Sul Ross State University

ANSC 3416 Livestock and Wildlife Nutritional Management-2025

Instructor: Dr. Jamie Boyd
Office: RAS 103A
Office Hours: MWF 9:30-12 or by appointment
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Lecture: TH 9:30-10:45 RAS 132
Lab: W 2-3:40 RAS 137

Textbooks: The following textbook will be used, you do not have to have a copy:

Applied Animal Nutrition, Feeds and Feeding by Peter R. Cheeke, 3rd edition

Course Description: Principles of ration formulation for various classes of livestock: feedstuff composition and identification, feed processing and ration formulation with special emphasis on computer application as applied to balancing and least-cost analysis. PR: ANSC 1419 (4 h credit)

Course Purpose: This course is designed to develop a basic understanding of livestock digestive physiology and feeds available for various classes of livestock and wildlife. The course focuses on feedstuff composition and ration formulation. Computer application as applied to balancing rations will be examined.

Course Goals: At the conclusion of this course the student should be able to:

- Understand the basic principles of digestive physiology of the various classes of animals
- Understand the classifications of feedstuff and the feeds that make up each classification
- Recognize feed ingredients on site
- Formulate diets and balance rations of the various classes of animal based upon knowledge of physiology and feed composition

Assessment Measures: Assessment of course goals will include the following:

- Each student will demonstrate, through written exams, the ability to relate their understanding of the course goals listed above.
- Through laboratory sessions, each student will gain experience and an appreciation of principles and techniques discussed in lecture.
- Each student will demonstrate their progress in understanding lecture and laboratory sessions through the completion of quizzes and problem sets.
- Each student will demonstrate the ability to integrate information from lecture, laboratory exercises and discussion through the completion of a class experiment involving chickens.

Departmental Projected Learning Outcomes:

- Recognize and be able to utilize animal breeds from a variety of domestic species.
- Comprehend the role of nutrition in the production of food animals.
- Understand the processes involved in producing meat products from a variety of domestic food animals.
- Select breeding animals using genetic information

Marketable Skills for Department of Animal Science:

1. Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.
2. Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.
3. Understanding the implications of new information for both current and future problem solving and decision-making.
4. Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. Communicating finding in both oral and written form at a level appropriate for the needs of the audience.

Course Policies: All students are expected to abide by the following rules:

- **Academic integrity:** Academic dishonesty will not be tolerated. Any violation of academic integrity may (will probably) result in a grade of zero for an assignment or a grade of "F" for the course. Unless otherwise specified, group studying and discussion is permitted for homework, but **all work submitted must be the student's own and individual work.** No group work is permitted on quizzes or tests, which are closed note/book (unless otherwise specified).
- **Attendance:** Attendance will be taken daily and it is your responsibility to attend. Both lecture and laboratory periods will include interactive discussion and it is to your benefit to attend and participate. **There will be no make-up labs, quizzes, or tests without prior approval!** If you are absent from class and/or lab in excess number of days, you may be withdrawn from the course. Also, please be in class on time. It is rude to both the instructor and your classmates to arrive late. Regarding lab attendance, you must be present for the entire lab period to receive all points available. If you only attend part of a lab session, points will be deducted accordingly.
- **Cell Phones:** Cell phones must be turned off during class. If your phone rings during class, you will receive a warning. Subsequent violations will result in a point deduction from your final grade.
- **Late Work:** Assignments are always due at the time and date specified in the course schedule. Late assignments will be accepted: however, 20% will be deducted for each day the assignment is late. Therefore, no assignments will be accepted after 5 days past the due date.
- **Extra Credit:** I reserve the right to offer extra credit assignments at any time: however, the entire class will have the option to complete any of these assignments. There will be no extra credit assignments given on an individual basis.

Methods of Instruction: Several methods of instruction will be used, including but not limited to:

- **Lecture:** During most class sessions, lecture will be used to provide the basic concepts related to livestock and companion animal feeding and ration formulation.
- **Discussion:** Some days may utilize part of the class or laboratory period for discussion. Additionally, outside of class period activities may be conducted.
- **Homework/quizzes:** Homework assignments related to material in lecture and laboratory sessions will be assigned. Quizzes will be administered and dates are noted on the tentative schedule.

Accommodation Statement: Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the Counseling and Accessibility Services Office: Ferguson Hall 112 (432-837-8203) as soon as possible to ensure that such accommodations are implemented in a timely fashion.

Evaluation and Grading Scale: Your course grade will be based on the following components:

Exams and Quizzes: There will be 4 exams given throughout the semester. The first three exams will be given in class and the dates for these will be noted on the daily schedule. The fourth exam is a comprehensive final exam. There will be weekly quizzes throughout the semester, except during weeks where exams are scheduled. I will drop your lowest quiz grade from your final average. I reserve the right to give an unannounced pop quizzes at any time during the semester. There will be no make-up exams or quizzes without prior approval or a valid doctor's excuse. Voice or email messages are not considered valid excuses.

Spelling: Except for multiple choice or fill in the blank questions on exams, all exam answers, homework, and papers must be written in complete sentences. Each incomplete sentence, major grammatical error or misspelled word will result in the loss of points.

Lab assignments: Each lab will have assignments designed to reinforce the concepts taught in lecture. Due dates for lab assignments will be announced.

Ration balancing problems: Ration balancing problems sets will be assigned and due dates will be announced when you receive the assignment.

Other considerations: Exams may include multiple choice, fill in the blank, short answer, matching, and diagrams. The final exam is comprehensive (non-negotiable). Cell phones and programmable calculators are not permitted during exams or quizzes.

Points Available:

• 3, 1h exams (100 points each)	= 300
• Quizzes	= 60 (7 quizzes, lowest grade dropped)
• Labs	=100
• Feed ID exam	= 100
• Comprehensive Final (150pts)	= 150
• Homework (pts variable)	= 50?
	760 possible points

Grading Scale:

A= 90-100%
B= 80-89 %
C= 70-79%
D= 60-69%
F= 59% or below

Tentative Schedule

Week	Lecture	Chapter

Tentative Schedule

Week	Lecture	Chapter	Laboratory
Jan 16	Nutrient categories, functions, req.	1	**No lab**
Jan 21-23*	Digestive tract physiology	1	Calculations
	Techniques to Evaluate Feeds	1	

Jan 28-30	Cereal grains, milling by-products	2	Calculations
	Other concentrated energy feeds	3	
Feb 4-6*	Oilseed meals	4	Diet Formulation
	Grain legumes, by-products, animal proteins	4	
Feb 11-13*	Nitrogen sources for ruminants, other sources	4	Diet Formulation
	Minerals	7	
Feb 18-20	Vitamins	7	**Exam 1 – 2/19/25**
	Feed additives	8	
Feb 25-27	Feed additives	8	Diet Formulation
	Feeding behavior & regulation of feed intake	9	
Mar 4-6*	Feed intake and water	9 & 10	Feed ID
Mar 11-13	Forages – nutrients & factors affecting quality	5	**Exam 2: 3/12/25**
Mar 18-20	Spring Break- no class or lab		
Mar 25-27	Grazing systems & haymaking	6	Computer lab
	Feed manufacturing and processing	12	
Apr 1-3*	Feeding & nutrition of beef cattle	15	Computer lab
	Feeding & nutrition of beef cattle	15	
Apr 8-10*	Feeding & nutrition of dairy cattle	17	Computer lab
Apr 15-17	Feeding & nutrition of horses	18	**Exam 3 - 4/16/25**
Apr 22-24*	Feeding & nutrition of small ruminants	16	**Feeds ID Exam**
	Feeding & nutrition of Exotics	22	
Apr 29	Wrap up and review		**No lab**
TBA	**Final exam**		

Important dates for quizzes and assignments:

Quizzes will be given at the beginning of class (1st 15 minutes) on the following dates:
January: 23
February: 6, 13
March: 6
April: 3, 10, 24

SPRING SEMESTER 2025
January 15, Classes Begin
March 17-21 Spring Break (no classes)
April 29, Last Day of Classes
May 2-7 Final Exams
May 8, Grades for graduating students due 10:00 AM
May 9 Graduation