Sul Ross State University

ANSC 5320 Advanced Nutritional Management

Instructor: Dr. Jamie Boyd
Office: RAS 107
Office Hours: : TH 9:30-12, F 9:30-12 or by appointment
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Lecture: web

Textbooks: The following textbook will be used, **you do not need 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.

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

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.
- **There will be no make-up labs, quizzes, or tests without prior approval!**
- **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:** Discussion boards will be used to discuss selected topics related to feeding animals.
- **Homework/quizzes:** Homework assignments related to material in lecture sessions may 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 3 exams given throughout the semester. The third exam is a comprehensive final exam. There will be five 20pt quizzes throughout the semester. There will be no make-up exams or quizzes without prior approval or a valid doctor's excuse.
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.

Other considerations: Exams may include multiple choice; fill in the blank, short answer, matching, and diagrams. The final exam is comprehensive (non-negotiable).
Points Available:

- 3, 1h exams (100 points each) = 300
- Quizzes = 100 (5 quizzes)

400 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

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Week	Lecture	Chapter
Aug 26th	Nutrient categories, functions, req.	1
Sept 1st	Digestive tract physiology	1
	Techniques to evaluate feeds	1
Sept 8th	Grains and Other Concentrates	2-3
Sept 15	Oilseed meals, Grain Legumes, By-Products	4
	Animal Proteins	
	Exam 1	
Sept 22	Nitrogen sources for ruminants	4
Sept 29	Vitamins and Minerals	7
Oct 6	Feed additives	8
	Feeding behavior & regulation of feed intake	9
Oct 13	Feed Intake Factors	10
Oct 20	**Exam 2**	
	Nutrients & factors affecting forage quality	5
Oct 27	Grazing systems & haymaking	6
	Feed manufacturing and processing	12
Nov 3	Feeding & nutrition of beef cattle	15
Nov 10	Feeding & nutrition of dairy cattle	17
	Feeding & nutrition of horses	18
Nov 17	Feeding & nutrition of small ruminants	16
Nov 24	No class-Thanksgiving	
Dec 1	**Exam 3-Final opens Dec 5th and closes Dec 8th at midnight**	

Important dates for quizzes and assignments:

Quizzes will be given on Friday on the following dates: opens Friday and closes the following Sunday at midnight.
Sept 12, Oct 3, Oct 17, Nov 7, Nov 21

Exams will be given on Friday on the following dates: opens Friday and closes the following Sunday at midnight.
Exam 1 Sept 19th
Exam 2 Oct 24th
Exam 3 Dec 5th

Discussion boards will close on the following dates.
Board 1 opens 10/1 and closes 10/31
Board 2 opens 11/1 and closes 11/30