

Integrative Biology 148
COMPARATIVE ANIMAL PHYSIOLOGY

Instructors:

Professor Robert Full
Office hours: Tues., Thurs., 1:30 - 2:30 PM, 5128 VLSB
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Professor Robert Dudley
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Course assistants:

TBA
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Location: TuTh 11-12:30 PM, 101 LSA

Required Text: *"Animal Physiology" 2011. 3/e by Hill, Wyse and Anderson ISBN: 978-0-87893-317-4. (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 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 16 will be 30% of total grade; covering lecture material from August 23 through and including October 2, and discussion section material through October 4.

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 17, 8:00 - 11:00 AM will be 30% of the total grade.

Part 1: 15% of total grade; midterm-type exam covering lecture material from October 5 through the end of the course, and discussion section material from October 12 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 October 2.

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:

Course Control Number:

Course: INTEGRATIVE BIOLOGY 148 S 102 DIS

Location:

Course Control Number:

Course: INTEGRATIVE BIOLOGY 148 S 103 DIS

Location:

Course Control Number:

Lunch with Professor Full & Dudley

Professor Full will be available for informal conversation in the VLSB Courtyard on Thursdays from 12:30-1:30 when possible. You are under NO obligation whatsoever to come.

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, Fall 2014**

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

4 December Overview

FINAL EXAM (exam group 9)

17 December 8-11 AM; location TBA