesses. For each particular type of financial institution, this course will study its sources of capital, its general loan criteria used to evaluate loan requests, and its financial performance. For ag borrowers, this course will also examine their financial condition, their projected cash flow and the importance of risk management. (Pre req: ACT 1103 and MTH 1203 or MTH 1503)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2503 AGRICULTURAL DECISION ANALYSIS**

**Description:** Introduction to quantitative decision-making methods for effective agribusiness management, emphasis on problem identification, model formulation and solution, interpretation and presentation of results. (Pre req: AIT 1003)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2603 AG LAW**

**Description:** The study of law that governs agriculture. To include estate planning, contracts, leasing, water rights, fencing rights, tortes, personal and liability for the producer and agribusiness. This course will include guest lectures from regional attorneys.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2854 FARM & RANCH MANAGEMENT**

**Description:** (Pre req: ECN 1203 or ECN 1103 and ACT 1103 or ABM 2963) Business management concepts which are involved in the decision-making process when organizing and operating a farming/ranching operation. Includes production economics, record keeping systems, financial budgets and analysis, crop and livestock enterprise analysis, depreciation, cash flow planning equity, and production efficiency indicators.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**ABM 2903 ENTREPRENEURSHIP**

**Description:** This course includes the skills and attitudes necessary for starting and maintaining a successful business: personal (self) assessment, government regulations, financing and marketing options, and writing a business plan. (Pre req: ACT 1103, MGT 2103, ACT 1203 or enrolled in ACT 1203)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2911 SEMINAR**

**Description:** Majors will be required to research, write and report on an agribusiness issue that pertains to their Option, and complete a presentation on their internship.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**ABM 2963 FARM, RANCH, AND SMALL BUSINESS RECORD KEEPING**

**Description:** Business record systems for farming and ranching. Manual and computerized record keeping techniques to aid farm and ranch managers and small business owners in making management and production decisions and preparing tax returns.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ABM 2991 INDEPENDENT STUDY**

**Description:** This course consists of elective individual or group projects. Projects may include research, continuing education programs, and group tours. The project is developed under the supervision and evaluation of a department faculty member who is willing and available to contract with the student. This class requires a written paper, and may require a presentation (up to the discretion of the supervising faculty member). Students may enroll in this course a maximum of 3 times, for a total of 3 credit hours. (Pre req: Approval of project by Instructor, Advisor, and Division Chair)

**Credit Hours:** 1-3

**Min credits per semester:** 1

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

# Agricultural Equipment (AEQ)

## AEQ 1071 INDUSTRIAL SAFETY

**Description:** Designed to acquaint students with standard industry practices and emergency procedures and develop an awareness of job hazards. Students will prepare for a CPR/First Aid exam and receive some bulk handling equipment training (forklift/skid steer).

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## AEQ 1103 SMALL ENGINES

**Description:** A complete course in gasoline engine operation. It consists of operational theory and nomenclature including the internal components and its air, fuel, lubrication, and cooling system. This course will emphasize small and multi-cylinder gas and diesel engines.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1153 EQUIPMENT PRINCIPLES

**Description:** Students will be exposed to the basic principles of agricultural equipment including power trains, hydraulics, fuel systems and electricity. Alternative devices will be studied.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1171 FARM EQUIP & SAFETY

**Description:** An orientation into the safe operation of tractors, combines, balers, skid loaders, and other common farm equipment. Students will be expected to demonstrate their ability to safely operate several types of equipment.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## AEQ 1203 WELDING

**Description:** Develop fundamental skills and procedures for oxy/acetylene, arc, and wire feed welding in flat position. Included will be basic blueprint interpretation and weld symbols, with metal cutting and preparation techniques.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1313 INTERMEDIATE WELDING

**Description:** (Pre req: AEQ 1203 or equivalent) Develop skills in vertical, horizontal and overhead position arc and wire feed welding. Plasma Arc Cutting and a small assigned construction project are included. Use of a spool gun and TIG equipment will be introduced.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1501 INTRODUCTION TO ELECTRIC CODE

**Description:** Introduction to Nebraska state electrical law and the National Electric Code as they pertain to the working electrician.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## AEQ 1503 DC CIRCUIT ANALYSIS

**Description:** Fundamentals of DC electricity as applied to series, parallel, and series-parallel circuits. Diagnosis and troubleshooting of circuits with test equipment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1513 AC CIRCUIT ANALYSIS

**Description:** Fundamentals of AC electricity including alternating current theory, waveform quantities and characteristics, and network analysis. Diagnosis and troubleshooting simple circuits with proper test equipment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 1651 HARVEST OPERATIONS

**Description:** The course will primarily focus on grain harvest operations. Grain combine setup and operation will be emphasized. Students will gain an understanding of factors influencing harvest efficiency including estimating harvest losses. Combine yield monitor operation will also be included.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## AEQ 1713 CARPENTRY

**Description:** Learning basic tools and techniques of carpentry as it would pertain to a farm and ranch, including selection, use and maintenance of hand and power tools; selection of wood construction materials; construction of joints; application of finishes; and using these basic skills to follow a plan in the construction of a functional project.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## AEQ 2103 AG CHEMICAL APPLICATION

**Description:** A course to provide career based training for a commercial applicator of pesticides, fertilizers and other agricultural chemicals. A foundation for the safe and effective use of agricultural chemicals will be emphasized. Students will gain experience and knowledge in the calibration, operation and maintenance of agricultural chemical application equipment. Preparation for obtaining a commercial pesticide applicator license will be included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2211 HYDRAULICS**

**Description:** Basic study of hydraulic concepts, applications, and operation as applied to power equipment systems. This class also includes study of the diagnosis of power equipment with the emphasis on hydraulic problems.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AEQ 2213 ADVANCED WELDING**

**Description:** (Pre req: AEQ 1313 or equivalent) Students will develop skills using a spool gun and TIG welding, and additional arc and wire feed welding on a wide variety of metals. The second eight weeks is devoted toward preparation for American Welding Society certification.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2303 EQUIP PREVENTATIVE MAINTENANCE**

**Description:** A study of economic principles and principles of operation, adjustments, repair, maintenance, and tune-up of farm vehicles (automotive, tractors, and powered farm equipment vehicles).

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2323 PRECISION FARM TECH**

**Description:** A course designed to acquaint students with the basic skills of farm map creation, GPS hardware components, software choices, decision making skills and application of GPS/GIS in the agriculture industry for improved crop management and protection of the environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2404 MECHANIZED IRRIGATION SYSTEMS**

**Description:** Prerequisites: AEQ 1501, AEQ 1503, AEQ 1513. Fundamentals of mechanized irrigation systems focusing on center-pivot components. Technical service and operation will be emphasized. Application of industrial electrical components and controls.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AEQ 2413 DIESEL ENGINE**

**Description:** A study of cost effective maintenance programs for agriculture power equipment. Included is nomenclature, operational theory, adjustment and maintenance of agriculture gasoline and diesel engines. Lab includes the disassembly of a diesel engine.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AEQ 2604 WELDING APPRENTICESHIP**

**Description:** (Pre req: approval by Division Chair) The apprenticeship 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. The internship must last a minimum of 8 weeks averaging at least 40 hours per week. A written journal of daily work activities plus a 10 minute PowerPoint presentation are required upon completion. Students must submit a list of learning objectives prior to the apprenticeship and include discussion of these within their presentation. The student and employee will also complete a survey at the conclusion of the apprenticeship.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Pass No Pass

**AEQ 2801 REINKE CERTIFICATION**

**Description:** Prerequisites: AEQ 1501, AEQ 1503, AEQ 1513. Students will complete the Reinke Platinum PLUS Certified Technician training program. The course is an on-line training program developed by Reinke with integrated exams at the end of each training module. Students will be expected to complete the training sessions on their own time; however, faculty assistance will be available. To receive a Pass for the course, students must meet performance standards established by Reinke.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

## Agricultural Information Technology (AIT)

**AIT 1003 SOFTWARE PRODUCTIVITY**

**Description:** Introduction to the spreadsheet application, Microsoft Excel. Students will be learning to apply formatting, work with formulas and functions, and create graphs and charts, in addition to creating, saving, revising, and printing documents.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AIT 1011 DIGITAL YEARBOOK**

**Description:** A course for students working on the campus digital yearbook. Students work with various types of media and digital technologies and gain professional skills in one or more of the following areas: photography, writing, editing, marketing, layout, and design. May be repeated.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 4

**Grading Option:** Graded

**AIT 1052 INTRODUCTION TO MSWORD**

**Description:** This course will introduce the student to the basics of word processing using Microsoft Word.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**AIT 1073 INTRODUCTION TO DATABASES**

**Description:** This course will introduce the student to the basics of relational databases using Microsoft Access. Students will learn the basics of database creation and management. Creating and manipulating databases adds an additional information management tool to the business manager's tool kit. (Pre req: AIT 1092)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AIT 1083 DESKTOP PUBLISHING & WEB DESIGN BASICS**

**Description:** This course will introduce the student to the basics of desktop publishing and web design.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AIT 2103 GRAPHIC DESIGN**

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AIT 2503 ADVANCED SPREADSHEET APPLICATIONS FOR AGRICULTURE**

**Description:** Introduction to quantitative decision-making methods for effective agribusiness management, emphasis on problem identification, model formulation and solution, interpretation and presentation of results using MS Excel.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Agriculture (AGR)

**AGR 1011 AGRICULTURAL CAREERS**

**Description:** Students will be exposed to the great diversity of careers that support the agricultural industry. Educational requirements to prepare for these agricultural careers will also be explored.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1073 INVASIVE PLANTS**

**Description:** Invasive plants can be found nearly everywhere on Earth. The flora of our planet is constantly being redistributed by either natural or human forces. The change in locations of plant species has affected, and continues to affect, ecosystems around the world. In this course, students will learn how invasive plants are able to establish in regions outside of their native range. Students will develop an understanding of the importance of invasive plants at the global scale and learn how species, which are fairly being in on ecosystem, can have significant negative impacts in others. The focus will be on how and why invasive plants become established and their impacts on ecosystems.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1091 CROP PRACTICUM I**

**Description:** This is the first course of a 3-course sequence that integrates students into the crop production on NCTA's farm laboratory. Students will work as a team to develop a crop management plan for one of NCTA's crop fields. The plan will include actual production practices, budgeting and marketing of the harvested crop. Crop planting and harvest will be conducted by the students and possibly some ag chemical applications. Due to farm size limitations, the practicum courses will be limited to just Agronomy majors.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1103 CROP SCIENCE**

**Description:** Students will develop a global understanding of the food, feed, and fiber system. Crop production strategies to maximize yield and quality while sustaining resources and the environment will be emphasized. Principles of crop growth and development, pest management and technology for crop production will be covered.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1116 AGRICULTURE APPLICATIONS**

**Description:** This course is designed for students to gain experience in handling conditions on the farm daily. Students will receive hands on experience.

**Credit Hours:** 6

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 1201 SOILS LAB**

**Description:** Laboratory activities dealing with physical, biological and chemical properties of soils that support plant growth.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1203 PRINCIPLES OF SOILS**

**Description:** A study of soil formation, physical, biological and chemical properties of soil with attention given to conditions that affect plant growth. Impacts of crop management on soil quality will be emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1213 NATURAL RES MNGT**

**Description:** A study of our natural resources with special emphasis on soil and water management including land classification, conservation practices, and protection methods used to conserve our natural resources, plus the role of government agencies in Natural Resource Management.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded



**AGR 1591 CROP PRACTICUM II**

**Description:** This course is the second of a three course sequence that will be required for all agronomy majors. The 3-course practicum sequence will provide another direct assessment of the agronomy program learning outcome of "applying economically sound and environmentally sustainable agriculture crop production practices." The practicum courses will also increase student utilization of the college's farm laboratory.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1603 INTRODUCTION TO URBAN AGRICULTURE**

**Description:** An introduction to the history, definitions, principles, practices, and innovations of agricultural production in urban and pre-urban settings. Topics will include urban farming systems including traditional and emerging systems such as controlled environment and hydroponics, animal systems in urban settings, urban food systems, community gardens, policies regarding urban agriculture, food access and security, urban agriculture's role in community and society, agricultural marketing in urban setting, and sustainable urban agricultural best practices.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 1661 AGRONOMY ORIENTATION**

**Description:** This course will provide students the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities. It will also include group activities to help formulate career goals, improve academic success skills, develop a resume and select an appropriate internship.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 1881 APPLIED AGRICULTURAL EXPERIENCE**

**Description:** Instructor permission required for enrollment. The course will provide agricultural experiential learning activities that meet the specific needs of the academic program pursued. Learning experiences will emphasize hands-on activities in the field or laboratory that reflects the student's chosen career. Experiences will be designed collaboratively between NCTA and any collaborating partners. Credit hours for the experience will be awarded to match the experience and meet requirement designated in the Credit Hour Policy.

**Credit Hours:** 1-6

**Min credits per semester:** 1

**Max credits per semester:** 6

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 1891 CROPS JUDGING I**

**Description:** This course will cover all principles of agronomy to prepare students to compete in crops judging contests that operate under the North American Colleges and Teachers of Agriculture (NACTA) contest guidelines.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 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

**AGR 2002 WILDLIFE HABITAT MGT**

**Description:** A course that studies the most common Nebraska Wildlife species that are managed for harvest throughout the state. The habitat requirements and management techniques for each wildlife species will be covered. Current wildlife habitat support programs will be reviewed.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**AGR 2091 CROP PRACTICUM III**

**Prerequisites:** AGR 1591 Crop Practicum II

**Description:** This is the third of a 3-course sequence that integrates students into the crop production of NCTA's farm laboratory. Students will work as a team to develop a crop management plan for one of NCTA's irrigated crop fields. The plan will include actual production practices, budgeting and marketing of the harvested crop. Crop planting and harvest will be conducted by the students and possibly some ag chemical applications. Due to farm size limitations, the practicum courses will be limited to just Agronomy majors.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**AGR 2103 BUILDING CONSTRUCTION**

**Description:** A study of materials, techniques, and design used for farm and ranch facilities. Lab time will include the construction of Ag building, fences, and facilities on the NCTA campus.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2153 ORGANIC FOOD PRODUCTION**

**Description:** An introduction to the history, definitions, principles, and practices of organic food production. Topics include soil husbandry, integrated pest management, farming systems including diversified vegetables, perennial fruit, agronomic field crops, meat, egg, and milk production, organic certification, and marketing.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2201 COMMERCIAL AG CARRIER**

**Description:** A course of study designed to enable students to successfully obtain their CDL with all necessary endorsements. This course of study targets agricultural employees and producers. It is not intended for those seeking fulltime employment as commercial truck drivers. (Pre req: Must be a full time NCTA student)

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**AGR 2304 SOIL FERTILITY**

**Description:** Dynamics of essential plant nutrients in the soil environment. Sustainable and profitable fertility management of agronomic and horticultural crops will be emphasized. Characteristics of the fertilizer materials, fertilizer application methods and fertilizer rate calculations will be covered.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AGR 2353 PEST MANAGEMENT**

**Description:** Identification of plant pests, including morphology and life cycles of selected insects, weeds and diseases. Pest control methods will include chemical, physical, mechanical, cultural and biological techniques. Application of integrated pest management will be stressed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2383 IRRIGATION MANAGEMENT**

**Description:** Efficient irrigation management strategies of agronomic crops. Irrigation techniques, irrigation scheduling, equipment selection, and water use regulations will be covered. Sustainable utilization of our water resources will be emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2403 CROP MANAGEMENT**

**Description:** Integration of principles of crop and soil science, plant breeding, climatology and integrated pest management in the development and evaluation of crop management practices. Students will be able to apply economically sound and environmentally sustainable crop production strategies in the Great Plains.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 2714 FARM BEGINNINGS**

**Description:** The Farm Beginnings Program consists of a series of sessions offered throughout the year by Nebraska Extension with cooperation from NCTA. The sessions focus on alternative agriculture and cover a variety of topics, including building networks, goal setting, whole farm planning, building your business plan, marketing, business and farm management and financials management. In addition to learning first-hand from successful farmers, participants will develop their own business plan as they progress through the course.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**AGR 2892 CROPS JUDGING II**

**Description:** This course will cover all principles of agronomy to prepare students to compete in crops judging contests that operate under the North American College and Teachers of Agriculture (NACTA) contest guidelines.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 6

**Grading Option:** Graded

**AGR 2903 INTERNSHIP**

**Description:** (Pre req: approval by Division Chair) 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. The internship must last a minimum of 8 weeks averaging at least 40 hours per week (NOTE: students must honor length agreed upon by employer). A written journal of daily work activities plus a 10 minute PowerPoint presentation are required upon returning from internship. Students must submit a list of learning objectives prior to the internship and include discussion of these with their presentation. The student and employer will also complete a survey at the conclusion of the internship.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**AGR 2983 CAPSTONE**

**Description:** This course is designed to culminate the student's experience in their APS or AMS program and will focus on tying together functional aspects of a farm, ranch, or entrepreneurial venture. The class will culminate with a workable business plan, understand the legal and regulatory environment of their proposed enterprise, and be ready to move into formation. Included in this plan will include facility design, applicable management plans, and a complete financial package for the proposed operation that will include a cash flow, net worth, one year and three year budget, and what-if analysis. This course allows students an opportunity to integrate tools learned in their respective program.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**AGR 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, Advisor, and Division Chair)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

## Agriculture Education (AED)

**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

**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

## Animal Science (ASI)

**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 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 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 semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ASI 1213 LIVESTOCK & 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 CATT**

**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 bio-security 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 course 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 2514 MEAT PROCESSING**

**Description:** Meat processing is designed to show students how to properly process livestock carcasses. Understanding of HAACP, BQA, PQA, and management of the various species will be stressed. This is a career applied course which could lead to working in the processing industry or owning their own business.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**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 2603 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 and 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 with ASI 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; AI 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](http://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 2991 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:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**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

## Biology (BIO)

**BIO 1104 GENERAL BIOLOGY & LAB**

**Description:** Examination of fundamental principles of plant and animal biology including cell biology, genetics, development, diversity, and ecology.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**BIO 1313 PLANT SCIENCE**

**Description:** Biology of plants grown for food, fiber, fun, or fuel. Plant life cycles in managed ecosystems, and their role in global carbon and water cycles. Mechanisms plants use to drive and control their growth, propagate, and change to compete with other organisms in their environment.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded



**BIO 1321 AGRONOMIC PLANT SCIENCE LABORATORY**

**Description:** Growth, development, morphology, and staging of annual and perennial monocot and dicot plants produced for grain, forage and grazing. Evaluation of seed, grain and forage quality for plants of agronomic importance.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**BIO 1331 INTRODUCTION TO HORTICULTURAL SCIENCE LABORATORY**

**Description:** Introduction to and practical experience in the production and usage of horticultural plants.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## Chemistry (CHM)

**CHM 1014 CHEMISTRY IN CONTEXT I**

**Prerequisites:** 1 year of high school algebra or 1 semester of a college math course.

**Description:** The extraordinary chemistry of ordinary things. The chemical model of solids, liquids, gases, molecules, and salts. How these models are used to explore chemical aspects of biological, social, or economic situation.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 1024 CHEMISTRY IN CONTEXT II**

**Prerequisites:** CHEM 1014: Introduction to Chemistry I.

**Description:** How organic chemistry and biochemistry complement one another. Chemical aspects of biological, social, or economic situations.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 1104 GENERAL CHEM I**

**Prerequisites:** Two years of high school algebra and one year of high school chemistry or two years of high school algebra and CHM 1014.

**Description:** Lecture and laboratory serving as an introduction to chemical reactions, the mole concept, properties of the states of matter, atomic structure, periodic properties, chemical bonding and molecular structure.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**CHM 2104 GENERAL CHEM II**

**Prerequisites:** CHM 1104: General Chemistry I

**Description:** Lecture and laboratory serving as an introduction to intermolecular forces, kinetics, chemical equilibrium, thermodynamics, and electrochemistry.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

## Economics (ECN)

**ECN 1103 INTRODUCTION TO AG ECONOMICS**

**Description:** This course will include an overview of food and agricultural issues. Goals of this course will be to: introduce students to the agribusiness sector of the U.S., survey of economic concepts that affect food and agricultural issues and developing an understanding of the interconnectedness of agricultural supply businesses, farm and ranch production, food markets, distribution and consumption.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ECN 1203 MICROECONOMICS**

**Description:** This course provides students an introduction to the economic principles and theories which have been developed to explain how firms make decisions on production and input use, how consumers make purchasing decisions, and how firms and consumers interact in the marketplace under differing market conditions.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ECN 1303 MACROECONOMICS**

**Description:** Introduction to the nature and methods of economics. Economic systems. Measurement and analysis of aggregate variables, such as National income, consumption, saving, investment, international payments, employment, price indices, money supply, and interest rates. Fiscal, monetary, and other policies for macroeconomic stabilization and growth.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ECN 1403 ECONOMICS OF WORLD FOOD AND AGRICULTURE**

**Description:** Explores global food and agricultural issues with a focus on hunger, chronic malnutrition, and diets of people in developing countries. Introduces basic economic concepts pertinent to understanding and analyzing global food markets and prices and to evaluating government policies designed to reduce food insecurity, enhance diets, and promote agricultural development. (Pre req: ECN 1203)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**ECN 1803 STATISTICS**

**Description:** Basic statistical analysis of business and economic data used in the decision making process. Topics include collection and presentation of data, discrete and continuous distributions, probability and sampling theory, statistical inference and hypothesis testing.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## English (ENG)

### ENG 1503 TECHNICAL COMMUNICATION I

**Prerequisites:** 18 ACT Reading & 18 ACT English or ENG 103 or permission through English placement process

**Description:** This course emphasizes the principles and strategies of written communication about technical subject matter using various media. It is designed to prepare the student to present technical and scientific documents in a clear and informative manner.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** ENG 2203

### ENG 1903 WRITING & INQUIRY

**Prerequisites:** 18 ACT Reading & 18 ACT English or ENG 103 or permission through English placement process

**Description:** A refinement of writing skills and critical reading, emphasizing the relationship between purpose and form, clarity, accuracy of expression, the development of the writer's voice and style, the elements of critical thinking, and the development of the research paper to prepare for university studies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** ENG 2203

### ENG 2203 WRITING & ARGUMENT

**Prerequisites:** ENG 1503 OR ENG 1903

**Description:** A course for students seeking advanced work in reading and writing expository prose and in methods of research.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### ENG 2223 BEGINNING CREATIVE WRITING

**Description:** Introduction to the writing of poetry, fiction, and screenplays. Lectures and discussions emphasize the principles, processes, and techniques of creative writing. Students develop their ability to respond to literature and scripts through workshops, discussions and written assignments requiring them to analyze professional and peer works.

Emphasis on literary (as opposed to "slick") writing.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## History (HTY)

### HTY 1303 AMERICAN HISTORY AFTER 1877

**Description:** Examines the economic, political, social, and cultural development of the United States from the end of the Reconstruction era through the modern era. Through lectures, readings, assignments, and discussion, students will be asked to interpret and critically evaluate historical documents, perspectives, concepts, and events.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Honors Program (HON)

### HON 1001 HONORS SEMINAR I

**Description:** The first of two courses for students accepted into NCTA's Honor's Program. Various learning activities will be provided to enhance the student's leadership and critical thinking skills. Students will develop an Honor's Project that is either a research project or creative activities in the student's area of interest. A faculty member at NCTA and perhaps WCREC will be selected to advise the Honor's Project.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### HON 2001 HONORS SEMINAR II

**Description:** The second of two courses for students accepted into NCTA's Honor Program. Various learning activities will be provided to enhance the student's leadership and critical thinking skills. Students will complete the Honor's Project developed during Honors Seminar I. A written report and oral presentation of the project to relevant professional societies is encouraged.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## Management (MGT)

### MGT 1103 PRINCIPLES OF LEADERSHIP

**Description:** Participants will demonstrate a foundational understanding of the principles and practices of organizational psychology, including how organizational factors contribute to individual behavior and how individuals affect groups and organizational functioning. emphasis is on such traditional topics as work motivation, job satisfaction and other attitudes, leadership, communication, socialization, and organization and job design.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### MGT 2103 MGT CONCEPTS

**Description:** Pre req: Second year with a minimum of 30 hours of declared major completed. This course is a study of the basic principles of management decision-making as applied to agricultural business operations. Emphasis will be placed on the importance of relevant data (such as business costs and returns, cash flow, income statement and balance sheet) in making informed business decisions. Differences in management goals will also be explored. (Pre req: ECN 1203, ACT 1103 or ABM 2963)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**MGT 2503 HUMAN RESOURCES MGT**

**Description:** This course includes a study of the recruitment, selection, training and utilization of human resources, including recruitment, worker's compensation, unemployment insurance, benefits and safety in the work place. (Pre req: MGT 2103)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Marketing (MKT)

**MKT 2103 RETAIL MARKETING**

**Description:** This course is designed to provide the student with a basic understanding of the functions necessary in the retail marketing of products and services. The advantages of understanding the complex marketing system is emphasized.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**MKT 2203 AG MARKETING**

**Description:** Pre req: ECN 1203 or ECN 1103. This class deals largely with all the risk management aids available to the agricultural producer. Topics include the use of commodity markets, storing, computer programs, market information, and government programs. (Pre req: ECN 1203)

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Mathematics (MTH)

**MTH 1203 INTERMEDIATE ALGEBRA**

**Prerequisites:** Test Placement

**Description:** Properties of real numbers, factoring, exponents and radicals, linear and fractional equations, linear and nonlinear inequalities, quadratic equations, and functions and graphs. This course may not be accepted in transfer toward the general education requirement for a baccalaureate degree.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** MTH 1503

**MTH 1403 AGRICULTURAL MATHEMATICS**

**Description:** A study of mathematics, geometry and algebra that are utilized in the agricultural industry. Problems will include examples from crop production, horticulture, livestock management and agricultural business.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**MTH 1503 COLLEGE ALGEBRA**

**Prerequisites:** 21 ACT in Math or equivalent test score; MTH 1203: Intermediate Algebra; or instructor permission

**Description:** Functions, inverse functions, graphing of linear and quadratic functions, the conic sections, polynomial functions, rational functions, exponential and logarithmic functions, systems of equations, determinants and matrices, and higher degree equations.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** MTH 2203; MTH 2252

**MTH 2203 INTRODUCTION TO STATISTICS**

**Prerequisites:** 24 ACT in Math or equivalent test score; MTH 1503: College Algebra; or instructor permission

**Description:** Frequency distributions, elementary probability theory, measures of dispersion and central tendency, normal distributions, confidence intervals, hypotheses testing, regression, and correlation.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**MTH 2252 TRIGONOMETRY**

**Prerequisites:** 24 ACT in Math or equivalent test score; MTH 1503: College Algebra; or instructor permission

**Description:** Designed for students who plan further study at the calculus level. Numerical trigonometry, trigonometric analysis, inverse trigonometric functions, and complex numbers.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

## Physical Activity Education (PAE)

**PAE 1011 FITNESS CENTER**

**Description:** This course provides students the opportunity to pursue individual fitness goals. Emphasis is placed on fitness as a lifelong pursuit of wellness. Minimum of 1 hour per week is required.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## Psychology (PSY)

**PSY 1103 HUMAN RELATIONS**

**Description:** This course studies the psychology of humans and their relationships with others. Emphasis is placed on one's ability to get along with others in a working relationship.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Speech (SPC)

### SPC 1103 SALES COMM

**Description:** This course will instruct students in retail and service salesmanship, emphasizing the purpose of selling, the characteristics and functions of the salesperson, sales promotion, locating and qualifying prospects, and the steps in making a sale. Students are required to select a product, develop a sales manual and make a sales presentation.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### SPC 1113 PUBLIC SPEAKING

**Description:** This course contains a study of the methods of developing and presenting oral communications. It includes techniques in speech making and other methods of communicating orally in the business world.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

## Veterinary Technology (Electives) (VTE)

### VTE 1021 BASIC DOG GROOMING

**Description:** Basic Dog Grooming provides an introduction to professional grooming. The entire process will be demonstrated and practiced. It includes prepping, bathing, drying, grooming, cuts and finishing. Creative grooming patterns for mixed breeds and purebreds are taught. An introduction to the dynamics of running a successful pet grooming business is discussed as well.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### VTE 1111 STOCK DOG I

**Description:** A course for first-year students designed to help the student and their stock dog learn and practice the skills necessary to be successful in the low stress handling of livestock as well as in trial competition. This course will be taught by a variety of dog training philosophies with a concentration on stock dog handling. The class will also take advantage of training DVD's, guest clinicians and regular practices with various species of hoof stock. Max credits per semester: 1  
Max credits per degree: 2 Format: Lab

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 2

**Grading Option:** Graded

### VTE 1401 ANATOMY & PHYSIOLOGY LAB

**Description:** This class includes the clinical skills (labs) for VTE 1403 Anatomy. Basic body systems are studied at the tissue, organ and systems levels. Comparison of various species of common domestic animals is stressed. Laboratory exercises include a study of the skeletal system and dissection of dog and cat specimens. Availability of large animal organs for comparison is encouraged. The on-site instructor is responsible for lab instruction, grading of laboratory assignments and delivery of lab exams. The on-site instructor may develop an assignment (s) worth 50 points total to customize the class to their site.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### VTE 1403 ANATOMY AND PHYSIOLOGY

**Description:** This on-line class studies basic body systems at the tissue, organ and system levels. Comparison of various species of common domestic animals is stressed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### VTE 1511 ANIMAL CARE LAB

**Description:** This lab course contains the clinical skills corresponding to VTE 1512 Animal Care. Both VTE 1512 and VTE 1511 must be taken and passed with a 70% to take Nursing I.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### VTE 1512 ANIMAL CARE

**Description:** This survey course introduces the student to canine and feline husbandry, including restraint, behavior, species and breed identification, basic technical techniques and the human-animal bond. Humane animal care and management is emphasized. The care, handling, feeding, basic nursing skills, normal values, administration techniques, basic grooming and sample collection are included. Both VTE 1512 and VTE 1511 must be taken and passed with a 70% to take Nursing I.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

### VTE 1611 CONCEPTS IN BITS

**Description:** Students explore theories and designs of bits in relation to mouth anatomy and discipline functions. History of bits to current industry trend will be explored with the goal of students gaining a thorough understanding of what a bit's role is in riding.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

### VTE 1621 CALVING ROTATION I

**Description:** Pre req: VTS 1403 Anatomy & Physiology, VTS 2533 Lg Animal Techniques III, VTS 2593 Nursing II, or instructor permission. Students observe and assist in calving. Enrollment limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 1623 EQUINE LABORATORY DIAGNOSTICS**

**Description:** This course will help familiarize students interested in equine health with a variety of tests and equipment available for equine diagnostics. complete blood counts, biochemical tests, urinalysis and other evaluation techniques will be discussed and practiced in this course.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 1633 EQUINE DISEASES**

**Description:** In this course students study the causes of equine diseases and the principles of preventive veterinary medicine pertaining to equine. Study includes investigation of specific diseases and disease control measures as well as parasite management in the equine. Important zoonoses are covered. The course includes dosage calculations, and a survey of the common drug types used in equine medicine. Adverse drug reactions are discussed, labeling and packaging requirements, handling and storage of hazardous material and controlled drugs, preparing medications and vaccines, appropriate routes and methods of drug and vaccine administration are included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 1643 EQUINE HEALTH RECORDS**

**Description:** This course will introduce students to the paperwork and record keeping associated with the horse. Medical records, breeding records, coggins papers, insurance applications, health permits for transportation to events across state borders, and other equine related record keeping will be included in the course. Equine law applications and business issues are introduced as well.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2011 LIFETIME LEARNING**

**Description:** Continuing education topics designed for Veterinary Technicians to meet continuing education licensing requirements. This class may be repeated for additional CE hours and can be taken by technicians, assistants, and veterinary technology students.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Pass No Pass

**VTE 2021 SPECIAL INTEREST**

**Description:** In this elective class, the student pursues a subject of special interest to them. It may include but is not limited to research and/or group tours. The project is developed under the supervision and evaluation of a faculty member who is willing and available to contract with the student. (Pre req: VT faculty permission)

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2031 EMERGENCY MEDICINE**

**Description:** Pre req: VTS 2593 Nursing II with a grade of 70% (C) or higher. Students observe and assist in animal care at an emergency clinic for a minimum of 40 hours.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2032 THE WORLD OF WORK**

**Description:** Course involves a minimum of 80 hours of field experience at an approved location. This study is tailored to the needs of an individual. Statement of objectives will be required and progress notes will be checked. This class is developed by the student and under the supervision and evaluation of a faculty member. (Pre req: VT faculty permission)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2041 MAKING A DIFFERENCE**

**Description:** Make a difference in the lives of hundreds of unwanted animals. Do 40 hours of volunteer work at a humane society or animal shelter and receive college credit. Enrollment is limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2101 DOG TRAINING**

**Description:** This course includes principles and rationale of canine training. Basic behavior, exploration of techniques and basic training goals are included. Limited enrollment.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2111 STOCK DOG II**

**Description:** A course for second-year students designed to help the student and their stock dog learn and practice the skills necessary to be successful in the low stress handling of livestock as well as in trial competition. This course will be taught by a variety of dog training philosophies with a concentration on stock dog handling. The class will also take advantage of training DVD's, guest clinicians and regular practices with various species of hoof stock. Max credits per semester: 1

Max credits per degree: 2 Format: Lab

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 4

**Grading Option:** Graded

**VTE 2322 INTRO TO VET OFFICE**

**Description:** This class provides an introduction into the Veterinarian's office and the knowledge essential for working in this position. It focuses on the terminology used in the clinic that is important for communication with clients, technicians, and veterinarians. Terminology expands into knowledge of areas such as infectious diseases, surgery, client relationships, animal care, and vaccinations.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2342 SPANISH FOR ANIMAL HEALTH**

**Description:** A beginning Spanish course to help one become familiar with terms used when working with people and animals in agriculture and animal health.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2423 CANINE & FELINE NUTRITION**

**Description:** This is an introductory canine and feline nutrition course. The course provides identification and function of nutrients, understanding pet food labels, and nutritional applications for well and unwell pets. It takes into account the various life stages of dogs and cats and disease processes that diet can affect.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2522 EXOTIC PETS SELECTION & CARE**

**Description:** This course is designed to introduce students to the selection decisions and overall concerns of owning common exotic animal pets. Specifics about animal species, housing and nutrition requirements as well as expectations of pet behavior and interaction will be addressed within this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2532 BASIC BIRD BEHAVIOR AND TRAINING METHODS**

**Description:** This course will introduce students to the basics of bird behavior that influences training methods. The goal of the course is to help students of veterinary technology practice the best care for birds coming into the clinic by providing birds with cooperative skills via training methods. The philosophy of training without force and utilizing reinforcement will be discussed and utilized within the class.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2542 WALK THE WILD SIDE**

**Description:** Learn about the untamed side of veterinary technician medicine. Discover the positive impact Zoos and Wildlife Rehab centers can make. Work with endangered and rescued animals. Observe the business side of these operations. Do 80 hours of volunteer work at a zoo or wildlife rehab center and receive college credit. Enrollment is limited. (Pre req: Enrollment in Veterinary Technology)

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2552 FACILITY MANAGEMENT II**

**Description:** Students study and assist with the daily work flow and management of animal facilities utilizing accepted animal welfare practices and standard operating procedures. Front office skill may be practiced and students have the opportunity to provide daily and special care for a selection of animals involved in the veterinary technology program. The course may include some weekend care of animals and facilities. The class is tailored to the student's interest and the division's needs. This class is offered as needed by students and must be prearranged with the division and class sponsor.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTE 2553 EXOTICS**

**Description:** This course is designed as a continuation in learning to care for exotic animals that the veterinary technician may encounter in clinical practice. Species identification, housing requirements, nursing care, dietary needs, reproduction, and potential health problems will be discussed. Emphasis is usually placed on birds, reptiles, amphibians, small mammals, and alternative livestock species. The goal of this course is to provide the student with skills essential for entry-level positions as veterinary technicians working with non-domestic animals.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2573 SAFARI**

**Description:** This course of study is intended for students with a special interest in wildlife and/or exotic animals. With the guidance of the instructor, students plan the study trip to expand their knowledge in topics outside the scope of college courses. Prior to the "safari", students will set educational goals based on research pertinent to their trip.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2613 EQUINE SURGERY AND ANESTHESIA**

**Prerequisites:** Equine Nursing or concurrent enrollment

**Description:** This course will teach an understanding of and basic skills for operating room protocols and anesthesia. The class will cover anesthesia from standing sedation, to basic and commonly used drugs and the anesthetist's responsibilities for induction, through surgery and recovery. Local and general anesthesia techniques and principles will be covered. The surgery portion will cover identification of common instruments, how to prepare them for sterilization, surgical prep and surgery suite management. This information will be presented through lecture, lab and field trips.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2621 CALVING ROTATION II**

**Description:** Pre req: VTE 1621 Calving Rotation I. Students observe and assist in calving (if available). Necropsy and various other experiences may present themselves. Enrollment limited.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2623 FEEDING THE EQUINE PATIENT**

**Description:** This course will introduce students with an equine interest to the nutritional management of the equine patient. Diets and needs for specific classes of horses and the unique nutritional demands placed on horses during various disease processes will be included.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2634 EQUINE DENTISTRY**

**Description:** Students gain an understanding in theories and techniques of equine dentistry. Dentistry methods from basic floating to complete mouth balancing using hand tools, and incisor work will be covered. Equine restraint techniques for unsedated work as well as pharmacologically aided methods will be covered. (Pre req: Must be a DVM, LVT, or a student who has completed 35 hours of an AVMA accredited program)

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**VTE 2643 EQUINE NURSING**

**Description:** Pre req: Large Animal Techniques II and ASI 1501 (Equine Safety) This course provides information to enhance and focus a student's understanding of equine nursing concepts.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2743 VT OVERVIEW**

**Description:** This course is designed to provide a comprehensive review of the field of veterinary technology. It is intended for students that have completed the veterinary technology program and need to review specific areas before entering the work force or sitting for the national veterinary technician exam.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTE 2811 ULTRASOUND**

**Prerequisites:** VTS 1403 Anatomy

**Description:** The principles of ultrasound are studied. The student is introduced to basic equipment care and use. Procedures are performed on small and large animals.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTE 2821 RADIATION SAFETY**

**Description:** This online course is designed for veterinary assistants who are working in a private practice. The course covers the dangers of radiation and how to protect our patients and ourselves from potential harm. Rules and regulations as they apply to veterinary assistants and technicians are reviewed and a clinic safety plan is developed. Successful completion of this course will allow the individual to meet the State of Nebraska's Radiation Safety requirements.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

## Veterinary Technology (Systems) (VTS)

**VTS 1301 MEDICAL TERMINOLOGY**

**Description:** Medical Terminology introduces the student to basic words and word structure that are essential in reading and writing medical literature. This course is essential for anyone seeking a better understanding of veterinary medical and scientific terms.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1313 MATH FOR VET TECHS**

**Description:** This course is specifically designed to prepare students for the mathematics used on a daily basis in veterinary nursing as well as on national certification board exams. It includes concepts needed for computations in chemistry and veterinary clinical practice classes. Major subject areas and exercises address conversions within a measurement system and between measurement systems. Computations taught in this course focus on single and multiple step dosage problems and the diluting of stock solutions to desired concentrations.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1403 ANATOMY AND PHYSIOLOGY**

**Description:** Basic body systems are studied at the tissue, organ, and system levels. Comparison of various species of common domestic animals is stressed. Laboratory exercises include a study of the skeletal system and dissection of a typical mammal.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**Prerequisite for:** VTE 2811

**VTS 1511 LARGE ANIMAL TECHNIQUES I**

**Description:** A course that deals with animal handling, current issues facing the livestock industry, production trends, terminology, animal growth, structure and selection, breeds, and development.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1513 ANIMAL CARE**

**Description:** This survey course introduces the student to canine and feline husbandry, behavior, species and breed identification, and the human-animal bond. Humane animal care and management is emphasized. The care, handling, nutritional needs basic nursing skills, normal values, and administration techniques, basic grooming and obtaining objective patient data. Effective and appropriate restraint techniques are stressed. Student must be able to lift and carry 50 lbs. to take this class. This is a lecture and lab class. A 70% or above in this class is required to take Nursing I.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1521 LARGE ANIMAL TECHNIQUES II**

**Description:** Prerequisite: VTS 1511 Large Animal Techniques I Specific animal physiology of large and small farm animals is studied. The course includes an introduction to nursing procedures required in veterinary practice for farm animals. Safe and effective methods of controlling various kinds of animals are discussed and practiced in a combination lecture and hands-on laboratory format. Equine, bovine, caprine, poultry, and porcine are covered, as well as other species.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 1542 FACILITY MANAGEMENT**

**Description:** (Pre req: 20 hours of veterinary clinic observation and completing the NCTA Veterinary Technology Clinic Observation Hours Form) Students study the management of animal holding facilities and the implementation of accepted animal welfare practices. Each student will participate in weekly kennel rotations providing the opportunity to care for the wide variety of animals involved in the veterinary technology program. This includes weekend care.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 1604 INTRODUCTION TO LABORATORY SCIENCE**

**Description:** A study of biological and chemical principles and how they pertain to living systems. Through the application of fundamental biology and chemistry, students will survey the biological world in association with production, companion animals and human health. Topics include parasitology, hematology, bacteriology, virology and an overview of laboratory procedures. The goal of this course is to provide students with an introduction to the world of microbes as a foundation for an integrated approach to understanding and managing for optimal, as well as economic, animal health decisions.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

**VTS 1713 PHARMACY-ANESTHESIA**

**Description:** Pre req: A 70% (C) or higher in VTS 1313 Math for Vet Techs. This course includes the study of pharmacokinetics, pharmacodynamics, dosage calculations, and a survey of the common drug types used in veterinary practice. Adverse drug reactions are discussed.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 1822 RADIOLOGY I**

**Description:** (Pre req: 18 years of age and passing of 60% (D) in VTS 1403 Anatomy & Physiology) The student is presented with an overview of radiation safety, the generation of x-rays, machine operation and maintenance, patient positioning, radio-graphic film exposure, film developing, CI imaging, care of darkroom equipment, evaluation of x-ray quality, and correction in techniques for producing an x-ray the veterinarian can use for diagnostic purposes. The laboratory portion is spent applying radiation safety principles and positioning of animals for radiography using various x-ray machines, film developing and computerized imaging storage techniques.. A grade of 70% (C) or higher in Radiology I is required to take Radiology II. Students must be able to lift and carry 50 lbs. and to perform the practical skills to do well in this class. It is important to remember that the hands-on skills in this class must be performed at an adequate entry skill level to do well in the class or on the job.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2241 CAREER STRATEGIES**

**Description:** This course will provide students the opportunity to develop their "intercultural knowledge and competence" and "information literacy" skills and abilities. It will include group activities to help formulate career goals, improve academic success skills, develop a resume and cover letter, select and prepare for an appropriate internship. The course provides preparation for future employment. Students will review OSHA standards and learn about types of performance reviews common in the work place. Goal setting skills will be sharpened by developing objectives and a way to accomplish them as well as a measure for recognizing success in each area chosen. Students will develop job seeking skills as they locate an internship site.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded



**VTS 2243 VETERINARY TECHNOLOGY INTERNSHIP**

**Description:** Pre req: Completion of or enrolled in VTS 2241 Career Strategies, a CGPA of 2.0 or higher, and successful completion of 24 credits in the chosen VTS option. The internship is for a period of 8 weeks. Internship may be done during school breaks that are of at least one week in length or upon completion of all course work. Internship locations and agreements must be approved. For the Veterinary Technician Option, internship must be done with a supervising veterinarian or veterinary technician designated by the veterinarian. Agreements may include more than one site. Official agreements are entered into between the student, the employer, and the college. Students identify learning objectives, design a methodology to accomplish them during the internship and must show substantial progress toward completion of these goals through weekly reports, pictures and evaluations. Students are encouraged to carry their own medical, disability, and liability insurance and receive pre-exposure Rabies vaccination.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Pass No Pass

**VTS 2331 CLINICAL PRACTICES**

**Description:** Pre req: VTS 2652 Parasitology, VTS 1822 Radiology I or VTE 2821 Radiation Safety Short Course and VTS 2583 Nursing I. This class provides practical experience and preparation for working in a veterinary clinic setting. The students will be working in the Dr. Walter Long Veterinary Technology Teaching Clinic where basic technician based services are offered to the clinic clientele consisting of NCTA student, faculty and staff owned animals. As a field experience, students work for a minimum of 64 hours during the semester.

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 2533 LARGE ANIMAL TECHNIQUES III**

**Description:** Prerequisite: VTS 1521 Large Animal Techniques II with a grade of 70% (C) or above. This course includes nursing procedures, radiology, and surgery for production animals and equine. Safe and effective methods of controlling various kinds of livestock are discussed and practiced in a combination of lecture and hands-on laboratory format. Equine, bovine, ovine, caprine, porcine and poultry as well as other species may be covered.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2551 LARGE ANIMAL CLINICAL ROTATION**

**Description:** Pre req: grade of 70% (C) or better in VTS 1511 Large Animal Techniques I. Students will have several extended days (32+ hours) of experiential learning opportunities with various large animal clinics/operations in the area, where they will assist in physical exams, vaccinations, pregnancy checks, necropsies, surgeries, and other large animal procedures (as available).

**Credit Hours:** 1

**Max credits per semester:** 1

**Max credits per degree:** 1

**Grading Option:** Graded

**VTS 2563 FUR AND FEATHER**

**Description:** This course is an introduction to the care of the smaller furred, feathered, and scaled animals that veterinary technicians may encounter in clinical practice. Species identification, housing requirements, dietary needs, reproduction, and potential health problems will be discussed. Emphasis will be placed on birds, rodents, small mammals, and reptiles housed at NCTA. This class includes a lecture and lab component.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2583 NURSING I**

**Description:** Pre req: A 70% (C) or higher in VTS 1313 Math for Vet Techs and VTS 1513 Animal Care. Basic animal nursing skills that are vital to the veterinary technician career are introduced. A large variety of skills are studied and practiced. This class includes a lecture and lab component. This class must be passed with a 70% (C) or higher to take Nursing II.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2593 NURSING II**

**Description:** Pre req: VTS 1542 Facility Mgt. and VTS 2583 Nursing I. This course is a continuation of Nursing I. Advanced animal nursing skills are studied and practiced. This class includes a lecture and laboratory component. This class is a pre req for VTS 1713 Pharmacy-Anesthesia.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

**VTS 2652 PARASITOLOGY**

**Description:** Pre req: VTS 1604 Intro to Laboratory Science with at least a 70% (C). Students study parasitic life cycles and parasite identification methods for both internal and external parasites of domestic animals, lab animals and birds. This class includes the collection and preparation of samples and diagnostic tests commonly used by veterinary technicians in the field and those available through commercial laboratory analysis. A survey of current therapy and products available for use will be included in this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

**VTS 2662 HEMATOLOGY**

**Prerequisites:** Parasitology with at least 70%

**Description:** Student will learn skills pertaining to the study of blood. Included in the class will be: principles of laboratory safety, proper operation and maintenance of clinical laboratory equipment (microscope, centrifuge, hemacytometer, refractometer, and hemoglobinometer) and preparation of microscopic slides (collection of samples, staining techniques, identification of blood elements, reporting of results, and identification of blood parasites). Correct techniques for performing total blood counts, hematocrits, differentials, reticulocyte counts, coagulation tests and hemoglobin determinations will also be included in this course.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

### **VTS 2672 CLINICAL PATHOLOGY**

**Prerequisites:** Hematology with at least a 70%

**Description:** Students will continue laboratory testing in the areas of hematology (including blood chemistries); parasitology (including skin scraping analysis); bacteriological culturing, isolation and identification; urinalysis and sample submission.

**Credit Hours:** 2

**Max credits per semester:** 2

**Max credits per degree:** 2

**Grading Option:** Graded

### **VTS 2733 DISEASES OF VET MED**

**Description:** Pre req: VTS 1403 Anatomy and Physiology and VTS 1604 Intro to Laboratory Science. Students study the causes of animal diseases and the principles of preventive veterinary medicine pertaining to livestock, dogs, cats and laboratory animals. Study includes investigation of specific diseases and disease control measures including biosecurity as well as parasite management in animals. Important zoonoses are covered as well. The necropsy lab provides students the opportunity to learn proper necropsy technique, sample collection and submission for diagnostic tests and appropriate disposal procedures.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### **VTS 2823 RADIOLOGY II**

**Description:** Pre req: 60% (D) or higher grade in VTS 1822 Radiology I. This course is a continuation of Radiology I with emphasis placed on principles governing x-ray generation, establishment of technique charts, automatic film development, computerized imaging, exotic, equine, canine and feline radiographs and small animal contrast studies.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### **VTS 2933 ANESTHESIOLOGY**

**Prerequisites:** A grade of 70% or currently enrolled in Radiology I, Nursing II, Pharmacology and Hematology

**Description:** Principles of small animal inhalation anesthesia, pre-anesthetics, induction and maintenance anesthesia are covered in this class. Pre-surgical patient evaluations, risk classifications, monitoring techniques, equipment, inhalation machines, systems and safety are all studied in both a lecture and lab format. A 70% or higher in Anesthesiology is a pre-requisite Surgery Prep.

**Credit Hours:** 3

**Max credits per semester:** 3

**Max credits per degree:** 3

**Grading Option:** Graded

### **VTS 2954 SURGERY PREPARATION**

**Description:** Pre req: 70% (C) or higher in VTS 2933 Pharmacy-Anesthesia and VTS 2662 Hematology. The student is introduced to the proper preparation of the surgical theater, instruments, equipment and the animal for aseptic surgery. Students perform all the supporting operating room tasks including pre-surgical screening, anesthesia, patient preparation, surgical assisting, suite set-up, pack preparation and recovery. Correct pre-operative and post-operative care of the patient is stressed. The lab is an integral portion of this course.

**Credit Hours:** 4

**Max credits per semester:** 4

**Max credits per degree:** 4

**Grading Option:** Graded

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