

Department of Animal Science

Spring 2015

ANSC 3310 Livestock and Wildlife Nutrition

COURSE NUMBER/TITLE: ANSC 3310 Livestock and Wildlife Nutrition

INSTRUCTORS:

Dr. Byron C. Housewright, ph. 432-837-8413

Lecture: 9:00 – 9:50, MWF

e-mail: bhousewright@sulross.edu

Office: RAS 107

Office Hours: M: 1:30 – 4:00

TR: 9:00 – 11:00; 1:30 – 4:00

If I am in my office, I am available to meet with students at any time.

Students are also welcome to schedule a specific meeting time when we are both available for additional assistance.

Graduate Assistant: Diego Suarez

TEXT:

Basic Animal Nutrition and Feeding 5th Ed, Pond et al.

COURSE OBJECTIVES:

This course is designed to survey and provide an introductory understanding of livestock and wildlife nutrition. Nutrient classes and their structure and metabolism will be discussed as well as an overview of gastrointestinal anatomy and function between species.

- 1) Understanding of gastrointestinal anatomy and function and the variation in these between species.
- 2) Be able discuss the nutrient classes and their requirements, metabolism and function.
- 3) Knowledge of specific structure and function of the ruminant digestive tract including rumen fermentation.
- 4) Knowledge of selected feed additives and their use in ration formulation.
- 5) Basic understanding of feed analysis and how these numbers relate to the availability of nutrients by the animal.

PROJECTED LEARNING OUTCOMES:

Student will demonstrate that he/she is able to:

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

GRADING POLICY:

Lecture Exams (4):		400 points total
Final (Comprehensive):	100 points total	Attendance (see below)
Research Design Report:		200 points total
Discussion Boards – 2 @ 50 pts ea		100 points total
Topic Reflection Papers – 4 @ 50 pts ea		200 points total
		1000 total

- A= 1000 – 900
- B= 899 – 800
- C= 799 – 700
- D= 699 – 600
- F= 599 and below

- 1) **Discussion Board** – A total of 2 discussion board topics will be posted during the semester and each discussion will be worth 50 points for a total of 100 points for this assignment group. Topics for the Discussion Boards will be posted by the instructor and students will have approximately 5 weeks to complete their required posts for each board. Students are to complete a minimum of 2 original posts and 4 replies to their classmates for each discussion board topic.
- 2) **Topic Reflections** – A total of 4 short articles covering current topics of discussion in physiology will be provided at about 4 week intervals throughout the semester. Students are expected to write a short, opinion paper based on their impressions of the article. This paper should be no longer than two pages in length. Below I have included the grading rubric that will be used for these papers.
- 3) **Research Project Design:** This assignment will require you to design a research project to answer a question in animal physiology. Included in this design should be an introduction and materials and methods. You will need a minimum of 5 references from reliable, refereed, scientific journals. Your project should be original, master’s level research. You can select a project area that is an extension of current knowledge, but not a redesign of research that has been done. I would anticipate that this paper will be around 4-5 pages in length with your introduction and justification being 1.5 to 2 pages and your materials and methods and design being approximately 2 pages. Your research topic is due on Friday, March 13, 2015. These will not be graded, but only to ensure you have something selected in time and allow us to refine your ideas if necessary.

Citation Style:

<http://www.journalofanimalscience.org/site/misc/JAS-InstructionsToAuthors.pdf>

Reasonable accommodations for students with disabilities:

If you have a disability that may require assistance or accommodation or if you have questions related to any accommodations for testing, not takers, readers, etc, please speak with me as soon as possible.

Tentative Schedule of Weekly Topics: These are subject to alteration if time warrants.

Week of:	Topic covered
Jan. 19	Introduction and Gastrointestinal Tracts
Jan. 26	Gastrointestinal Tracts
Feb. 2	Water
Feb. 9	Carbohydrate Structure and Metabolism

Feb. 16	Energy Metabolism
Feb. 23	Protein Structure and Metabolism
Mar. 2	Lipid Structure and Metabolism
Mar. 9	Lipids/Minerals
Mar. 16	SPRING BREAK
Mar. 23	Minerals
Mar. 30	Vitamins
Apr. 6	Vitamins
Apr. 13	Rumen Fermentation
Apr. 20	Feed Additives
Apr. 27	Feed Analysis
May 4	Feed Analysis