

University of Southern California  
Spring 2023  
Syllabus  
BISC363 – MAMMALOGY (4 units)

**Instructors**

Dr. Jim Dines  
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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 10:00-11:20 am.  
Lab: Fridays 10:00-11:50 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. **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**

**Recommended textbook:**

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

**Recommended laboratory textbook:**

Kelt, D. A. and J. L. Patton. A Manual of the Mammalia.

(<https://press.uchicago.edu/ucp/books/book/chicago/M/bo28915892.html>)

-or-

Dines, J. P., ed. Lawlor's Handbook to the Orders and Families of Living Mammals (on Blackboard already).

### **Grading System Overview (1000 points total):**

#### Lecture:

Lecture Exam 1.....100 points  
Lecture Exam 2.....100 points  
Lecture Exam 3.....100 points  
Family presentation 75 points

#### Lab

Skull quiz ..... 75 points  
Lab Practical 1.....150 points  
Lab Practical 2.....150 points  
Squirrel tracking .....100 points  
Boyd field trip .....150 points

### **Grading System Details:**

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

**Family presentation:** Each student will research and present one mammal family 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. Your instructors will guide you through slide creation.

**Skull quiz:** Because so much mammalogy depends on identifying features in skulls, we will have a short quiz on skull morphology early in the semester. We will ask you to identify various features on a skull.

**Lab Practicals:** The two lab practicals will include "fill-ins", "multiple choice", matching, and short answer or essay questions. These practicals will take place in lab, and focused on specimens (normally skulls).

**Squirrel tracking:** Each student will participate in "tracking" squirrels 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.

**Boyd field trip:** We will spend one over-night at the Boyd Research Center to trap, identify, and learn about desert rodents. This semester, it will most likely occur April 23. Details to follow.

### **Make-up Policy:**

Exams can not be made-up. The field trip can not be made up, although we recognize that some peoples' schedules simply will not work. If students present compelling reasons for being unable to attend (at least one week in advance of field trip), we may consider alternative assignments. In the case of medical emergencies, we may prorate your points, but only if an excuse considered valid by faculty (i.e., doctor's note that clearly states student was unable to take exam, for example) is presented in a timely fashion. An acceptable written excuse or documentation must be provided to the faculty. The final exam will be administered only on the date and time set by the University.

Date	Topic	Leader
1/9/23	Intr., Origins of Mammals (Lecture)	Jim Dines
1/11/23	Mammal Characters (Lecture)	Jim Dines
1/13/23	Osteology: skull and skeleton (Lab)	Charlie Toney
1/16/23	MLK Day	-
1/18/23	Reproduction; Monotremes (Lecture)	Jim Dines
1/20/23	Skull quiz; Monotremes and Metatherians (Lab)	Charlie Toney
1/23/23	Metatherians (Lecture)	Jim Dines
1/25/23	Insectivorans; Xenarthra (Lecture)	Jim Dines
1/27/23	Eulipotyphla; Xenarthra; Pholidota (Lab)	Charlie Toney
1/30/23	Primates I (Lecture)	Jim Dines
2/1/23	Primates II; Bats I (Lecture)	Jim Dines
2/3/23	Primates; Chiropterans (Lab)	Charlie Toney
2/6/23	Bats II (Lecture)	Jim Dines
2/8/23	LECTURE EXAM 1 (Lecture)	Jim Dines
2/10/23	Carnivorans (Lab)	Charlie Toney
2/13/23	Carnivorans (Lecture)	Jim Dines
2/15/23	Paenungulata: Perissodactyla (Lecture)	Jim Dines
2/17/23	Artiodactyls (incl. Cetacea); Perissodactyla (Lab)	Charlie Toney
2/20/23	President's Day	-
2/22/23	Artiodactyla I (incl. Cetacea) (Lecture)	Jim Dines
2/24/23	LAB PRACTICAL I (Lab)	Charlie Toney
2/27/23	Artiodactyla II (incl. Cetacea) (Lecture)	Jim Dines
3/1/23	Artiodactyla III (incl. Cetacea) (Lecture)	Jim Dines
3/3/23	Paenungulates; Perissodactyla (Lab)	Charlie Toney
3/6/23	Rodents I (Lecture)	Matt Dean
3/8/23	Rodents II ; Lagomorphs (Lecture)	Matt Dean
3/10/23	Artiodactyla (incl. Cetacea) (Lab)	Charlie Toney
3/12-17/2023	Spring Break	-
3/20/23	Evolutionary Ecology I (Lecture)	Matt Dean
3/22/23	LECTURE EXAM 2 (Lecture)	Matt Dean
3/24/23	Rodents; Lagomorphs (Lab)	Charlie Toney
3/27/23	Evolutionary Ecology II (Lecture)	Matt Dean
3/29/23	Biogeography I (Lecture)	Matt Dean
3/31/23	Local Species (Lab)	Charlie Toney
4/3/23	Biogeography II (Lecture)	Matt Dean
4/5/23	Behavior (Lecture)	Matt Dean
4/7/23	Squirrel tracking (Lab)	Charlie Toney
4/10/23	Coevolution with parasites (Lecture)	Kayce Bell
4/12/23	Sexual Selection I. Body size (Lecture)	Matt Dean
4/14/23	Squirrel tracking (Lab)	Charlie Toney
4/17/23	Sexual Selection II. Mating (Lecture)	Matt Dean
4/19/23	Sexual Selection III. Genitalia (Lecture)	Matt Dean
4/21/23	Squirrel tracking (Lab)	Charlie Toney
4/24/23	Sexual Selection IV. Genome (Lecture)	Matt Dean
4/26/23	Sexual Selection V. Humans (Lecture)	Matt Dean
4/28/23	LAB PRACTICAL II (Lab)	Charlie Toney

**Final exam:** Monday, May 8, 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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://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](http://dps.usc.edu)