

ANIMAL COMMUNICATION
ESPM C156
IB C145

COURSE GUIDELINES

Instructor:

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Lectures:

- MWF, 3-4pm, Wheeler 204

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.

Discussion Assignments:

Assignments will be designed to get students familiar with the primary literature about animal communication and will consist of in class assignments on assigned readings and weekly(ish) assignments where students will be expected to identify recent primary literature on the topics discussed in class.

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	Readings
1/22/2020	Introduction to animal communication	Chapter 1
24-Jan	Introduction to acoustics 1	Chapter 2
1/27/2020	Acoustics 2	Chapter 2, 3
1/29/2020	Acoustics 3	Chapter 2, 3
1/31/2020	Sender bioacoustic mechanisms 1	Chapter 2
2/3/2020	Sender bioacoustic mechanisms 2	Chapter 2
2/5/2020	Receiver physiology 1	Chapter 3
2/7/2020	Receiver physiology 2	Chapter 3
2/10/2020	Receiver physiology 3	Chapter 3
2/12/2020	Primary Literature Discussion	
2/14/2020	Midterm 1	
2/17/2020	Presidents Day	
2/19/2020	TBD	
2/21/2020	NO CLASS?	
2/24/2020	Research Lecture – Acoustics: Dr. Julie Elie	
2/26/2020	Light 1	Chapter 4
2/28/2020	Light 2	Chapter 4
3/2/2020	Sender visual production mechanisms 1	Chapter 4
3/4/2020	Sender visual production mechanisms 2	Chapter 4
3/6/2020	Receiver optics and visual physiology 1	Chapter 5
3/9/2020	Receiver optics and visual physiology 2	Chapter 5
3/11/2020	Color Vision	Chapter 5
3/13/2020	Primary Literature Discussion	
3/16/2020	Midterm 2	
3/18/1930	Research Lecture - Vision	
3/20/2020	Data analysis discussion	
3/23/2020	Spring Break	
3/25/2020	Spring Break	
3/27/2020	Spring Break	
3/30/2020	Mate Choice	Chapter 12
4/1/2020	Mate Choice	Chapter 12
4/3/2020	Mate Choice	Chapter 12
4/6/2020	Chemical signal production 1	Chapter 6
4/8/2020	Chemical signal reception 1	Chapter 6
4/10/2020	Signal Design 1	Chapter 8, 10
4/13/2020	Signal Design 2	Chapter 8, 10
4/15/2020	Signal Honesty 1	Chapter 10

4/17/2020	Signal Honesty 2	Chapter 10
4/20/2020	Aggressive Signals 1	Chapter 11
4/22/2020	Aggressive signals 2	Chapter 11
4/24/2020	Social Integration signals	Chapter 13
4/27/2020	Research Lecture - TBD	
4/29/2020	Primary Literature Discussion	
5/1/2020	TBD	