BIOL 4409 Mammalogy Fall 2025

Instructor: **Dr. Thornton Larson**
Office: **WSB 221**
Office Hours: **M 9 AM – 11 PM; T 5 PM – 8 PM**
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Lecture: **MW 12:30 PM – 1:45 PM**
Lab **M 3:30 PM – 5:15 PM**
Room: **WSB 107**

Course Description:

Students study the biology of mammals with an emphasis on evolution, population structure, reproduction, and physiological adaptation. This course will focus on diversity of mammals with an emphasis on mammals of Texas specifically the Trans Pecos region since that is where we are located. The laboratory component of this course will make use of preserved museum specimens, dissections, and possibly field trips to illustrate the morphology, taxonomy, natural history, reproduction, and other aspects of mammal biology. A separate syllabus will be provided for laboratory as labs will differ slightly between campuses. Blackboard will be used as the primary communication hub as well as the repository for materials associated with this course.

Recommended Books/Checklists:

REQUIRED

1. *Mammalogy: Adaptation, Diversity, Ecology*, Feldhamer et al.

   This text is a large and comprehensive view of Mammalogy. We will not have the time in the course to cover every chapter, but purchasing this text will greatly assist you with lecture materials. The large part of lectures and lecture exams will be based on this text. While I will be utilizing the 5th edition, the 4th edition would be more than adequate if you desire the reference.

OPTIONAL

1. *A Field Guide to Mammals* (Peterson Field Guide). Boston: Houghton-Mifflin **(Highly recommended!)**

   Petersons guides are typically THE field guide to use as a budding naturalist/mammologist.
2. *Field guide to the Mammals of the Trans Pecos* (Shmidley)
3. *Field guide to Mammals of Texas* (Shmidley)

Exams and Grading:

4 lecture exams (100 pts ea)	400 (~63%)
4 Lecture Assignments (50 pts each)	200 (~32%)
Attendance	30 (~5%)
Total Credit	**630 points (300 additional from lab[~30%])**

A 90 – 100% B 80 – 89% C 70 – 79% D 60 – 69% F <60%

Attendance:

Mandatory. I will have a sign-in sheet at the front of the class, but this course is sized to where I will recognize when someone is not present. **I am allowed to drop you from my class** if you miss **more than six times** (that accounts for 3 full weeks of lecture). Although permitted, I do not typically drop students from the course and will instead leave it as your responsibility; as a result, you will be left with an 'F' for the course. I do not wish to hear excuses for missing class, and do not want to hear about it every time you are gone. Absences are excused only if you have a **documented**, university-approved excuse (hospitalization, funeral, etc.)

IMPORTANT!! Too often students have been arriving incredibly tardy for classes to where I have literally started class with either only the online students or even only 1 student in the classroom and everyone else sauntering in. This is massively inappropriate and taken by me as a sign of disrespect. **Tardiness will result in a half deduction of attendance points for that day**, this does include students attending online (whom I have seen pop in incredibly late as well). If you have issues with being on time, such as coming from a class in the RAS building, please speak to me and we can discuss accommodations.

If you miss a class, it is not my responsibility to provide you with notes, materials, etc., it is yours. It is recommended that you speak to a classmate regarding what you missed. If you feel that is not helpful for you between the assigned reading and talking with a classmate, please come to my office hours. I have tried to make them accessible to all students, including athletes by staying incredibly late to accommodate students after practice. I do also accept appointments.

DO NOT MISS EXAMS unless you have a documented, university-approved excuse. If you do not inform me of your approved absence before the exam it will be a **ZERO**. For labs, **DO NOT MISS LAB PRACTICALS!!!** It is impossible to re-run them as they are setup with many lab components that take up space that is not guaranteed.

Summary Papers:

This semester you will have one summary paper that you will write by yourself. The summary paper will entail you reading a on topic peer-reviewed journal article and writing a summary on that paper. Then you will place that paper into a LLM such as chatGPT and ask it to write a

summary. For the GPT summary, I will need to know what LLM you are using, and you must include the prompt you wrote to inform the GPT how to summarize the paper, there is more than one way to inform the models. You will then compare and contrast how your summary compares to that of the AI summary and reflect on what you can take-away from this experience. Is it useful at some level, where might it be helpful versus not helpful in understanding scientific literature?

A second assignment meant to take the place of a second summary paper is a group project where you and a partner will read a journal article and then interview one of the authors (generally the corresponding author of the paper) about the paper, their research, and how their career lead them down their current path. This interview will be recorded with Bobby Greeson, our media guy, and posted as a podcast on YouTube and other podcasting locations. Currently most videos are luck to get 100 views through our YouTube so the audience is relatively small.

Both of these assignments will have a more detailed post in the course page on Blackboard. More on the podcast is also below.

Podcast Assignment:

Of the four assignments in lecture one of the four will be a podcast interview of an author of a scientific paper of you and a partner's choosing within the field of mammalogy. Interview guidelines will be posted on Blackboard, but this must be done in a very timely fashion as we need to schedule time with both Bobby Greeson and the author of interest. The interview is expected to take between 40 minutes and an hour but closer to 45 minutes. Both you and your partner must contribute to the podcast interview. Recommendations include coming up with questions ahead of time, I will have some examples that you may use and adjust for your specific interview, but you must have your own questions and conversation topic points prepared. You will be expected to understand the paper enough to ask questions of the author so make sure you take care in your development of the project. I also recommend you practice interviewing peers or classmates to become comfortable with the process. Interviews can start very stiff, strictly following the questions but can evolve to be more fun and conversational. Podcast will be posted on several of Sul Ross's media sites including YouTube.

Late Work Policy:

The policy is as follows: if it is late 1 minute to 24 hours 10% will be taken off the assignment; from 24 to 48 hours 20% taken off; and from 48 to 72 hours 30% taken off. Anything after 72 hours (3 days) will be a zero. That is a grade level per day for papers that would receive 20/20 points.

Course Objectives: At the end of the semester, students will:

1. Sight-recognize the mammals of Texas and know the habitat and range for which they would be encountered.
2. Know the families of North American mammals.
3. Know the orders of mammals.

4. Be able to use morphological features to identify and classify living and preserved mammals.
5. Understand and compare different reproductive strategies of mammals.
6. Use a standard field guide to identify mammals.
7. Utilize databases to find primary literature to learn more about a mammalian family.
8. Keep journal records of field sightings and behaviors of mammals.

Student Learning Outcomes (SLOs) for Biology:

1. Demonstrate an understanding of evolution by natural selection.
2. Demonstrate an integration of environmental awareness into everyday modern life.
3. Understanding how to incorporate molecular biology into the study of the whole organism.
4. Demonstrate utilization of various field techniques toward addressing scientific questions in the discipline.
5. Conduct basic laboratory experiments utilizing standard observational strategies.

Marketable Skills

1. Ability to organize, analyze, and interpret data.
2. Proficiency in using presentation software.
3. Experience in managing time and meeting deadlines.
4. Ability to speak effectively and write concisely about scientific topics.
5. Experience in the development of professional email correspondence.

SRSU Library Services

The Sul Ross Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu. Off-campus access requires your LoboID and password. Check out materials using your photo ID. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or phone (432-837-8123).

SRSU Disability Services:

SRSU Accessibility Services. Sul Ross State University (SRSU) is committed to equal access in compliance with the 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 each semester for each class. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartze Grisham, LPC, SRSU's Accessibility Services Director or Ronnie Harris, LPC, Counselor, at 432-837-8203 or email mschwartze@sulross.edu or ronnie.harris@sulross.edu. RGC students can also contact Alejandra Valdez, at 830-758-5006 or email alejandra.valdez@sulross.edu. Our office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine. Texas, 79832.

Academic Integrity:

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own and avoid the temptation to engage in behaviors that violate academic integrity, such as turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. Students should also avoid using open AI sources unless permission is expressly given for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

I will reiterate here that I take academic dishonesty and plagiarism very seriously. Citations are your friend. There is a difference between knowingly being dishonest with what is your work and mistakes through learning.

Classroom Climate of Respect

Importantly, this class will foster free expression, critical investigation, and the open discussion of ideas. This means that all of us must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, we must all learn how to probe, oppose and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference. Still we will not be silenced by the difficulty of fruitfully discussing politically sensitive issues.

Supportive Statement

I aim to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

For Remote/Online Courses Only - SRSU Distance Education Statement.

Students enrolled in distance education courses have equal access to the university's academic support services, such as library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through

Blackboard, which requires secure login. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website. Directions for filing a student complaint are located in the student handbook.

Tentative Lecture Schedule

Date	Topic
8/25	Syllabus and Intro to Mammalogy (ch.1)
8/27	Mammal diversification (ch. 3)
9/1	**LABOR DAY No Class**
9/3	Evolution and dental characteristics (ch. 4)
9/8	Structure and Function: Anatomy (ch. 6)
9/10	Structure and Function: Modes of Feeding (ch. 7) (**Summary Assignment 1 Due**)
9/15	Structure and Function: Environmental Adaptations (ch.8)
9/17	**Exam 1**
9/22	Reproduction (ch.9)
9/24	Orders: Monotremata and Marsupials (ch. 10)
9/29	Shrews, Tree shrews, colugos (ch.11, 14)
10/1	Order: Chiroptera (ch. 21)
10/6	Orders: Rodentia and Lagomorpha (ch. 16)
10/8	Orders: Probiscidea, Hyracoidea, and Sirenia (ch. 12) (**Summary Assignment 2 Due**)
10/13	Order: Eulipotyphla (ch. 17)
10/15	Infraorder: Cetacea (ch. 20)
10/20	Review before Exam 2
10/22	**Exam 2**
10/27	Order Primates (ch. 15)
10/29	Orders: Pilosa and Cingulata (ch. 13)
11/3	Orders: Carnivora and Pholidota (ch. 18)

11/4	Orders: Perissodactyla and Cerartiodactyla (ch. 19) (**Summary Assignment 3 Due**)
11/10	Sexual Selection, Parental Care, Mating Systems (ch. 22)
11/12	**Exam 3**
11/17	Social Behavior (ch. 23)
11/19	Territory and Ranges (ch. 24)
11/24	Populations and Communities (ch. 25, 26) (**Summary Assignment 4 Due**)
11/26	**Thanksgiving Holiday No Class**
12/1	Diseases and Parasites (ch. 27)
12/3	Review and Conservation (ch. 28)
12/9	**Final Tuesday 10:15 AM to 12:15 AM**