

## LECTURE SYLLABUS

### BIOL 4409 Mammalogy Spring 2020

**Instructor:** Dr Sean P. Graham  
**Lectures:** MWF 9-950 WSB 107  
**Laboratory:** M 3-450 WSB 107  
**Office:** WSB 221

**Office Hours:** MWF 9-1030, T-TH 4-6  
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**Course Description:** Mammalogy is the study of mammals, one of the most spectacular, successful, and best-studied animal groups. This course will survey the origin, evolution, diversity, physiology, and behavior of mammals. This course will focus on deep diversity of mammals more than typical U.S. mammalogy courses because I have experience with Australian marsupials and monotremes. The laboratory component of this course will make use of preserved museum specimens, dissections, and field trips to illustrate morphology, taxonomy, identification, natural history, reproduction, and other aspects of mammal biology. A separate syllabus is available for laboratory. Many materials associated with this course (e.g. this syllabus, lecture and lab handouts, grades) will be distributed through the Blackboard web site.

#### **Recommended Books/Checklists: NONE REQUIRED**

1. *Mammalogy*, Drickhamer et al.  
This text is a large and comprehensive view of Mammalogy. We will not have the opportunity to cover every chapter, but purchasing this text will greatly enhance your understanding of the lecture material. I will be basing the lectures and tests in large part on this text.
2. *A Field Guide to Mammals* (Peterson Field Guide). Boston: Houghton-Mifflin. (**Highly recommended! Buy it used online for 1\$**)
3. *Field guide to the Mammals of the Trans Pecos* (Shmidley)
4. *Field guide to Mammals of Texas* (Shmidley)

**Exams & Grading:** The table below illustrated the grading for this course. I do not give comprehensive exams.

3 lecture exams (3 @ 100 pts ea)	300			
Lab practicals (3 @ 100 pts ea)	300			
Field notebook (50 pts)	50			
<b>Total Credit</b>	<b>650 points</b>			
A 90 — 100%	B 80 — 89%	C 70 — 79%	D 60 — 69%	F 0 — 60%

**Attendance** is mandatory. I will not waste class time calling roll because you are all adults. However, this will be a small class and I will notice when you are missing. **I am allowed to drop you from my class** if you miss **more than six times**. I don't want to hear about your excuse for not being in class and I don't want to hear about it every time you're gone. Absences are excused only if you have a documented, university approved excuse (hospitalization, funeral, etc.). **DO NOT MISS EXAMS** unless you have a documented, university-approved excuse (hospitalization, etc.), and I need to hear about this **BEFORE THE DAY OF THE EXAM**. Otherwise you're out of luck. **DO not miss** lab practicals. It is impossible for me to re-run them.

**Course Objectives.** At the end of the semester, students should be able to:

1. Sight-recognize the mammals of Texas (especially those in the Trans Pecos), and know the habitat and range in which each would be encountered.
2. Know the families of North American mammals.
3. Know the orders of mammals around the world.
4. Explain the basic external and internal anatomical/physiological features of mammals.
5. Understand the reproductive biology and behavior of mammals.
6. Use a standard field guide to identify mammals.
7. Understand the evolution of mammals.
8. Appreciate the management and conservation of mammal populations.

### 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.

### TENTATIVE COURSE SCHEDULE

	Date	Topic
<i>Week 1</i>		
Lecture 1		Introduction: Diversity of Mammals
Lecture 2		
<i>Week 2</i>		
<b>No Class Monday Jan 20</b>	<b>MLK Holiday</b>	
Lecture 3		Origin and phylogeny of mammals
Lecture 4		
<i>Week 3</i>		
Lecture 5		Form and function I: Anatomy
Lecture 6		
		II: Physiology
<i>Week 4</i>		
Lecture 7		III: Brains and Senses
Lecture 8		
<b>EXAM</b>	<b>Friday, February 07</b>	<b>Exam I</b>
<i>Week 5</i>		
		Form and Function IV: Food and Feeding
Lecture 9		
		V: Social Behavior and Communication
<i>Week 6</i>		
Lecture 10		VI: Parental Care

Lecture 11		
		Reproduction I
<i>Week 7</i>		
		Reproduction II
Lecture 12		
Lecture 13		Adaptive Radiation I: Monotremes
<i>Week 8</i>		II: Marsupials
Lecture 14		
Lecture 15		III: Shrews, tree shrews, colugos
<b>Spring Break</b>	<b>March 19-13</b>	<b>No classes – Spring break</b>
<i>Week 9</i>		
		IV: Chiroptera
Lecture 17		
<b>EXAM</b>	<b>Friday, March 20</b>	<b>Exam II</b>
<i>Week 10</i>		V: Primates
Lecture 18		
		VI: Human evolution
<b>No Class</b>		<b>No class – Good Friday Holiday</b>
<i>Week 11</i>		
Lecture 19		XII: Xenarthra and allies
Lecture 20		
		VIII: Carnivora
<i>Week 12</i>		IX: Cetacea
Lecture 21		X: Artiodactyla, Perissodactyla
Lecture 22		
<i>Week 13</i>		
Lecture 23		XI: Rodentia and Lagmorpha
Lecture 24		XII: Proboscidea, Hyracoidea, Sirenia
<b>Friday April 10</b>	<b>No Class-Good Friday Holiday</b>	
<i>Week 14</i>		
Lecture 25		Ecology
Lecture 26		
		Conservation
<i>Week 15</i>		
Lecture 27		Conservation
<b>EXAM</b>	<b>Tuesday, May 05</b>	<b>Final Exam (8-10 am)</b>

Note – Lecture topics are subject to change according to course interest, organization, and timing constraints, however the exam dates will remain the same.

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.