

Department of Animal Science

Fall 2014

ANSC 5324 Animal Physiology

COURSE NUMBER/TITLE: ANSC 5324 Animal Physiology

INSTRUCTOR: Dr. Byron C. Housewright, ph. 432-837-8413
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Office: RAS 107
Online Course: Blackboard 9
Website: <http://sulross.blackboard.com>

TEXT: No Required Text

Reference texts: http://www.amazon.com/Anatomy-Physiology-Domestic-Animals-Michael/dp/0813803292/ref=sr_1_7?ie=UTF8&qid=1377205626&sr=8-7&keywords=anatomy+and+physiology+farm+animals
http://www.amazon.com/gp/product/0813814510/ref=s9_simh_gw_p1_4_d2_i3?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=center-2&pf_rd_r=1M86NCP6N4NRR167A93Z&pf_rd_t=101&pf_rd_p=1389517282&pf_rd_i=507846
http://www.amazon.com/gp/product/0813813948/ref=s9_simh_gw_p1_4_d0_i3?pf_rd_m=ATVPDKIKX0DER&pf_rd_s=center-2&pf_rd_r=1NEWRM1V8WCPOENVZVJ5&pf_rd_t=101&pf_rd_p=1389517282&pf_rd_i=507846

COURSE OBJECTIVES: This course is designed expand the student's understanding of anatomy and physiology of domestic animals with emphasis placed on physiological and biochemical processes. Individual systems will be discussed as well as topics relevant in current scientific discussions and publications.

- 1) Ability to discuss whole body homeostasis and what that means to biochemical pathway direction and health
- 2) Understanding of the primary anatomical structures making up various organ systems
- 3) Discuss integration of organ systems within the body
- 4) Understanding of directional terms utilized in the study of anatomy and physiology
- 5) Describing plasma membrane structure and function

DEPARTMENTAL 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:

Quizzes 5 quizzes @ 100 pts ea:	500 points total
Research Project Design:	200 points total
Case Studies 4 @ 50 pts ea:	200 points total
Physiology in the News Reviews 2 @ 50 pts ea:	100 points total

A= 1000 – 900

B= 899 – 800

C= 799 – 700

D= 699 – 600

F= 599 and below

Assignments can be turned in late but please note that there will be a 10% per day penalty for any assignment turned in late.

- 1) **Quizzes** – Quizzes will be 40 multiple choice questions worth 2.5 pts ea for a total of 100 points for each quiz. Quizzes will be posted on a Thursday and you will be available until the Saturday, 2 days later until midnight. You will be allowed to attempt the quiz twice and your highest score will be recorded. Quiz dates are listed below in Dates to Remember section.
- 2) **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, October 10, 2014. These will not be graded, but only to ensure you have something selected in time and allow us to refine your ideas if necessary.
- 3) **Physiology in the News** – Select either a popular press source or newsworthy publication in which an article on animal physiology is published. Write a 1.5 to 2 page review of this article where you provide a short introduction, a summary of what the article says and then a paragraph of your thoughts and opinions on the topic or research presented in the article. Below you will find the rubric that will be used in grading your papers so please briefly review this before you write your first review. You are not required, but are encouraged to utilize other reference material in your article review.

	Points
Clearly & effectively responds to assignment.	10
Demonstrated thorough understanding and interpretation of the article by summarizing.	10
Developed reflective thoughts supported by a variety of relevant facts within the article, provided potential application of information and posed questions raised by the article.	10
Clarity, organization & structure very evident.	10
Correct grammar, word usage, spelling, and punctuation.	10
Total	50

Dates to Remember:

Friday, September 5, 2014 – Physiology in the News Review 1
Thursday, September 11 through Saturday, September 13, 2014 – Quiz 1
Friday, September 19, 2014 – Case Study 1
Friday, September 26, 2014 – Case Study 2
Thursday, October 2 through Saturday, October 4, 2014 – Quiz 2
Friday, October 10, 2014 – Physiology in the News Review 2 and
Topic for Research Project Design
Friday, October 17, 2014 – Case Study 3
Thursday, October 23 through Saturday, October 25, 2014 – Quiz 3
Friday, October 31, 2014 – Case Study 4
Thursday, November 13 through Saturday, November 15, 2014 – Quiz 4
Friday, November 21, 2014 – Research Project Design
Monday, December 1 through Wednesday, December 3, 2014 – Quiz 5

Academic Honesty

On all work submitted for credit by students at the University, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

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.

About Me:

I grew up in Stephenville, TX where my father was on faculty at Tarleton State University and my mother taught special education. After high school I attended Texas Tech University and received my undergraduate in Animal Science. From there I went to The University of Tennessee where I received my Masters and PhD in Ruminant Nutrition and Nutritional Physiology respectively. After finishing my PhD I worked until 2000 in industry as a technical service

nutritionist, private nutrition consultant and director of nutrition for Con Agra. I began teaching in 2000 at Texas A&M-Commerce where I stayed until 2007. Going back into industry for a few years working as a nutritionist primarily in WI and then taught at Tennessee Tech University during the 2011-2012 academic year. I started at Sul Ross State University in the fall of 2012. During my academic career I have taught, General Animal Science, Anatomy and Physiology, Biochemistry, Livestock Management, Beef Production, Nutrition, Feeds and Feeding and Sheep and Goat Production among other courses.

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

Week of:	Topic covered
August 25	Introduction and Directional Terms
September 1	Cellular Biology
September 8	Integumentary
September 15	Skeletal
September 22	Respiratory
September 29	Muscular
October 6	Neural
October 13	Neural
October 20	Digestive
October 27	Blood
November 3	Cardiovascular
November 10	Endocrine
November 17	Respiratory
November 24	Urinary
December 1	Gas and Renal Exchange