

University of Southern California
Spring 2022
Syllabus
BISC363 – MAMMALOGY (4 units)

Instructors

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Teaching Assistant

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Please note: All three of us can easily schedule office hours by appointment to accommodate your schedules.

Times

Lectures: Monday and Wednesday 9:00-10:20 am.
Lab: Fridays 9:00-10:50 am.

Course Description

Mammalogy introduces students to the morphology, classification, distribution, and physiology of mammals. It involves identification and field study of local species as well as study in lecture and lab of representatives of the major groups worldwide. **Barring covid restrictions, we will hold our lab across the street at the Natural History Museum, using their collections as a learning tool.**

Objectives of the Course

1. Become familiar with mammals on a world-wide basis – their major groups, relationships, and aspects of their natural history. We will do this primarily through the lectures and field trips.
2. Become familiar with the mammals of North America and southern California (families, genera and species) - identification and distribution, plus some information on habitat preferences and habits. We will do this primarily through the laboratory work and an overnight field trip in which we will live-trap small rodents (or adjusted per covid-related rules).
3. Become familiar with some basic techniques of studying mammals - live capture of small mammals, and identification of tracks, scats, and other sign.
4. Appreciate the ecological and evolutionary forces that have shaped mammal diversity on the planet.

Prerequisite

None, just natural curiosity and excitement to learn. Please note: if you are a freshman or sophomore and want to register for this class, you need to contact Matt Dean (matthew.dean@usc.edu), who will get you D clearance to register.

Books

Required text: Vaughan, Ryan, & Czaplewski. 2015. Mammalogy, 6th Ed., Jones & Bartlett Publishers, Sudbury, MA

Skull identification guide: Dines, J. P., ed. Lawlor's Handbook to the Orders and Families of Living Mammals.

Grading System Overview (1000 points total):

Lecture:

Lecture Exam 1 100 points
Lecture Exam 2 100 points
Lecture Exam 3 100 points
Lecture quizzes 100 points
Oral Presentation....50 points

Lab

Lab Practical 1 100 points
Lab Practical 2 100 points
Lab quizzes 100 points
Squirrel tracking 100 points
"Zoo project" 150 points

Please note: Flexible and reasonable make-up assignments will be given in cases of covid-related issues, including limitations due to time zone differences.

Grading System Details:

Lecture exams: The three lecture exams may include "fill-ins", "multiple choice", matching, and short answer or essay questions. Lecture exams are open-note. Lecture exam 3 is actually the final and will not be cumulative.

Weekly lecture quizzes: Every Wednesday at 10:30 am, a quiz will open up on Blackboard which serves to reinforce the lecture material of that week. Quizzes will be open for 24 hours, but once a student opens the quiz, they have 20 minutes to complete. These will be 1-5 short questions, including fill-in, multiple choice, matching, and short answer. Lecture quizzes are worth 10 points each. We will give 11 quizzes and drop the lowest score, so lecture quizzes are worth a total of 100 points. Lecture quizzes are open-note.

Oral presentations: Each student will choose one mammal family to present to the class. These presentations are about 5 minutes. You will introduce the family, describing morphological features, ecology, and taxonomy of its members. Presentations will be spread throughout the semester depending on which family you choose.

Lab exams: The Lab practical exams will consist of "fill-ins", "multiple choice", matching, and short answers. Most questions will be accompanied by a picture (of a skull for example) to ask you questions about. Lab exams are open-note.

Weekly lab quizzes: Every Friday at 11:00 am, a quiz will open up on Blackboard which serves to reinforce the lab material of that day. Quizzes will be open for 24 hours, but once a student opens the quiz, they have 20 minutes to complete. These will be 1-5 short questions, including fill-in, multiple choice, matching, and short answer. Lab Lab quizzes are worth 10 points each. We will give 11 quizzes and drop the lowest score, so lab quizzes are worth a total of 100 points Weekly lab quizzes are open-note.

Squirrel tracking: Each student will be required to "track" a squirrel that we have fit with a radio collar on campus. This involves checking out radio telemetry gear and walking through campus, noting GPS and timepoint of various squirrels and inputting their data on our centralized database. We will eventually map out territories of individual squirrels, then compare with Dr. Jennifer Duggan's course at Cal State Monterey, whose students are doing the same but for a different species of squirrel.

"Zoo report": Students will identify an animal that they want to observe. It could be in a zoo, it could be a webcam (lots of zoos have them). Students will spend approximately 5 hours – spread throughout the semester – observing their mammal and writing down notes. Notes will be turned in along with a paragraph summarizing their behavioral characteristics.

Date	Topic	Leader
1/10/22	Intr., Origins of Mammals (Lecture)	Jim Dines
1/12/22	Mammal Characters (Lecture)	Jim Dines
1/14/22	Osteology: skull and skeleton (Lab)	Michael Lough-Stevens
1/17/22	MLK Day	-
1/19/22	Reproduction; Monotremes (Lecture)	Jim Dines
1/21/22	Skull quiz; Monotremes and Metatherians (Lab)	Michael Lough-Stevens
1/24/22	Metatherians (Lecture)	Jim Dines
1/26/22	Insectivorans; Xenarthra (Lecture)	Jim Dines
1/28/22	Eulipotyphla; Xenarthra; Pholidota (Lab)	Michael Lough-Stevens
1/31/22	Primates I (Lecture)	Jim Dines
2/2/22	Primates II; Bats I (Lecture)	Jim Dines
2/4/22	Primates; Chiropterans (Lab)	Michael Lough-Stevens
2/7/22	Bats II (Lecture)	Jim Dines
2/9/22	LECTURE EXAM 1 (Lecture)	Jim Dines
2/11/22	Carnivorans (Lab)	Michael Lough-Stevens
2/14/22	Carnivorans (Lecture)	Jim Dines
2/16/22	Paenungulata: Perissodactyla (Lecture)	Jim Dines
2/18/22	Artiodactyls (incl. Cetacea); Perissodactyla (Lab)	Michael Lough-Stevens
2/21/22	President's Day	-
2/23/22	Artiodactyla I (incl. Cetacea) (Lecture)	Jim Dines
2/25/22	LAB PRACTICAL I (Lab)	Michael Lough-Stevens
2/28/22	Artiodactyla II (incl. Cetacea) (Lecture)	Jim Dines
3/2/22	Artiodactyla III (incl. Cetacea) (Lecture)	Jim Dines
3/4/22	Paenungulates; Perissodactyla (Lab)	Michael Lough-Stevens
3/7/22	Rodents I (Lecture)	Matt Dean
3/9/22	Rodents II ; Lagomorphs (Lecture)	Matt Dean
3/11/22	Artiodactyla (incl. Cetacea) (Lab)	Michael Lough-Stevens
3/14-18/2022	Spring Break	-
3/21/22	LECTURE EXAM 2 (Lecture)	Matt Dean
3/23/22	Evolutionary Ecology I (Lecture)	Jennifer Duggan
3/25/22	Rodents; Lagomorphs (Lab)	Michael Lough-Stevens
3/28/22	Evolutionary Ecology II (Lecture)	Matt Dean
3/30/22	Biogeography I (Lecture)	Matt Dean
4/1/22	Local Species (Lab)	Michael Lough-Stevens
4/4/22	Biogeography II (Lecture)	Matt Dean
4/6/22	Behavior (Lecture)	Matt Dean
4/8/22	Squirrel tracking (Lab)	Michael Lough-Stevens
4/11/22	Conservation (Lecture)	Matt Dean
4/13/22	Sexual Selection I. Body size (Lecture)	Matt Dean
4/15/22	Squirrel tracking (Lab)	Michael Lough-Stevens
4/18/22	Sexual Selection II. Mating (Lecture)	Matt Dean
4/20/22	Sexual Selection III. Genitalia (Lecture)	Matt Dean
4/22/22	Squirrel tracking (Lab)	Michael Lough-Stevens
4/25/22	Sexual Selection IV. Genome (Lecture)	Matt Dean
4/27/22	Sexual Selection V. Humans (Lecture)	Matt Dean
4/29/22	LAB PRACTICAL II (Lab)	Michael Lough-Stevens

Guest lecture by Dr. Jennifer Duggan, Cal State Monterey

Final exam: Friday, May 9, 8-10 a.m. The final exam is “Lecture Exam 3” and will not be cumulative

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – *HSC:* (323) 442-1000 – 24-hour emergency or to report a crime. Provides overall safety to USC community. dps.usc.edu