

BIOL 4422 - MAMMALOLOGY

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Office Hours: T, R 9-11:00 am, or by appointment

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Lecture: RFM 3224, T, R 12:30-1:45 pm

Laboratory: SUPP 176, T or R 2:00-4:45 pm

General Course Content: This course focuses on the biology of mammals of the world with an emphasis on the mammals of Texas and adjacent states. This course will use lectures, field trips, and laboratory work to explore the biology of mammals. Lectures will cover the taxonomy, ecology, physiology, evolution, behavior and conservation of mammals. Laboratory work will mostly involve identification of specimens from museum collection and field research techniques. Field trips will be used to survey local mammalian populations and employ field techniques involved in mammalian research.

Course Objectives: Students shall:

- Know the basic concepts of mammalian biology including the ecology and evolution of mammals.
- Know the diagnostic features of extant mammalian orders and families and be able to accurately identify mammals down to genera and species from museum specimens, skulls, and images.
- Know the evolutionary history of mammals and diagnostic features of extinct orders discussed in class.
- Become familiar with field research techniques used in mammalian studies.
- Identify Texas mammals and have a basic understanding of the natural history of the mammals of Texas.

Textbooks:

Feldhamer, G.A., L.C. Drickamer, S.H. Vessey, J.F. Merritt. 2004. Mammalogy: Adaptation, Diversity, and Ecology, 2nd Edition. McGraw-Hill Companies (required).

Kays, R. W., and D. E. Wilson. Mammals of North America, 2nd edition. Princeton University Press (required).

Jones, R. Manning. Illustrated key to skulls of North American Mammals. Texas Tech University Press (required).

Schmidly, D. The Mammals of Texas, Revised Edition. University of Texas Press (optional).

IMPORTANT: Attendance of lectures and laboratories is required. If the student has more than 3 unexcused absences they may be required to drop the class.

Lecture and laboratory are not completely independent. Some of the material presented in laboratory or on field trips may form the basis for questions in lecture.

Class Schedule--Subject to Change

Topic	Date	Chapters	Lab
- Introduction, History of Mammalogy	08/23	1-2	No lab first week
- Methods for Studying Mammals	08/28	3	
- Mammalian Evolution	08/30	4	Mammal morphology
- Field Trip: Bracken Cave	08/30		
- Mammalian Biogeography	09/04		
- Structure and Function	09/06	5, 6	Morph test; Guide/Key use
- Structure and Function	09/11	7	
- Environmental Adaptations	09/13	8	Insectivores, Bats
- Reproduction	09/18	9	
- Exam 1	09/20		Rabbits, Rodents
- Marsupials and Monotremes	09/25	10	
- Anteaters and Insectivores	09/27	11	Owl Pellet exercise
- Field trip: Elephant Mountain WMA	09/28-09/30		
- Chiroptera	10/02	12	
- Chiroptera continued	10/04	12	Open Lab
- Rodentia and Lagomorph	10/09	17	
- Rodentia and Lagomorph continued	10/11	17	Lab Midterm
- Primates	10/16	13	
- Primates continued	10/18	13	Freeman Ranch
- Xenarthra et al.	10/23	14	
- Exam II	10/25		Carnivores, Primates
- Texas Mammals	10/30		
- Life of Mammals	11/01		Cetacea, Ungulates
- Carnivora	11/06	15	
- Carnivora continued	11/08	15	Open Lab
- Field trip: Southmost Preserve	11/09-11/11		
- Cetacea	11/13	16	
- Cetacea continued	11/15	16	Open Lab
- Proboscidea et al.	11/20	18	
- Perissodactyla & Artiodactyla	11/27	19	
- Mammalian Conservation	11/29	29	Lab Final
- Final Exam	12/11 @ 11:00		

Grading (for undergraduates)

Lecture Tests: (55% of grade)

- 1st Test 15%
- 2nd Test 20%
- Final 20%

Lab Tests: (35% of grade)

- Morph Test 5%
- Lab Quizzes 8%
- Lab Midterm 8%
- Lab Final 14%

Participation in field trips 10% (day trips 2%, weekend field trips 8%)

Laboratory: Quizzes will be given weekly in lab. If you miss a quiz and have a valid documented excuse, you will not be given a zero for the quiz. However, any missed quiz due to an unexcused absence will result in a grade of zero, no exceptions.

If a field trip is canceled, its proportion of the Participation grade will be distributed among the remaining field trips.

Field Trips: This class involves field trips. Therefore your active and enthusiastic participation in field trips is expected and will be a large part of your grade. There will be two weekend field trip (departing Friday PM, returning Sunday PM), and several afternoon field trips.

Each field trip will be graded as follows: Enthusiastic and active participation = A (100%), limited active participation = C (75%), unsatisfactory participation (as determined by instructor's subjective criteria) = F (40-55%). Missing a field trip without a valid, documented excuse will result in a grade of F (0%) for Participation. If a student cannot attend a trip because of other obligations or sickness, and with instructor approval, grades of 0 can also be replaced through completion of a special assignment. Special assignments will involve working in the museum for specified number of hours (depending on field trip missed) on specimen cataloging and prepping of museum specimens. If an afternoon field trip is missed, the student is required to log 2 hours to fulfill the missed trip while a weekend field trip will require 8 hours to satisfactorily fulfill the missed trip.

Notice: During field trips we will be handling live mammals. Mammals sometimes carry diseases that can be transmitted to humans. Although such disease transmission is extremely unlikely and students will be instructed in appropriate safety precautions, the possibility of contracting a potentially fatal disease exists. The university and instructor assume no liability for harm that results from participation in field trips.

EXAM MAKE-UP POLICY: If you miss an exam (other than the final) and have a valid, documented excuse, you may, at the instructor's discretion, substitute the final exam grade for the missing grade. If the final exam (or final laboratory exam) is missed for a valid, documented reason, I will give the student an oral exam at the earliest possible date. All other missed exams will result in a grade of zero.

Academic Integrity: Students are expected to adhere to the University's Academic Integrity Policy. If you are caught cheating on a test, report, or other work, you will be assigned a grade of zero. The instructor reserves the right of turning the names of cheating students over to the appropriate disciplinary board for possible expulsion. www.txstate.edu/effective/upps/upps-07-10-01.html