

ANSC 5324
Anatomy and Physiology
Fall 2026

Instructor:

Dr. Jamie Boyd

Professor

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Office Hours: TH 9:30-12 and Friday 9-12 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. 4th 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
<u>Final Exam</u>	<u>150 points</u>
Total	950 Points

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>
Aug 24-28	Introduction (1) Epithelial tissue (1)
Aug 31-Sept 4*	Connective tissue (1)
Sept 8-11*	Endocrine system (6)
Sept 14-18	Exam 1 opens on 9/18 and closes at midnight 9/20 Nervous system (4)
Sept 21-25*	Physiology in the News 1- due by midnight 9/25 Skeletal system (7)
Sept 28-Oct 2	Joints (7)
Oct 5-9*	Muscle (8)
Oct 12-16	Exam 2 opens 10/16 and closes at midnight 10-18
Oct 19-23	Physiology in the News 2- due by midnight 10/23 Hematology (3)
Oct 26-30*	Cardiovascular system (9)
Nov 2-6	Cardiovascular system (9)

Nov 9-13*	Respiratory system (10)
Nov 16-20	Exam 3 opens on 11/18 and closes at midnight 11/22
Nov 23-24	Urinary system (11) Physiology in the News 3- due by midnight 11/24
Nov 30-Dec 2*	Digestive systems (12) Physiology in the News 4- due by midnight 12/2
Dec 4	Final exam opens on 12/4 and closes at midnight 12/7

Dates to Remember:

Sunday October 24th (midnight)- Case Study 1 due on Blackboard
Monday December 1st (midnight)- Case Study 2 due on Blackboard

Instructor's bibliography:

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

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

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

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

Seely's Anatomy and Physiology. 10th 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.