

**ANSC 5324**  
**Anatomy and Physiology**  
**Spring 2022**

**Instructor:**

Dr. Jamie Boyd

Associate Professor

Office: RAS 103A

Phone: 432-837-8413

Email: [Jamie.boyd@sulross.edu](mailto:Jamie.boyd@sulross.edu)

Office Hours: MWF 8-9:00; 1-3

TH 10-12 or by appointment

Lecture: Web

Location: Web-based

**Course description:** Expand upon the basic principles of anatomy and physiology of farm animals, emphasizing ruminant and equine digestive physiology. Individual systems will be discussed as well as topics from current scientific discussions and publications.

**Required Text:** Functional Anatomy and Physiology of Domestic Animals. 4<sup>th</sup> edition. 2009. Reece, Wiley-Blackwell.

**Purpose of the course:** The course is designed to expand the students understanding of the basic and fundamental concepts of domestic animal anatomy and physiology. Individual systems will be discussed as well as topics relevant in current scientific discussions and publications.

**Student learning outcomes:**

1. Students will demonstrate knowledge of domestic animal anatomy and physiology at the advanced level.
2. Be able to discuss species differences as related to various organ systems structure and function.
3. Understand the integration of organ systems in the function of the total body.
4. Understanding of the directional terms utilized in the study of anatomy and physiology.

**Departmental Projected Learning Outcomes:**

1. Demonstrate the basic skills of interpreting research data gathered in an agricultural context,
2. Apply critical thinking skills to mitigate potential challenges in diverse animal sciences and related agricultural industries,
3. Develop problem solving skills, and
4. Demonstrate the ability to communicate through written, spoken, and graphical methods.

**Assessment measures:** At the end of this course, students should have a basic understanding of the concepts and principles of animal anatomy and physiology. Each student's success of achieving these results will be based on a minimal of 60% or better on all exams, quizzes, and other assignments.

**Recommendations for Success:** In order to succeed in this class, I recommend that you dedicate at a minimum two hours of study time per class hour each week. The material covered in this course cannot be learned adequately in only a couple days, it is cumulative and each day's material will build on the previous day.

**Accommodations:**

It is the SRSU policy to provide reasonable accommodations to students with disabilities. If you would like to seek any accommodations for this course, please contact Mary Schwartz at the Counseling and Accessibility Services Office: Ferguson Hall 112 phone: (432) 837-8203 as soon as possible to ensure that such accommodations are implemented in a timely fashion

**Academic integrity:** Students are expected to submit original work without unauthorized assistance. Academic dishonesty, which includes cheating, unauthorized collaboration, plagiarism, fabrication, multiple submissions, and aiding and abetting, will result in a grade of 0 on the work in question. Subsequent instances of academic dishonesty may result in more serious sanctions.

**Examinations and grading:** The grade you earn is your responsibility! **There will be no extra-credit opportunities.** Your course grade will be based on the following components:

**Exams and Quizzes:** There will be four exams administered throughout the semester. The dates of the exams are noted on the syllabus. The fourth exam will be a comprehensive final exam. There will also be 8 quizzes throughout the semester. There will be no make-up exams or quizzes without prior approval or a valid doctor's excuse. You must talk to me "live". Voice or email messages are not considered valid excuses.

**Case Studies:** Case studies will be provided via blackboard. The assignments will contain pertinent information about a physiological pathology of an animal. Students will research the symptoms and provide an explanation as to the potential cause of the pathology and if possible treatment options, survivability and long term prognosis. Responses should be 1-3 pages typed and will be submitted via Blackboard. No email responses will be accepted.

**Physiology in the News:** Select either a popular press source or newsworthy publication in which an article on animal physiology is published. Write a 2 to 3-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 review this before you write your first review. You are not required, but are encouraged to utilize other reference material in your article review. The review will be submitted via Blackboard and you **must include a copy of the original article with your submission. Automatic 10pt deduction if the original article is not submitted. No email responses will be accepted.**

**Rubric:**

- Clearly and effectively respond to the assignment (10pt)
- Demonstrate a thorough understanding and interpretation of the article by summarizing and addressing relevant questions raised by the article (10pt)
- Introduction (5pt)
- Body of the summary (15pt)
- Conclusion (5 pts)
- Correct grammar, word usage, spelling, and punctuation (5pt)

**Other Considerations:** Exams may include multiple choice, fill in the blank, short answer, identification, diagrams, and matching questions. Common abbreviations for terms may be used on exams, quizzes, and assignments after the abbreviation has been defined by using the complete term once. The final exam is comprehensive (non-negotiable). Due dates for all assignments will be announced on Blackboard or on the attached class schedule. **Late assignments will be accepted for 4 days following the initial due date and time with a 20% penalty per day late.**

**Points available:**

3 1 hour exams (100 pts each)	300 points
8 quizzes (25 pts each)	200 points
Case Studies (2 @ 50pts each)	100 points
Physiology in the News (4 @ 50pts each)	200 points
Final Exam	150 points
<b>Total</b>	<b>950 Points</b>

**Grading scale: (% of total class points)**

A = 90-100%  
 B = 80-89.99%  
 C = 70-79.99%  
 D = 60-69.99%  
 F = 59.99% or below

**Schedule of class sessions:** This information should be treated as an outline. There may be some alterations in the sequence of topics.

**Scheduled Quizzes are indicated below with (\*)**

<u>Date</u>	<u>Lecture (Chapter)</u>
Jan 10-14	Introduction (1) Epithelial tissue (1)
Jan 17-21*	Connective tissue (1)
Jan 24-28*	Endocrine system (6)
Jan31- Feb 4	<b>Exam 1 opens on 2/4 and closes at midnight 2/6</b> Nervous system (4)
Feb 7-11*	<b>Physiology in the News 1- due by midnight 2/13</b> Skeletal system (7)
Feb 14-18	Joints (7)
Feb 21-25*	Muscle (8)
Feb -28-Mar 4	<b>Exam 2 opens on 3/4 and closes at midnight 3/6</b>
Mar 7-11	Spring Break <b>Physiology in the News 2- due by midnight 3/13</b>
Mar 14-18*	Hematology (3)
Mar 21-25	Cardiovascular system (9)

Mar 28-Apr 1*	Respiratory system (10)
Apr 4-8	<b>Exam 3 opens on 4/8 and closes at midnight 4/10</b>
Apr 11-15	Urinary system (11) <b>Physiology in the News 3- due by midnight 4/17</b>
Apr 18-22*	Digestive systems (12) <b>Physiology in the News 4- due by midnight 4/24</b>
Apr 25-27*	Review
Apr 29	<b>Final exam opens on 4/29 and closes at midnight 5/2/22</b>

**Dates to Remember:**

**Sunday February 27th (midnight)- Case Study 1 due on Blackboard**  
**Sunday April 17th (midnight)- Case Study 2 due on Blackboard**

**Instructor's bibliography:**

Anatomy and Physiology of Farm Animals. 7<sup>th</sup> edition. 2009. Frandson, Wilke, and Fails. Wiley-Blackwell.

Veterinary Anatomy and Physiology. A clinical laboratory manual. 2<sup>nd</sup> edition. 2011. Cochran. Delmar Publishing.

Introduction to Anatomy and Physiology. 2012. Rizzo. Delmar Publishing.

Principles of Animal Physiology. 2<sup>nd</sup> edition. 2008. Moyes and Schulte. Pearson Education, Inc.

Seely's Anatomy and Physiology. 10<sup>th</sup> edition. 2013. Vanputte, Regan, and Russo. McGraw-Hill.

Spurgeon's Color Atlas of Large Animal Anatomy. 2006. McCracken, Kainer, and Spurgeon. Wiley-Blackwell.

Ruminant Anatomy: A Photo Atlas. 2013. Dunn. Clemson University.

Companion Animal Anatomy: A Photo Atlas. 2014. Dunn. Clemson University.