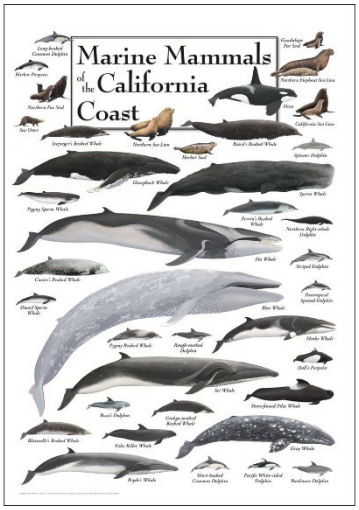
IB 41 Marine Mammals
Monday & Wednesday 1:00 - 1:59 pm
Etcheverry 3106



Course description
A survey of marine mammals with a concentration on species found in the North Pacific. Coverage includes origin and evolution of marine mammal groups, basic ecology, biology, conservation, and a revision of the methods used to study marine mammals. This class is intended for both, biology and non-biology students.

Instructor
José Pablo Vázquez-Medina
Email: jpv-m@berkeley.edu

Reader
Elizabeth Piotrowski
Email: epiotrowski@berkeley.edu

Student Hours with the Instructor
Wednesday 2:00-3:00 pm VLSB 5048B

Student learning objective
To gain a general understanding of marine mammals, their basic biology, conservation/management strategies and how to study them.

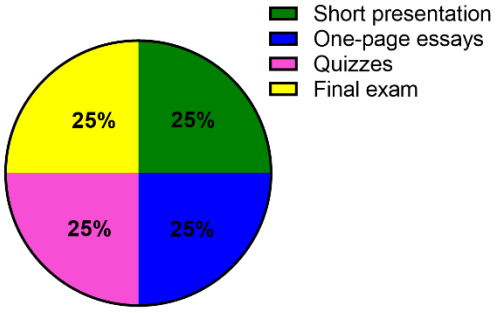
Course materials
A) Suggested textbooks (freely available online with your Cal credentials)

- Marine Mammals of the World
https://www.marinemammalscience.org/species-information/books/
- Encyclopedia of Marine Mammals
https://www.sciencedirect.com/book/9780128043271/encyclopedia-of-marine-mammals
- Marine Mammals: Evolutionary Biology
https://www.sciencedirect.com/book/9780123970022/marine-mammals

B) bCourses
I will use bCourses to communicate with the class, distribute any relevant materials including lecture PowerPoints, administer quizzes and collect papers.

C) Online discussions
Online Discussions allows students to participate in an asynchronous conversation with a group of students or the entire class. We encourage you to use this bCourses built-in tool to interact with your peers and the instructor.

Grade distribution/Requirements
Short presentation (25%). 4 one-page essays (25%). 4 in-class quizzes (25%). Final exam (25%).



Letter grades:

≥ 95% A+	≥ 73% C+
≥ 90% A	≥ 70% C
≥ 87% A-	≥ 67% C-
≥ 83% B+	≥ 63% D+
≥ 80% B	≥ 60% D
≥ 77% B-	<60% F

Short presentation: One 3-minute individual presentation describing a current marine mammal conservation/management issue and a possible solution. The topic you select must be unique. Please enter your topic of choice in this google sheet, *making sure your topic has not been previously selected by another student*:
https://docs.google.com/spreadsheets/d/1YiU-2uBMmvkSAGDTlB0ALUErY00L1rlD97cWQzGslMQ/edit?usp=sharing

Essays: Four 1-page papers describing your impressions about the material presented in guest lectures. We will have eight guest lectures, please pick the 4 lectures you like the most and write about them. Papers are due 1 week after each corresponding guest lecture and should be submitted via bCourses. Please keep in mind that the final exam will be based on the guest lectures and student presentations, so make sure you attend all the guest lectures, even if you only must write an essay about 4 of them.

In-class quizzes: 4 quizzes will be administered at the beginning of selected lectures *via* bCourses (please consult the class schedule).

Final exam: the final in-person exam includes multiple choice and short answer questions. It will be closed book, closed notes and *will be based exclusively on the material presented in the guest lectures and student presentations*.

How to Succeed in this Course

I encourage you to engage as much as possible by attending lectures and asking questions. When studying for quizzes and exams focus on the material presented in lecture. Take notes and work on your papers as soon as you can, while the material is still fresh in your mind. Identify a marine mammal conservation/management problem and start working on your short presentation as early as possible. Feel free to attend the Student Hours with the Instructor. ***I enjoy interacting with you***. To prepare for the final exam, read your notes, attend the general review session, and feel free to ask questions.

Class Schedule (subject to changes, **no class: Monday Sep 4 and Wednesday Nov 22**)

Wednesday, Aug 23	Introductions and class logistics
Monday, Aug 28	Lecture 1. Marine mammals of the world
Wednesday, Aug 30	Lecture 2. Taxonomy and classification
Wednesday, Sept 6	Lecture 3. Marine mammal evolution
Monday, Sept 11	Lecture 4. Functional morphology of cetaceans; **Quiz 1**
Wednesday, Sept 13	Lecture 5. Functional morphology of pinnipeds and other marine mammals
Monday, Sept 18	Lecture 6. Energetics; **Quiz 2**
Wednesday, Sept 20	Lecture 7. Communication and cognition
Monday, Sept 25	Lecture 8. Marine mammal conservation; **Quiz 3**
Wednesday, Sept 27	Lecture 9. Marine mammal health
Monday, Oct 2	Lecture 10. Pollutants and marine mammals
Wednesday, Oct 4	Lecture 11. Methods used to study marine mammals; **Quiz 4**
Monday, Oct 9	Guest Lecture: “Thermoregulation in northern elephant seals among three northern California rookeries”. Emily Lam, UC Berkeley
Wednesday, Oct 11	Guest Lecture: “Diving physiology: marine mammal adaptations to life below the surface”. Kaitlin Allen, UC Berkeley
Monday, Oct 16	Guest Lecture: “Sleeping while diving: developing techniques to record and visualize the hidden behaviors of marine mammals in the deep” Jessica Kendall-Bar, Scripps Institution of Oceanography, UC San Diego
Wednesday, Oct 18	Guest Lecture: “Pinniped research at Point Reyes National Seashore”, Sarah Codde, National Park Service
Monday, Oct 23	Guest Lecture “An evolutionary tail about marine mammals and their adaptations!“ Diana Moreno-Santillán, UC Berkeley
Wednesday, Oct 25	Guest Lecture “Cancer: A whale of a problem“Juan Manuel Vazquez, UC Berkeley
Monday, Oct 30	Guest Lecture: “The life and stresses of an elephant seal". David Ensminger, San Jose State University
Wednesday, Nov 1	Guest Lecture: “From cells to behavior of marine mammal life history: Finding ’tipping points’ in a changing world”. Michelle Shero and Caroline Rzucidlo, Woods Hole Oceanographic Institution
Monday, Nov 6	Guest Lecture “Straight from the seal's mouth: engineering and evolution of marine carnivore skulls”. Jack Tseng, UC Berkeley
Wednesday, Nov 8	Short Presentations 1
Monday, Nov 13	Short Presentations 2
Wednesday, Nov 15	Short Presentations 3
Monday, Nov 20	Short Presentations 4
Monday, Nov 27	Short Presentations 5
Wednesday, Nov 29	Short Presentations 6
Monday, Dec 4	Final Exam Review; **optional**
Wednesday, Dec 13	**FINAL EXAM**

Policies

Remote instruction: please note that the class could transition to remote instruction at any time due to COVID, fire/air quality or other emergencies in accordance with University policy.

Absences: if you cannot attend a lecture or exam due to illness or other circumstances beyond your control, please contact me and explain the circumstances beforehand (when possible). Please provide documentation of the circumstances (e.g., a doctor's note in the case of illness). I will consider the possibility of alternative assessment under justified circumstances.

Accommodations: please contact me as soon as possible if you have a disability (see below), sports conflict or religious need, so that we can work together on a plan to provide you with the necessary accommodations to succeed in this class.

Students with Disabilities: UC Berkeley is committed to creating a learning environment that meets the needs of its diverse student body including students with disabilities. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. If you have a disability, or think you may have a disability, you can work with the Disabled Students' Program (DSP) to request an official accommodation. DSP is the campus office responsible for authorizing disability-related academic accommodations, in cooperation with the students themselves and their instructors. You can find more information about DSP, including contact information and the application process at https://dsp.berkeley.edu/. If you have already been approved for accommodations through DSP, please meet with me so that we can develop an implementation plan together.

Other Resources: UC Berkeley is fully committed to your success! If you need mental health services or other resources to support your academic success and self-development, please contact Counseling and Psychological Services: https://uhs.berkeley.edu/caps. If you are experiencing food, housing, or financial insecurity, please contact the Berkeley Basic Needs Center: https://basicneeds.berkeley.edu/home.

Class materials: all class materials are the property of the instructor. **They shall not be posted or shared on CourseHero or any other website.**

Academic Integrity: The student community at UC Berkeley has adopted the following Honor Code: **"As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others".** As a UC Berkeley student, you are required to abide to the Code of Student Conduct at all times. Please refer to this link for more resources: https://conduct.berkeley.edu/code-of-conduct/

Collaboration and Independence: reviewing lecture materials and studying for exams can be enjoyable and enriching things to do with your fellow students. This is recommended. However, assignments should be completed independently, and all materials submitted should be the result of one's own independent work.

Cheating: A good lifetime strategy is always to act in such a way that no one would ever imagine that you would even consider cheating. Anyone caught cheating will receive a failing grade and will be reported to the University Center for Student Conduct. To guarantee that you are not suspected of cheating, please keep your eyes on your own materials and do not converse with others during the quizzes and exams.

Plagiarism: To copy text or ideas from another source without appropriate reference is plagiarism and will result in a failing grade for your assignment and usually further disciplinary action. For additional information on plagiarism and how to avoid it, see:

https://www.lib.berkeley.edu/research/help?section=cite-sources
https://gsi.berkeley.edu/gsi-guide-contents/academic-misconduct-intro/

Cheating on exams and plagiarism are two common examples of dishonest, unethical behavior. Honesty and integrity are of great importance in all facets of life. They help to build a sense of self-confidence, and are key to building trust within relationships, whether personal or professional. There is no tolerance for dishonesty in the academic world, for it undermines what we are dedicated to doing – furthering knowledge for the benefit of humanity.

Closing words

This class will expose you to the fascinating world of marine mammals. ***I am very excited to share this learning experience with you!*** I sincerely encourage you to interact with your fellow students, our invited guests, and me.