Feeds and Feeding – On line and Dual credit - Fall 2020
NEBRASKA COLLEGE OF TECHNICAL AGRICULTURE

Division: Agriculture Production Systems- Animal Science/ Ag Education
Course Number: ASI 2203
Credit Hours: 3
Instructor: DAVE SMITH, associate professor emeritus
Address: 23642 Busted five Ct., Rapid City, SD
E-MAIL: dsmith4@unl.edu
Phone: 402-219-3738

DIVISION MISSION APS-Animal Science/ Agriculture Education division is dedicated to embracing innovation and respecting tradition for the agriculture industry and related sciences.

ASI 2203-Feeds & Feeding meets the following APS 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 exhibit required knowledge and skills consistent with their chosen field of study.

   Learning outcomes specific to Livestock Industry Management Options.
1. Students will be knowledgeable in the areas of modern livestock husbandry and management Practices.

ASI 2203 – Feeds and Feeding supports the following General Education Outcomes:
1. Information Literacy
2. Quantitative Literacy
3. Problem Solving

Student Learning Outcomes:

1.) List feedstuffs according to classification and describe the general nutrient composition of each classification of feedstuff.
2.) Identify common feeds used in livestock rations.
3.) List common processing methods and the advantages and disadvantages of each for feedstuffs used in livestock feeding.
4.) Understand dry matter versus as fed comparisons of feedstuffs and feed nutrients.
5.) Be able to find and utilize the nutritive values of feeds listed in an NRC feed table.
6.) Using the NRC animal requirements tables evaluate rations for dry matter, total digestible nutrients, crude protein, calcium, and phosphorus to determine if requirements are being met using a ration checking procedure.
7.) Calculate ration costs per pound, per head, and per ton as well as a cost per pound of gain.
8.) Be able to understand the information given on a livestock feed tag.
9.) Know what the common feed additives and implants are, how they are classified, used, and regulated and the advantages and disadvantages of using additives and implants.
**Course Prerequisite:** ASI 1253 Nutrition is recommended

**COURSE DESCRIPTION:** (Pre req.: ASI 1253 Nutrition recommended) The study of feedstuffs, feed processing, and nutrient digestion and utilization by livestock. Lab will include feed identification, feed evaluation, moisture determination and digestion of feeds.

**TEXT:** Required:

**References:**
- Basic Animal Feeding and Nutrition by Church and Pond
- *Feeds and Nutrition* by Ensiminger and Holystone
- *Feeds and Feeding* by Collation

**CANVAS LEARNING MANAGEMENT SYSTEM:**
Students will receive an ID and password from UNL to access the Canvas Learning Management system available on the NCTA website.

**COURSE OUTLINE**

I. **Feedstuffs**
   A. Carbonaceous concentrates
   B. Proteinaceous concentrates
   C. Proteinaceous roughages
   D. Carbonaceous roughages
   E. Mineral and vitamin sources

II. **Feed Preparation**

III. **Feed Additives and Implants**

IV. **Problems (dispersed throughout the course)**
   A. Moisture & dry matter
   B. Nutrient concentrations on Dry and As Fed basis
   C. Protein and urea in rations
   D. Feed tag information
   E. Ration evaluation & cost

**Assessment:**
Purpose of Academic Assessment
Academic assessment is the process for ongoing improvement of student learning and success. The assessment program at Nebraska College of Technical Agriculture has four specific interrelated purposes:
1. To improve Student learning
2. To improve teaching strategies
3. To document success and identify opportunities for improvement
4. To provide evidence for institutional effectiveness
This is a self-paced class intended to be completed in a 16 week semester. It is up to the student to prepare for each test. The timed tests are closed book non timed tests are open book. Students should plan to spend two weeks covering the materials for each test taking a test every other week. Test will be made available on Canvas 5 days prior to the due date and will consisting of matching, multiple choice, multiple answer, and true false questions. If the internet is disrupted during the taking of a test contact the instructor and at his discretion the test may be retaken. Dual credit on site instructors have the option of setting the test dates and may be asked to verify internet interruption issues.

Criteria for Assessment:
There will be 8 graded tests, an ID quiz, 3 discussion questions and a comprehensive final. The comprehensive final has only two questions involving calculations of water and dry mater, no other calculations will be required. Final grades are determined by the total number of points earned divided by the total available points, resulting in a percentage. The grading scale is shown below.

Points available:
- Test #1 Concentrates: 82 points closed book timed test
- Test #2 Roughages & additives: 66 points closed book timed test
- Feed ID Quiz: 40 points closed book timed quiz
- Test #3 Feedstuffs exercise: 50 points open book
- Test #4 Water problems: 32 points open book
- Test #5 Feed processing: 42 points closed book timed test
- Test #6 Nitrogen, urea & feed tags: 40 points open book
- Test #7 Feed additives: 50 points closed book timed test
- Test #8 Ration evaluation exercise: 40 points open book
- Discussion questions: 15 points
- Final, comprehensive: 152 points closed book timed test

609 total

The instructor reserves the right to change the points as conditions warrant.

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**Academic Honesty:** Students are expected to conduct themselves in conformity with the highest standards with regard to academic honesty. Violation of college, state, or federal standards with regard to plagiarism (see below), cheating, or falsification of official records will not be tolerated. Students violating such standards will be subject to disciplinary action the first offense will result in a dismissal from class and the second offense a dismissal from the institution.

**Identity Verification:**
Dual credit students will be required to provide the name and contact information for a person within the school system who will be proctoring their test. This can be an Ag. Teacher, Guidance counselor, or other teaching personal. Other on line students will be provided with a password for each test when they contact the instructor to open each test.

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**Suggested study and testing schedule**

**Week one:**
- Email instructor to verify Canvas access and link to Feeds and Feeding class
- Review the syllabus
- Take the pre test
- Read chapter 3 in the text, pages 119-127 & 212-229
- Open the course modules folder & view the file called materials for test #1
- View the lecture on carbonaceous concentrates 35 minutes
- View the lecture on proteinaceous concentrates 50 minutes

**Week two:**
- Use the study guide in the syllabus folder to prepare for test #1
- Take test #1 Due by September 4
- Read in chapter 3 pages 229-260

**Week three:**
- In the materials for test #2 view the lecture on feed grain by-products 10 minutes
- Start the lecture on roughages 30 minutes
- Finish the lecture on roughages 30 minutes

**Week four:**
- Start exercise V & VI in module 3
- Read chapter 3 pages 260-265
- View the lecture on nutritive additives 15 minutes
- Use the study guide to prepare for test #2
- Take test #2 Due by September 11

**Week five:**
- Finish exercise V & VI
- Take the feed ID quiz Due by September 18
- Take test #3 Due by September 25

**Week six:**
- In the materials for test #4 view the lecture over water problems 21 minutes
- For additional help read pages 93 -96
- Do the practice water problem
- View the lecture on “As Fed & DMB” 14 minutes
Week seven: Do the ration work sheet
Take test #4 Due by October 9

Week eight: Read pages 265-276
In the materials for test #5 view the lecture on feed processing 38 minutes
View the lecture on feed mixing 22 minutes
Watch the feed mixing videos

Week nine: Use the study guide to prepare for test #5
Take test #5 Due by October 23

Week ten: Read chapter 5
In the materials for test #6 view the lecture on nitrogen, protein, urea, and feed tags 25 minutes
Do the problems on nitrogen, protein, and urea
Do the feed tag problem

Week eleven: Review the problems using the keys
Take test #6 Due by November 6

Week twelve: Read chapter 6
In the materials for test #7 view the lecture over Implants 49 minutes
Watch the implant video 5 minutes
Read the information on Beta Agonist, Antibiotics, and the 2016 update on the FDA ruling

Week thirteen: Use the study guide to prepare for test #7
Take test #7 Due by November 20
In the materials for test #8 view the ration cost and evaluation lecture 14 minutes
Do the ration cost problem

Week fourteen: Do ration evaluation practice problem 1
Do ration evaluation practice problem 2

Week fifteen: Do ration evaluation practice problems 3 & 4
Take test #8 Due by December 4

Week sixteen: Review all the study guides
Take the comprehensive final Due by December 11
Do the class evaluation

COMMUNICATION: The online instructor is available through e-mail or phone. Canvas can also be used through the discussion questions. Please limit phone calls to normal working hours. Allow 24 hours for responses to e-mails during the week and 48 hours over weekends and holidays. Whenever possible I will respond as soon as I can.
Technical support resources:

**Computer Help Center.** The Information Technology Services Computer Help Center at the University of Nebraska-Lincoln provides NCTA students with 24 hour access to help with issues such as accessing E-mail and Canvas and dealing with computer problems. (Web site: [http://its.unl.edu/helpcenter](http://its.unl.edu/helpcenter), E-mail: [mysupport@unl.edu](mailto:mysupport@unl.edu), Phone: toll-free (866) 472-3970)

**NCTA Computer Technology Assistance.** The NCTA director of instructional technology and telecom is available to assist with hardware, software and peripheral acquisition, set up and troubleshooting. Contact Tyler Faber at 308-367-5210, or email: [tfaber@nebraska.edu](mailto:tfaber@nebraska.edu)

**Student Quick Start Videos** For Canvas
[https://canvas.unl.edu/courses/1/pages/student-quick-start-video-tour](https://canvas.unl.edu/courses/1/pages/student-quick-start-video-tour)

Students with disabilities resources:

**Student Services Center.** NCTA is committed to equal access in education. The Disability Services Center assists online students with questions regarding eligibility and applying for accommodations, testing for learning disabilities, and development of Individualized Education Program (IEP) agreements. Financial aid counseling and assistance is also available online through telephone, email, Skype or Adobe connect. Contact Kevin Martin: 308-367-5217, or email: [Kmartin4@UNL.edu](mailto:Kmartin4@UNL.edu).


Windows 7,8 and 10 resources:  [https://www.microsoft.com/en-us/Accessibility/windows](https://www.microsoft.com/en-us/Accessibility/windows)


Canvas resources:  [https://community.canvaslms.com/docs/DOC-2061-accessibility-within-canvas](https://community.canvaslms.com/docs/DOC-2061-accessibility-within-canvas)

**TITLE IX:**
Title IX is a Federal civil rights law that prohibits discrimination on the basis of sex or gender in all programs and activities. The Nebraska College of Technical Agriculture will not discriminate on grounds of race, color, sex, national origin, or any other factor prohibited by law in providing any educational or other benefits or services. For more information or to report a Title IX incident, please contact Jennifer McConville, Title IX Coordinator, 308-367-5259, Ag All Room 25.