

# Equine Nutrition and Physiology

## Animal Science 3150

Fall Semester 2012

**Location:** Animal Science Molecular Biology Building Room 103

**Time:** Tuesday and Thursdays at 1:20 pm to 2:35 pm

### Instructor

Brenda Alexander, Ph.D.

Office Room 405

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Office hours 9 – 11 am MW (drop ins welcome!!)

**Course Description:** Provides general knowledge of nutrition, physiology and biochemistry of exercise and reproductive processes of equine. Prerequisite: 4 hours of biology. The anatomy of the digestive tract will be studied as it relates to nutrient utilization in the horse. Major nutrients and nutrition requirements for horses in different production states will be studied. The basic physiology of nutrition and exercise will be examined. Reproductive physiology and the optimization of reproductive management will be covered.

**Disability Statement:** If you have a physical, learning, or psychological disability and require accommodations, please let the instructor know as soon as possible. You must register with, and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, room 330 Knight Hall.

**Objective of the Course:** The objective of this course is to provide students with the general knowledge of the principles of nutrition, and the physiology of nutrition, reproduction and exercise in the horse. Students will be able to take their acquired skills and knowledge and have a scientific-based approach to the management of horses.

**Recommended Textbooks:** Feeding and Care of the Horse (2<sup>nd</sup> Edition) Lon D. Lewis  
Equine Exercise Physiology David Marlin and Kathryn Nankervis

### Testing and Grading:

Three One Hour Exams (essay and short answer)	100 pts each	50%
Participation	20 pts	3%
Essay	30 pts	5%
Rations – 2	90 pts	15%
Quizzes – 8	160 pts	26%
Total	600 pts	100%

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**Academic Honesty:** Students are responsible for their own work and anyone who practices academic dishonesty will be dealt with according to current University of Wyoming regulations. Any written work containing plagiarized material will receive a zero—no exceptions.

**Attendance:** Students are expected to participate in class and complete assignments on time. Points will be deducted from any late assignments unless due to extenuating circumstances covered by an excused absence. Please let me know when you will be missing an assignment or exam so arrangements can be made. Participation activities will occur regularly and at random, and points can only be awarded to students participating and in attendance.

**Cell phone and texting:** Out of respect for your fellow students, please turn off your cell phones while attending class. If you must send or receive messages or have a phone conversation, please leave the classroom.

### **Fall 2013- Lecture Topics- Animal Science 3150 Equine Nutrition and Physiology**

#### **Section 1: Nutrition**

Digestive Anatomy/Physiology  
Nutrient Requirements: Water, Forage, Protein, Energy  
Feeds and Feeding Management  
Minerals and Vitamins Requirements and Deficiencies  
Nutritional Health Problems and Health Management  
Pastures for Horse Nutrition and Management

#### **Section 2: Exercise Physiology**

Metabolism  
Exercise and training responses in muscle, skeletal, respiratory and cardiovascular systems.  
Physiological stress and fatigue  
Thermoregulation  
Feeding the Performance Horse

#### **Section 3: Reproductive Physiology**

Reproductive Anatomy of the Mare and Stallion  
Endocrine Control of Reproduction in the Mare and Stallion  
Endocrine Control of Gestation and Parturition  
Anatomy and Physiology of Lactation  
Breeding Management

**Exam 3: Final Exam period -- Tuesday Dec. 11 @ 1:15 – 3:15**