

Sul Ross State University
ANSC 5324: Anatomy & Physiology of Domestic Animals
Monday, Wednesday, Friday 11:00-11:50 am (RAS 130)

Instructor:

Dr. Perse McCrae

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Office hours: Monday & Wednesday 9:30-11:00 am or by appointment

Course description:

The course is designed to build upon the basic and fundamental concepts of domestic animal anatomy and physiology. Students will apply and interpret this knowledge in a scientific and clinical framework.

Course objectives:

1. Students will demonstrate knowledge of domestic animal anatomy and physiology.
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. Be able to critically analyze scientific and veterinary literature.

Marketable Skills for Department of Animal Science:

1. Knowledge of techniques and equipment for planting, growing, and harvesting food products (both plant and animal) for consumption, including storage/handling techniques.
2. Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment.
3. Understanding the implications of new information for both current and future problem solving and decision-making.
4. Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
5. Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions. Communicating finding in both oral and written form at a level appropriate for the needs of the audience.

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.
- Demonstrate the ability to communicate through written, spoken, and graphical methods.

Required text:

Functional Anatomy & Physiology of Domestic Animals. 4th Ed. 2009. Reece, Wiley-Blackwell.

Academic honesty:

The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of their classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. For more information visit:

https://www.sulross.edu/sites/default/files/sites/default/files/users/docs/stulife/student_conduct_discipline.pdf

Students with special needs:

Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the Student's responsibility to initiate a request. Please contact me, Ms. Rebecca Greathouse Wren, M.Ed., LPC-S, Director/Counselor, Accessibility Services Coordinator, Ferguson Hall (Suite 112) at 432.837.8203; mailing address is

P.O. Box C-122, Sul Ross State University, Alpine, Texas 79832. Students should then contact the instructor as soon as possible to initiate the recommended accommodations.

Absence & late assignment policy:

It is expected that ALL assignments will be submitted on time. Valid absences include 1) medical emergencies with signed note from a doctor, 2) participation in a SRSU-sanctioned activity with a letter from faculty advisor, or 3) other emergencies or conflicts that are allowed at the professor's discretion. Students are expected to make up missed work within a week of original due date. **Late assignments will be accepted for 4 days following the initial due date and time with a 20% penalty per day late.**

Exams:

There will be four exams administered in class throughout the semester. The dates of the exams are noted on the syllabus. The fourth exam will be a comprehensive final exam. **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.**

Assignments:

Critical article review: 400 pts (100 pts each)

You will choose a primary scientific paper (NOT a review paper or brief communication) published in a peer reviewed journal on a topic within the field of animal anatomy and physiology (sign up required). Submission includes a two-page paper (12 pt. Times New Roman font, double spaced) explaining what the goal of the study was, how the authors conducted the research, what their results indicate and a critical review on how the research was carried out and interpreted. You must choose a different topic for each review. See rubric for all details. **Due: January 31st, February 21st, March 16th, April 15th.**

Animal body systems project: 350 pts

Choose an animal species and a disease or condition that affects multiple physiological systems (sign up required). Describe the anatomy of that animal including any species differences, as well as the disease itself (what it is, symptoms, diagnosis, treatment/management, prevention, etc). You must highlight how this condition impacts the different body systems and integrate your anatomy and physiology knowledge. You can submit either a paper or a poster detailing the above information. See rubric for all details. **Due: April 24th.**

Points available:

Assignment	Points
Exams (125 points each X 3)	375 pts
Critical article review (100 pts each X 4)	400 pts
Animal body systems project	350 pts
Final Exam (Cumulative)	175 pts
Total	1300 pts

Grading scale:

A = 90-100%
B = 80-89%
C = 70-79%
D = 60-69%
F = below 60%

Tentative lecture schedule:

**This information should be treated as an outline – there may be alterations in sequence of topics.*

Date	Topic	Chapter
January 13	Introduction, structures & function	Chapter 1
January 15	Structures & function	
January 17	Endocrine	Chapter 6
January 20	MLK day: NO CLASS	
January 22	Endocrine	
January 24	Endocrine	
January 27	Endocrine	
January 29	Neurophysiology	Chapter 4
January 31	Neurophysiology Critical article review 1 due by midnight	
February 3	Neurophysiology	
February 5	Neurophysiology	
February 7	Neurophysiology lab	
February 10	EXAM 1	
February 12	Bones, joints & synovial fluid	Chapter 7
February 14	Bones, joints & synovial fluid	
February 17	Bones, joints & synovial fluid lab	
February 19	Muscle physiology	Chapter 8
February 21	Muscle physiology Critical article review 2 due by midnight	
February 24	Muscle physiology lab	
February 26	Hematology	Chapter 3
February 28	Hematology	
March 2	EXAM 2	
March 4	Cardiovascular system	Chapter 9
March 6	Cardiovascular system	
March 9	Spring break: NO CLASS	
March 11	Spring break: NO CLASS	
March 13	Spring break: NO CLASS	
March 16	Cardiovascular system Critical article review 3 due by midnight	
March 18	Cardiovascular lab	
March 20	Respiratory system	Chapter 10
March 23	Respiratory system	
March 25	Respiratory system	
March 27	Respiratory system lab	
March 30	EXAM 3	
April 1	Flex day	
April 3	Urinary physiology	Chapter 11
April 6	Urinary physiology	
April 8	Urinary physiology	
April 10	Good Friday: NO CLASS	
April 13	Digestive physiology	Chapter 12
April 15	Digestive physiology Critical article review 4 due by midnight	
April 17	Digestive physiology lab	
April 20	Reproductive physiology	Chapters 14 & 15
April 22	Reproductive physiology	

April 24	Reproductive physiology Animal body systems assignment due	
April 27	Review	
April 29	Review	
May 5	Final 10:15 am – 12:15 pm	Cumulative final