

Biology 132: Introduction to Animal Behavior/ Fall 2015

Instructor: Dr. Debbie Schlenoff
schlenof@uoregon.edu

Office Hrs: Wednesdays at 10:30 and by appointment
Office: 15A Klamath



Graduate Teaching Fellows (and office hours):

Sierra Deutsch sierrad@uoregon.edu (Mondays 1:30 in Col47A)

Alejandro Gutierrez agutier4@uoregon.edu (Thursdays 10:00 in 360 Onyx)

Aliza Karim alizak@uoregon.edu (Fridays 12:00 in 360 Onyx)

Undergraduate assistants (BULAs):

Zurui Yu, zuruiy@uoregon.edu

Alex Davis, adavis6@uoregon.edu

Course Description

We will explore behaviors found in a variety of animals, investigate what functions they might serve, and use the concept of natural selection to understand their evolution. Many examples will be used to illustrate concepts in animal behavior and to develop an appreciation for the many interesting things that animals do to survive and reproduce. Among the topics in animal behavior that we will discuss are the influences of genetics and learning; strategies for migration, foraging and defending against predators; reproductive strategies to attract a mate, mating systems and parental behavior; communication, dynamics of social groups, cooperative behavior, and social cognition. We will also examine the methods with which scientists study these behaviors and understand the study of animal behavior as an ongoing process rather than just a set of facts. By doing this, you will better understand how science works and become comfortable evaluating scientific information; a skill required by all people whether or not they pursue a career in the sciences.

Course Objectives:

- Be able to explain observed behaviors based on the process of natural selection.
- Implement the process of scientific inquiry by making observations, generating questions and hypotheses, and collecting data relevant to the hypothesis.
- Communicate in the format of a scientific paper including the use of graphs to display data.
- Be comfortable reading and evaluating a scientific paper from a peer-reviewed source.
- Utilize library data bases to search for and identify reputable sources.
- Identify examples of the diversity of strategies employed by several species of animals.
- Describe influences on behavior including environmental and social effects.
- Apply concepts in animal behavior to novel situations.
- Examine how we think about other animals in relation to ourselves.

Recommended Text: **Goodenough, J.; McGuire, B. and Wallace, R.; Perspectives on Animal Behavior** It would be helpful to read (or at least skim) the assigned chapters before coming to class and to then read more carefully those parts relevant to lecture, assignments, and discussion.

Assigned readings and other links will be posted on Canvas. You are responsible for reviewing all assigned readings and videos. Come to class prepared to discuss and write about them.

Course Format

Lectures (Monday and Wednesday 12:00-1:20 pm, 282LIL)

You will be responsible for all material presented in lecture.

The course schedule is tentative and subject to change; adjustments will be announced in class.

Lecture outlines containing the text of the PowerPoint slides are available on Canvas. Please keep in mind that these are merely outlines for your convenience in taking and organizing notes. They are not meant to serve as a complete set of lecture notes for exam preparation. *There is a strong positive correlation between attendance in lecture and class grades.*

Occasionally, there are group and writing activities that occur during lecture. It is our expectation that you participate in these activities. Your active involvement promotes understanding of the material and preparation for exam questions. I-clickers are used during each lecture to further active participation.

I appreciate feedback on the lectures. Questions are welcome and encouraged during and after lecture, during office hours, and via e-mail.

Discussion Sections (Tuesdays, 130 HUE)

Participation in discussion sections is a required part of this class and will count toward your final grade. Much of discussion will be devoted to developing and preparing to research and write a project paper. In addition, hands-on activities will allow us to ask questions about animal behavior and design experiments to search for answers. All assignments associated with the project are due in discussion section on the date noted in the syllabus. Students are expected to attend the section in which they are registered.

Grading Evaluation

19% Exam 1

20% Exam 2

20% Exam 3

20% Term Project Paper

6% Question Sets (Three sets at 2% each; submit through Canvas)

9% Discussion Section Assignments and Participation (includes reading-related and project assignments)

6% Lecture Participation Clicker Questions

Exams will include material from the lectures, discussion, video clips, readings, and assignments. The structure of the **three Exams** will be mixed format (multiple choice, short answer, and/or short essay). Scantrons will be handed out in class; please bring a #2 pencil to all exams. NOTE: Exams 1 and 2 are *Monday* exams; Exam 3 is on a *Wednesday*. There is **NO Final Exam** in this class.

Make-up Exam Policy: Because this is such a large course, make-ups are **NOT** administered except in the case of a severe medical condition or other extreme documentable emergency. It is your responsibility to contact the instructor as soon as possible and to provide documentation.

Question sets get you thinking about the material and allow you to focus and organize your studies. There are three questions sets, each corresponding to preparation for one of the three exams. Consider them to be practice quizzes. Question sets will be posted and submitted through Canvas by the due date noted in the syllabus. Enter your answers in the textbox that appears when you open the assignment link. You may discuss the material with others but *please submit your answers in your own words*. Copying and pasting from the lecture notes or student shared documents are a form of plagiarism and will not do much to promote understanding or retention of the material. The answers to the Question Sets will be posted on Canvas after the due date. We recommend you read through these keys to prepare for the exams.

Project The Project will involve forming an hypothesis and testing predictions about animals that are easily observed outside of class. Assignments pertaining to the project will be due in discussion section (see below for due dates). A Project Proposal will be due in section and will give you an opportunity to discuss your ideas with others. We will explore ways to find reputable scientific sources, how to graph data, and how to write up a scientific research paper. The final project paper (hard copy) will be due in Discussion Section on Week 8 on 11/15. An electronic copy will also be submitted through Canvas. Information about the project is posted in Files on Canvas. Please read documents carefully and ask if you have any questions.

Assignments include project proposals and term paper drafts, as well as answering reading questions for assigned readings/videos. Readings should be done before the due date so you are prepared to discuss them in discussion section. Your instructors will have you either answer the posted questions and turn them in or answer questions in a general quiz format during section. To receive credit for assignments, they must be turned in as instructed in discussion section.

Clickers (Personal Response Systems) THESE CONSTITUTE PART OF YOUR GRADE.

i-Clickers will be used in almost every class to encourage participation and to provide valuable feedback to instructors and students. Each student is expected to purchase a clicker for use in this class. The i-clicker #1 is sufficient. You are responsible for bringing your clicker remote to *each* lecture. You will need to register your clicker remote on the Canvas web page before the second week of classes. (If you've already registered your clicker this term for another class, then you don't need to register it again.)

Professional Conduct:

You are expected to do your own work on homework assignments, projects, and exams. When writing up your homework assignments, papers, and exam questions, you are expected to paraphrase (use your own words). When writing up your project papers, give credit to the sources of your information. **Plagiarism will not be tolerated.** You are encouraged to discuss ideas with each other and to study together, but don't copy someone else's work, or allow them to copy yours.

Similarly, it is a breach of university regulations to use an i-clicker registered to someone else or to allow someone else to use an i-clicker registered to you. You must be present to accrue clicker points.

Academic dishonesty is a serious offense. Please refer to the University of Oregon Student Conduct Code by which all students are expected to abide.

Classroom Etiquette:

1. Please arrive on time.
2. Please do NOT use cellphones, laptops, or other electronic devices in the classroom.
3. Please don't leave early. This is very disruptive to everyone. In turn, I will not lecture beyond 1:20. If you have an unusual circumstance and must leave early, then please sit near the exit so you can leave unobtrusively. (A break from lecture to engage in small group work does not signal the end of lecture.)
4. Please refrain from engaging in activities that could be distracting to your fellow students.

We ask that you not converse with your neighbors when someone else is talking (instructor or classmate) as this interferes with the ability of other students to learn.

Please do not pack up your things early as this makes it difficult for students around you to hear the end of the lecture.

If you are having a problem that interferes with your ability to do the work in this class, please tell us about it as soon as you can. We will work with you to find a suitable solution.

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in barriers to your participation. You may also wish to contact the Accessible Education Center in 164 Oregon Hall at 346-1155 or uoaec@uoregon.edu

TENTATIVE COURSE SCHEDULE: The course schedule below is tentative and subject to change. Additional information will be provided in class or via e-mail and Canvas.

See Canvas: Course Documents for instructions on assignments. Each assignment contributes points to your overall grade. Submit to your GTF in discussion section or on Canvas as indicated.

WK	Lecture Topics and Discussion Sections	Assignments
1	<p>9/26 The Study of Animal Behavior. What kinds of questions help us understand behavior and how do we design ways to get answers? 9/28 Natural Selection and Adaptation. How do we explain the evolution of animal behavior?</p> <hr/> <p>Discussion Sections 9/27: Introduction to project and hypothesis testing.</p>	<p>Read syllabus and project information on Canvas. Register your clicker.</p>
2	<p>10/3 Genetic Analysis of Behavior. Are there ways to determine whether some behaviors have a genetic basis? 10/5 Types of Learning. How does learning contribute to success in animals? What is the variety of types of learning that we can examine?</p> <hr/> <p>Discussion Sections (outdoors) 10/4: Meet for Duck Lab at Millrace (<i>corner of Onyx across Franklin Blvd.</i>)</p>	<p>Assigned reading: Project Proposal Information. Begin to formulate your proposal. Research your proposed study animal. Make observations.</p>
3	<p>10/10 Early learning, Imprinting, and Development. How does early experience help shape an animal's behavior throughout its life? 10/12 Biological Rhythms/Migration. Do animals show patterns of behavior? Why do animals migrate? How do they find their way?</p> <hr/> <p>Discussion Sections 10/11: Initial project proposal. How to Find Reputable References. Discuss scientific papers. Tentative: Bee hive observations.</p>	<p>Assigned reading (snails) on Canvas. Fill out initial project proposal form on Canvas.* Look for references.</p>
<p>**Question Set 1 Due before 11:00 pm, Thursday 10/13**</p>		
4	<p>10/17 EXAM 1 10/19 Foraging Strategies. Tool use. What strategies do animals use to obtain food? How do they balance costs and benefits?</p> <hr/> <p>Discussion Sections 10/18. Finalized proposal due. Hermit Crabs.</p>	<p>Test your proposal by collecting data.* Fill in finalized project proposal information form.</p>
5	<p>10/24 Anti-predator Strategies: How to keep from being someone's dinner. 10/26 Sexual Selection. What adaptations have arisen in animals to attract a mate and compete with rivals?</p> <hr/> <p>Discussion Sections 10/25. Fruit Fly maze.</p>	<p>Assigned reading (ants) on Canvas. Collect data for term project.</p>

6	<p>10/31 Mating Systems. How do mating strategies affect reproductive success? 11/2 Parental Care. Who takes care of the kids?</p> <hr/> <p>Discussion Sections 11/1: In Class Review: Draft Part 1. Data and graphs.</p>	<p>Assigned reading (bird song) on Canvas. *Data collection should be complete. Draft Part 1: Raw data, summary of results, summary of a study from a peer-reviewed reference</p>
**Question Set 2 Due Thursday, 11/3 before 11:00 pm **		
7	<p>11/7 EXAM 2 11/9 Social Groups: What are the Benefits, Costs, and Dynamics of living in social groups?</p> <hr/> <p>Discussion Sections 11/8: In class Term Paper peer review.</p>	<p>* Draft Part 2. Bring to section your term paper draft. Must include background info from at least one peer-reviewed reference and a data figure.</p>
8	<p>11/14 The evolution of altruism. Under what conditions does it pay to help others? 11/16 Conflict and cooperation. Under what circumstances might individuals in a group cooperate?</p> <hr/> <p>Discussion Sections 11/15: PROJECT PRESENTATIONS</p>	<p>PROJECT PAPER DUE* Turn in print copy in section AND post digital copy on Canvas.</p>
9	<p>11/21 Social Groups: Awareness and Social Intelligence. How aware are animals of others in their groups? How aware are they of their own knowledge? 11/23: TBA</p> <hr/> <p>11/22: Discussion on animal welfare issues: Animals in industry, research and entertainment .</p>	<p>Reading assignment on animal welfare due. Come prepared to discuss.</p>
**Question Set 3 Due before Thursday, 11/24, 11:00 pm. **		
10	<p>11/28 The Human Animal: Evolutionary psychology. How do we examine human behavior from an evolutionary perspective? Communication among animals. 11/30 EXAM 3</p> <hr/> <p>Discussion Sections 11/29 Review</p>	<p>Turn in video/reading assignment. Bring questions for review.</p>
No meeting during finals week.		