

## Biology 390 "Animal Behavior"

**Instructor:** Dr. Debbie Schlenoff [schlenof@uoregon.edu](mailto:schlenof@uoregon.edu)

Office: 15A Klamath

Office hours: Mondays 2:15 (other time slots will be available) and by appointment

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Office Hour: Thursdays 1:00-2:45 in Condon 368

### **Biology Undergraduate Assistants:**

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**Website:** Course documents will be posted in "Files" on the **Canvas** Course Website.

**Course Description:** **Animal behavior** is a multidisciplinary science devoted to understanding the variety of behaviors that contribute to biological diversity on our planet. We will study the foundational concepts and principles of animal behavior and use case studies and examples to illustrate and develop an appreciation for the many interesting things that animals do to survive and reproduce. Our primary focus will be the adaptive significance of behavior. We will explore how behavior contributes to an individual's survival and the successful transmission of an individual's genes across generations. The prerequisite for this course is either Bi213 or Bi253.

### **Course Objectives**

- Learn fundamental principles and concepts in animal behavior.
- Apply these principles to help understand the variety of behaviors and traits observed in the animal kingdom.
- Cultivate scientific literacy and communication skills.
- Independently research, explore, and evaluate questions in animal behavior.
- Collaboratively explore ways to acquire data from animal observation.
- Critically examine methodology and experimental design used to research animal behavior.
- Creatively pursue ways to ask questions about animal behavior and practice developing research proposals.
- Examine how we think about other animals in relation to our own capabilities.
- Gain an appreciation for the diversity of the natural world!

**Readings**, mostly journal articles from the scientific literature, are **required** reading for this course. These readings will be available on Canvas. The readings will be announced in class and on Canvas. We will be actively engaged in discussing the readings during class so please read them *before* the due date. Although there is no required textbook for the course, there are some excellent textbooks in Animal Behavior that might be helpful to your studies. Please inquire if you want recommendations for a textbook.

### **Course Format**

*Lectures* in LIB101, 12:00-1:20 MW

You will be responsible for all material presented in lecture. *There is a strong positive correlation between attendance in lecture and class grades.*

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

Lecture meetings will be a mix of lecture and discussion. Discussions will include questions on assigned readings, so I have a strong expectation that you will have read the material before coming to class and arrive ready to participate. 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.

Lecture outlines containing the PowerPoint slides will be 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 when studying the material.

Questions are welcome and encouraged during and after lecture, during office hours, and via e-mail.

*Discussion Sections* 112 HUE, Fridays at 9:00, 10:00, or 11:00. Please attend the section for which you are registered.

Participation in discussion sections is a required part of this class and will count toward your final grade. Occasionally there will be short graded assignments associated with discussion section activities. These will be announced in class and on Canvas. Sections will provide an opportunity to question and discuss some of the topics presented in the readings and lecture, discuss projects, or engage in participatory activities.

### **Grading Evaluation:**

25% Exam 1

25% Exam 2

9% Ethogram Project

20% Term paper

+3% Electronic comments, questions and answers on term paper abstracts

9% Section participation and assignments

9% Reading quizzes and lecture participation

**Total = 100%**

**Exams:** Exams will include material from the lectures, assigned readings and videos, in-class activities, discussion sections, and the video clips shown in class.

**Exams** will be mixed format (short answer, multiple choice, short essay). Details will be announced in class.

***Make-up Exam Policy:*** **There will be NO make-up exams** except in the case of a documented severe medical condition or other extreme documentable emergency. It is your responsibility to contact the instructor as soon as possible.

### **Ethogram Project**

See Canvas for detailed information. Due as hard copy on 1/29.

You will work in groups of two to develop an ethogram for an animal easily observed outside of class.

1. Initial Observations. Create an observation sheet/ethogram.
2. Data collection: Make observations to complete an ethogram and quantify behavior. You and your partner will make observations simultaneously but each of you will independently record the ethogram.
3. Write up summary of observations and comparison of results.
4. Research proposal: Propose a question, hypothesis, and experiment based on your preliminary results.

## Term Project

Each of you will independently research a topic in animal behavior that results in an individually written seven page term paper which will be handed in as a hard copy on Friday, 2/26. In addition, you must submit a digital copy of your paper through “Vericite” on Canvas. In the paper, you will synthesize information from the scientific literature to address a question, problem, or idea. The paper will include an analysis of two to three data figures from your sources and a Project Proposal component: What research would you propose to gather more information that would elucidate your chosen topic?

You will post an abstract of your paper electronically on Canvas and will be expected to comment on some other abstracts and respond to comments from other students in the class. More details about the project requirements will be provided.

## Discussion Activities and Assignments

Your score for each week will be determined by attendance, participation, and completion of any assigned exercises. One of these assignments will be a draft of your term paper for peer review on 2/19. You will receive further instructions about assignments due in discussion.

**Lecture Participation and Reading Quiz Questions:** We will present a short quiz on the readings ten times during the term. Nine of these will count toward your final grade. You can miss one without penalty. Make-ups will not be administered.

### Percent to letter grade conversion

A+ = 97-100%	B+ = 87-89%	C+ = 77-79%	D+ = 67-69%
A = 93-96%	B = 83-86%	C = 73-76%	D = 63-66%
A- = 90-92%	B- = 80-82%	C- = 70-72%	D- = 60-62%

## *Professional conduct*

**Plagiarism will not be tolerated.** You are expected to do your own original work on assignments, projects, and exams. When writing up your assignments and papers, you are expected to paraphrase (use your own words). When writing up your project papers, give credit to the sources of your information. 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.

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 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 sit near the exit so you can leave unobtrusively.
3. 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.
  - Everybody is expected to come to class prepared to discuss the readings and to engage in small group discussion.
  - Please silence your cell phones during lecture.
  - Please use computers during lecture only to access reading material (or to take notes.) Other laptop activities have been reported to be distracting to your fellow students.
  - 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 may be able to refer you to someone for help or to make special arrangements if the need is real and if you have done your best to deal with the situation in a timely manner.

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](mailto:uoaec@uoregon.edu)

VK	Lecture Topics (Tentative Schedule)	Discussion Section (Fridays)
	<b>1/4 Introduction and the Study of Animal Behavior</b> <b>1/6 Proximate and Ultimate Levels of Analysis. Natural Selection.</b> <b>Reading: Holekamp and Sherman. (For future classes, see Canvas for upcoming class reading assignments.)</b>	<b>1/8 Read Syllabus and Project documents.</b> <b>Discuss projects. Form teams.</b> <b>Hypothesis testing.</b>
	<b>1/11 Behavioral Genetics and Adaptation</b> <b>1/13 Optimality and ESS</b>	<b>1/15</b> Reading assignment on Canvas. Hermit crab activity- data acquisition and hypothesis testing
	<b>1/18 MLK Day. No lecture.</b> <b>1/20 Adaptations for finding food. Optimal Foraging.</b>	<b>1/22.</b> Foraging Activity. Reading assignment on Canvas. <i><b>Submit tentative term paper topic + a potential reference.</b></i>
	<b>1/25 Predator Prey Interactions</b> <b>1/27 Anti-predator Adaptations</b>	<b>1/29</b> <b>Ethogram Project due.</b> Fruit fly activity.
	<b>2/1 Sexual Selection</b> <b>2/3 Honest Signaling</b>	<b>2/5</b> Case study on sexual selection <i><b>Finalize term paper statement of purpose. Identify a data figure from a reference for analysis.</b></i>
	<b>2/8 Mating Systems</b> <b>2/10 EXAM 1</b>	<b>2/12</b> Graph Interpretation assignment. Bring in graph from one of your term paper references for analysis.
	<b>2/15 Parental Care</b> <b>2/17 Social Behavior</b>	<b>2/19</b> <b>Term paper draft due in section.</b> Peer review of Term paper.
	<b>2/22 The evolution of Altruism</b> <b>2/24 Social Insects</b>	<b>2/26</b> <b>Term paper DUE</b> Altruism case study activity. Evolution of cooperation (prisoner's dilemma).
	<b>2/29 The evolution of Cooperation</b> <b>3/2 Social Intelligence</b>	<b>3/4</b> Discussion on animal welfare. <b>Please read posted document. View the video and complete the assignment.</b>
<b>0</b>	<b>3/7 "The Mind of Animals"</b> <b>3/9 Conclusions</b>	<b>3/11 EXAM 2</b> <b>Times TBA</b>