

**ANIMAL COMMUNICATION
ESPM 156**

COURSE GUIDELINES

Instructor:

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Lectures:

MWF, 3-4pm, 110 Barker Hall

Course website:

The course website is available through **bcourses.berkeley.edu**.

Course text:

Principles of Animal Communication, 2nd Edition, Sinauer Publishing

Course Prerequisites and recommendations:

Coursework in Animal Behavior, Physiology and Evolution is highly recommended although not required.

Course Overview:

The goal of this course is to explore animal communication from a variety of perspectives from physics to evolutionary biology. Due to the interdisciplinary nature of the study of animal communication, over the course of the semester, we will draw on a variety of disciplines (including cell biology, ecology, evolution, genetics, neurophysiology, and physics) to understand the mechanisms, function, and evolution of animal communication. The course will be divided into three general parts: (1) mechanism of animal communication and sensory systems, (2) functional studies of animal communication, and (3) evolution of animal communication. The lectures/discussions will draw on examples from diverse taxa (insects, spiders, fish, birds, and mammals) and examples from the primary literature will be emphasized.

Exams and grading:

The final course grade will be based on a total of 400 points. Grades will be “curved” to reflect the distribution of point totals for members of the class. There will be two midterms worth 100 pts, a final exam worth 100 pts (date, time, and place assigned by the University), and a series of discussion assignments that will total 100 points.

Note: Cell phones are very disruptive to lectures and exams. Anyone whose cell phone rings during an exam will automatically lose 5 points on that exam. Please turn them off

before class begins.

Policy on cheating:

Cheating will not be tolerated. Cheating includes both copying of answers during written exams and plagiarism of written assignments. Students caught cheating will be receive a score of zero for that exam or assignment and will be reported to the Office of Student Conduct.

Missed exams and assignments:

If you know that you will miss an exam or assignment for a legitimate reason, you must notify the instructors of the course **in advance**. The official campus policy concerning acceptable conflicts with exams is available at:

http://academic-senate.berkeley.edu/pdf/Guidelines_AcadSchedConflicts_July2006.pdf.

Students with learning or physical disabilities or who require special arrangements for taking exams must contact the appropriate instructor at least **one week prior to the exam** to assure that appropriate arrangements can be made.

Students who miss an exam or assignment unexpectedly (i.e., no prior warning) will be allowed to complete a make-up exam or assignment only with written verification of illness or family emergency.

| DATE | TOPIC | Reading |
|-------------|---------------------------------|-----------|
| January 20 | Class Overview | |
| January 22 | Introduction to Communication | Chapter 1 |
| January 25 | Introduction to Bioacoustics | Chapter 2 |
| January 27 | Physical Acoustics | Chapter 3 |
| January 29 | Propagation of acoustic signals | Chapter 2 |
| February 1 | Acoustic signal production | Chapter 2 |
| February 3 | Perception of acoustic signals | Chapter 3 |
| February 5 | Perception of acoustic signals | TBA |
| February 8 | Acoustic signals finale | |
| February 10 | Discussion session 1 | |
| February 10 | Primary literature | TBA |
| February 12 | Primary Literature/Review | |
| February 15 | Holiday (Presidents Day) | |
| February 17 | Review | |
| February 19 | Midterm 1 | |
| February 22 | Properties of light | Chapter 5 |
| February 24 | Properties of Light | Chapter 5 |
| February 26 | Visual signal production | |
| February 29 | Visual signal transmission | Chapter 4 |
| March 2 | Visual signal transmission | |
| March 4 | Optics | |
| March 7 | Visual signal reception | |
| March 9 | Visual signal reception | Chapter 6 |
| March 11 | Visual signal reception | |
| Chapter 6 | | |
| March 14 | Primary lit primer | Chapter 7 |
| March 16 | Discussion session 3 | |
| March 18 | Intro to chemical senses | |
| March 21 | Spring Break! | |
| March 25 | | |
| March 25 | | |
| March 28 | Chemical signal production | |
| March 30 | chemical Reception | |
| April 1 | No Class | Chapter 8 |

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| April 4 | Other Modalities | Chapter 9 |
| April 6 | Midterm 2 | |
| April 8 | Primary literature | |
| April 11 | Discussion 4 | TBA |
| April 13 | Signal Information | |
| April 15 | Signal Information 2 | |
| April 18 | Signal Honesty | |
| April 20 | Signal Honesty 2 | Chapter 12 |
| April 22 | No Class | |
| April 25 | Discussion session 5 | |
| April 27 | Review | Chapter 13 |
| April 29 | Final | |
| Final | WEDNESDAY, MAY 11, 2016 | 7-10P |
