

**ANSC 3410**  
**Anatomy and Physiology**  
**Spring 2025**

**Instructor:**

Dr. Jamie Boyd

Associate Professor

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Office Hours: MWF 9:30-12:30 or by appointment

Lab: T 2-3:40pm RAS 132

Lecture: TH 8:00-9:15

Location: RAS 135

**Course Description:** General principles of anatomy and physiology of farm animals, emphasizing ruminant and equine digestive physiology.

**Required Text:** Functional Anatomy and Physiology of Domestic Animals. 4<sup>th</sup> or 5<sup>th</sup> edition. Reece, Wiley-Blackwell.

**Purpose of the course:** The course introduces students to the basic concepts of domestic animal anatomy and physiology. By learning and understanding fundamental concepts, students will be able to apply this knowledge to other advanced Animal Science courses.

**Student learning outcomes:**

1. Students will demonstrate knowledge of domestic animal anatomy and physiology at the introductory level.
2. Be able to discuss species differences as related to various organ system's structure and function.
3. Understand the integration of organ systems in the function of the total body.

**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 in achieving these results will be based on a minimum 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 a minimum of two hours of study time per class hour each week. The material covered in this course cannot be learned adequately in only a couple of 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 Schwartze 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 the physiological pathology of an animal. Students will research the symptoms and explain the potential cause of the pathology and if possible treatment options, survivability, and long-term prognosis. Responses should be 2-3 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)

**Laboratory Assignments/ Attendance:** Labs will be held on a weekly basis to supplement the course learning and will include written assignments and dissections. Please notify me within the first week, if this is an issue for you. Attendance is mandatory without prior approval. Five points will be deducted from your final lab grade for each unexcused absence. No make-up labs will be offered.

**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 (10 pts each)	80 points
Case Studies (2 @ 50pts each)	100 points
Physiology in the News (2 @ 50pts each)	100 points
Labs/Attendance	120 points
Lab Practical	50 points
Final Exam	150 points
<b>Total</b>	<b>900 Points</b>

\* I reserve the right to give an unannounced quiz at any time during the semester.

**Grading scale:**

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 16	Introduction (1) Epithelial tissue (1)
Jan 21-23*	Connective tissue (1)
Jan 28-30*	Endocrine system (6)
Feb 4-7*	Endocrine conti.
Feb 11-13	<b>Exam 1 (11<sup>th</sup>)</b> Nervous system (4)
Feb 18-20	Skeletal system (7)
Feb 25-27*	Joints (7)
Mar 4-6*	Muscle (8)
Mar 11-13	<b>Exam 2 (11<sup>th</sup>)</b> <b>Physiology in the News 1- due by midnight 3/16</b>
Mar 17-21	<b>Spring Break</b>
Mar 25-27	Hematology (3) Cardiovascular system (9)
Apr 1-3*	Respiratory system (10)
Apr 8-10	Urinary System (11)
Apr 15-17	<b>Exam 3 (15<sup>th</sup>)</b> Reproductive system (14, 15, 16) <b>Physiology in the News 2- due by midnight 4/20</b>
Apr 22-24*	Reproductive system conti.
Apr 29*	Review

**Final Exam TBA****Dates to Remember:**

Sunday, March 2nd (midnight)- Case Study 1 due on Blackboard

Sunday, April 6th (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.