

Integrative Biology 148
COMPARATIVE ANIMAL PHYSIOLOGY

Instructors: TBD

Course graduate instructor: TBD

Location: TuTh 11:00AM - 12:30PM, Li Ka Shing 125

Required Text: *"Animal Physiology" 2016. 4/e by Hill, Wyse and Anderson ISBN: 978-1-60535-594-8 (Loose Leaf Edition – Acceptable)*

Rationale:

The course discusses principles of how organisms work in their environment. Muscular, neural, sensory, respiratory, circulatory, digestive, osmoregulatory and energetic systems are considered. The biodiversity of animals, both invertebrate and vertebrate will be illustrated, and the relevance of physiology and structure is presented. Lectures, discussions and exams will emphasize general principles and integration of information rather than rote memorization. A major goal is to give students the opportunity to critically evaluate and present current research.

Grading:

Exams will cover material from the lectures, in-class presentations, and assigned readings, and will be primarily short answer questions, and short essay questions. An in-class presentation is required.

Midterm Exam: Given on October 9 will be 30% of total grade; covering lecture material from August 23 through and including October 2, and discussion section material through October 3.

In-Class Presentations: Given in the second half of the semester will be 40% of the total grade. Groups will give a 15-20 min presentation to the class focusing primarily on an original research paper. Groups will first provide a general background, next discuss the methods and results and then critically evaluate the conclusions. The presentation will end by asking what the next step in the research is and where the field going. All other groups will ask questions and are responsible for the material presented.

Final Exam: Given Wednesday December 12, 8:00AM - 11:00 AM will be 30% of the total grade.

Part 1: 15% of total grade; midterm-type exam covering lecture material from October 4 through the end of the course, and discussion section material from October 10 through the end of the course.

Part 2: 15% of total course grade; final exam drawing together material from the whole semester.

Your grade will be determined in the following way:

30%: Midterm exam

40%: In-class presentations

30%: Final exam (15% = midterm #2, and 15% = material from the entire course)

Disabled Students:

Disabled students must get a letter from the Disabled Students Program and present this letter to the instructor at least 2 weeks in advance of the exam so that appropriate accommodations can be made. See <http://dsp.berkeley.edu>

This means we must have your letter by September 25.

Discussion Sections:

Material covered in discussion sections will complement and expand upon topics introduced in lecture. Specific examples of general principles will be discussed, opportunities for review of lecture and reading material will be provided, and sample problems will be worked on. In the second half of the semester, time will be provided to work on the in-class presentations.

Course: INTEGRATIVE BIOLOGY 148 S 101 DIS

Location: Wed 1-2P, 3083 VALLEY LSB

Course Control Number: 30809

Course: INTEGRATIVE BIOLOGY 148 S 102 DIS

Location: Wed 2-3P, 3083 VALLEY LSB

Course Control Number: 30810

Course: INTEGRATIVE BIOLOGY 148 S 103 DIS

Location: Wed 3-4P, 3083 VALLEY LSB

Course Control Number: 30811

Piazza - Online Discussion Forum

We will use *Piazza* as our online forum. *Piazza* is a main venue to ask questions, discuss problems, and help each other out. *Piazza* is a *question-and-answer system* designed to streamline class discussion outside of the classroom. It should always be your first recourse for seeking answers to your questions about the course, lecture or reading material, or the assignments. You are encouraged to post any questions or clarifications you might have about the course material, logistics, and assignments. Please post questions about the material or the administration of the course to the discussion board - but before posting a question, read the discussion board and the syllabus and other course materials in case the question has already been answered. If you know the answer to a question, you are encouraged to post it. By default, your posts are visible to the course staff and other students, and you should prefer this mode so

that others can benefit from your question and the answer. We will monitor the discussion board, and endorse answers and reply. You can post privately so that only the course staff can see your question. If you post privately, we reserve the right to make your question public if we think the class will benefit. You can also post anonymously if you wish. Do not post your SID on Piazza. Please avoid email if Piazza will do. Posts may be anonymous to the class, but not to the instructor. We expect that posts will be pertinent and respectful. Don't use Piazza as a place to complain about, insult or harass anyone. Please do send us email if you have a *real* emergency or need to discuss something privately.

Web Site:

We will use a bCourses site for the syllabus, reading assignments, announcements, presentations and lecture material. You may access the site by going to:
<https://bcourses.berkeley.edu>, login through CalNet.

**INTEGRATIVE BIOLOGY 148
COMPARATIVE ANIMAL PHYSIOLOGY
TENTATIVE LECTURE SCHEDULE**

23 August	Course Orientation/Logistics – Introduction
28 August	Body size
30 August	Nervous system I
4 September	Nervous systems II
6 September	Sensory systems I
11 September	Sensory systems II
13 September	Muscular system I
18 September	Muscular system II
20 September	Gas transport I
25 September	Gas transport II
27 September	Circulation I
2 October	Circulation II
4 October	High altitude & diving
9 October	MIDTERM EXAM
11 October	Osmoregulation I
16 October	Osmoregulation II
18 October	Endocrinology
23 October	Digestion
25 October	Energetics I
30 October	Energetics II
1 November	In-class presentations
6 November	In-class presentations

8 November	In-class presentations
13 November	In-class presentations
15 November	In-class presentations
20 November	In-class presentations
22 November	Holiday
27 November	In-class presentations
29 November	Overview
FINAL EXAM (exam group 9)	
12 December	8-11 AM; location TBA