



Biology132: Introduction to Animal Behavior/ 2019

Instructor: Dr. Debbie Schlenoff

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Office Hrs: Wednesdays at 1:30 and by appointment, 15A Klamath

Graduate Teaching Fellows

Katie Fisher kfisher3@uoregon.edu Mondays 3:00-4 in Sci Lib B009

Kayla Evens kevans@uoregon.edu Thursdays 9:00-10 in Onyx 275

Lina Aoyama laoyama@uoregon.edu Monday 2:00-3 in Sci Lib B009
(Office Hrs will be adjusted: check back for details.)



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. Several 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. This helps us to better understand how science works and to 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.
- Identify examples of the diversity of strategies employed by several species of animals.
- Describe influences on behavior including genetic, environmental, and social effects.
- Apply concepts in animal behavior to novel situations.
- Study and Implement the scientific process 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.
- Examine how we think about other animals in relation to ourselves.

Course Format

Lectures (Monday and Wednesday 4-5:20pm in 177 LA)

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.

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.

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, activities will allow us to ask questions about animal behavior, design experiments to search for answers, and practice science literacy skills. Students are expected to attend the section in which they are registered.

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.

How you know you're learning:

Exams (two midterms and a final) will include material from the lectures, discussion, video clips, readings, and assignments. The structure of the exams will be mixed format (multiple choice, short answer, and/or short essay) with details to be announced in class. Scantrons will be handed out in class; please bring a #2 pencil to all exams. The **Final Exam** in this class occurs on Tuesday of finals week.

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. 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 announced. A Project Proposal and Project Updates will be due in discussion section or on Canvas as noted 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 7 on 11/12. A digital copy will also be submitted on Canvas, through Vericite, an anti-plagiarism tool. Information about the project is posted in Files on Canvas. Please read documents carefully and ask if you have any questions.

Reading Assignments 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 quiz format during section. To receive credit for assignments, they must be turned in as instructed in discussion section or on Canvas.

Clickers (Personal Response Systems) THESE CONSTITUTE PART OF YOUR GRADE. i-Clickers will be used in every class to encourage participation and to provide valuable feedback to instructors and students. Each student is expected to have a clicker for use in this class. The i-clicker #1 is sufficient. You are responsible for bringing your clicker remote to *every* 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.)

Grading Evaluation

19% Midterm 1

20% Midterm 2

21% Final Exam

19% Term Project Paper

3% for project-related assignments
(Proposals, Drafts)

6% Question Sets

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

6% Discussion Section Assignments and Participation
(includes reading-related assignments)

6% Lecture Participation Clicker Questions

100% Total

Standard Letter Grades:

A+ 97-100

A 93-96

A- 90-92

B+ 87-89

B 83-86

B- 80-82

C+ 77-79

C 73-76

C- 70-72

D+ 67-69

D 63-66

D- 60-62

F <60

P= 70% or higher

Extra Credit Opportunities will be announced in class.

We encourage you to attend out-of-class presentations and engage in volunteer projects that help native animals in our community (such as planting for pollinators.) Several opportunities will be announced. A one-page write up will be required and extra credit (2pts.) will added to your final weighted grade. Only one submission will be eligible for extra credit points although we encourage you to engage in as many out-of-class events as possible. See Canvas for more details.

Office Hours:

We are here to help guide your learning and help you succeed during the course. We are available during office hours to answer questions about this course or provide additional resources. We invite you to come visit us, so we can meet you and learn more about your interests. Note that I will also stay in the classroom after lecture to speak with anybody who wants to ask questions, or discuss their interests or concerns.

A few things to help you succeed in this course

1. Attend classes.
2. Complete the readings and assignments before class.
3. Participate and engage in every class activity.
4. Attend office hours, study sessions, and review sessions.
5. When questions arise, send me an email, see me after class, or visit office hours.
6. Start your term project early. Don't wait to collect data. As you develop your term project, be curious, thoughtful, and diligent.
7. Keep track of all your assignments with the course calendar and transfer everything to your personal calendar throughout the term so there are no surprises.
8. There is too much material to be able to learn everything right before an exam. Study material over a number of relatively short sessions with repeated review. Interacting with the material is a good way to learn it. Don't just read it- Write it, explain it, and discuss it.

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 answers, submit original work for this course. You are expected to paraphrase (use your own words) and 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 5:20. 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.

Inclusiveness

Open inquiry, freedom of expression, and respect for difference are fundamental to a comprehensive and dynamic education. We are committed to upholding these ideals by encouraging the exploration, engagement, and expression of divergent perspectives and diverse identities.

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.

WK	Lecture Topics and Discussion Sections	Assignments
1	Lectures W10/2 The Study of Animal Behavior. What kinds of questions help us understand behavior and how do we design ways to get answers? ----- <i>No Discussion Sections first week</i>	Read syllabus and project information on Canvas . Register your clicker.
2	CLICKERS required 10/7 Natural Selection and Adaptation. How do we explain the evolution of animal behavior? 10/9 Genetic Analysis of Behavior. Are there ways to determine whether some behaviors have a genetic basis? ----- <i>10/8 Discussion Sections</i> Introduction to project and hypothesis testing.	Assigned reading with reading questions posted on Canvas. Read Project Proposal Information. Begin to formulate your proposal. Research your proposed study animal. Make observations.
3	10/14 Types of Learning. How does learning contribute to success in animals? What is the variety of types of learning that we can examine? How does early experience help shape an animal's behavior throughout its life? 10/16 Biological Rhythms/Migration. Do animals show patterns of behavior? Why do animals migrate? How do they find their way? ----- <i>10/15 Discussion Sections: Dubia roach response lab</i>	Read up on your study animal. Fill out initial project proposal form on Canvas.* by Tuesday 10/15 . Test your proposal by collecting data.* Look for references.
4	10/21 Foraging Strategies. Tool use. What strategies do animals use to obtain food? How do they balance costs and benefits? 10/23 Anti-predator Strategies: How to keep from being someone's dinner. ----- <i>10/22 Discussion Sections: Finalized proposal due. Foraging Activity</i> **Question Set 1 Due before 11:00 pm, Thursday 10/24**	Fill in finalized project proposal information form. Collect data for term project
5	10/28 EXAM 1 10/30 Sexual Selection. What adaptations have arisen in animals to attract a mate and compete with rivals? ----- <i>10/29 Discussion Sections..</i> <i>Graphing. Bring Raw data for your project.</i>	Assigned reading on Canvas. Answer guided reading questions. *Data collection should be complete.

6	<p>11/4 Mating Systems. How do mating strategies affect reproductive success?</p> <p>11/6 Parental Care. Who takes care of the kids?</p> <p>-----</p> <p><i>11/5 Discussion Sections: In Class Term Paper peer reviews.</i></p>	<p>Term Paper Draft due. * Bring draft to section: include info from at least one peer-reviewed reference and a data figure.</p>
7	<p>11/11 Social Groups: What are the Benefits, Costs, and Dynamics of living in social groups?</p> <p>11/13 The evolution of altruism. Under what conditions does it pay to help others?</p> <p>-----</p> <p><i>11/12 Discussion Sections: PROJECT PRESENTATIONS</i></p> <p>**Question Set 2 Due Thursday, 11/14 before 11:00 pm **</p>	<p>PROJECT PAPER DUE* Turn in print copy in section AND post digital copy on Canvas.</p>
8	<p>11/18 EXAM 2</p> <p>11/20 Conflict and cooperation. Under what circumstances might individuals in a group cooperate?</p> <p>-----</p> <p><i>11/19 Discussion Sections:</i></p>	<p>Assigned reading with reading questions posted on Canvas. Activity on cooperation.</p>
9	<p>11/25 Social Groups: Awareness and Social Intelligence. How aware are animals of others in their groups? How aware are they of their own knowledge?</p> <p>11/27: <i>No class due to Thanksgiving holiday. Assignment in lieu of lecture will be posted on Canvas.</i></p> <p>-----</p> <p><i>11/26: Discussion on animal welfare issues: Animals in industry, research and entertainment. For credit assignment due.</i></p>	<p>Reading assignment on animal welfare. Write-up due in section for credit. Come prepared to discuss.</p>
10	<p>12/2 The Human Animal: Evolutionary psychology. How do we examine human behavior from an evolutionary perspective?</p> <p>12/4 Communication among animals and conclusions.</p> <p>-----</p> <p><i>12/3 Discussion Sections: Review</i></p>	<p>Bring questions for review.</p>
<p>**Question Set 3 Due before Thursday, 12/5, 11:00 pm. **</p>		
<p>FINAL EXAM Dec 10, Tuesday, 2:45</p>		

Campus resources to support your learning:

Tutoring and Academic Engagement Center (<https://engage.uoregon.edu/services/>) Drop-in math and writing support in addition to tutoring, study skills support, and Class Encore. Located in the 4th Floor Knight Library (541) 346-3226, engage@uoregon.edu.

Counseling Center The University of Oregon Counseling Center provides students with confidential consultation 24 hours a day, 7 days a week. From 8-5 Monday through Friday you will be connected with the front desk, and after hours, the same number connects to their support line. **Their number is (541) 346-3227.** Students often believe that their issues are not “severe” enough for them to call, but at the Counseling Center, there is no problem too small.

Accessible Education Center The University of Oregon is working to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your participation, please notify us as soon as possible. You are also encouraged to contact the Accessible Education Center. If you are not a student with a documented disability, but you would like for us to know about class issues that will impact your ability to learn, we encourage you to come visit during office hours so that we can strategize how you can get the most out of this course. Located on the 1st Floor of Oregon Hall (541) 346-1155, uoaec@uoregon.edu

Center for Multicultural Academic Excellence (CMAE) mission is to promote student retention and persistence for historically underrepresented and underserved populations. We develop and implement programs and services that support retention, academic excellence, and success at the UO and beyond. We reaffirm our commitment to all students, including undocumented and tuition equity students. Located on the 1st Floor of Oregon Hall (541) 346-3479, cmae@uoregon.edu

Basic needs resources. Any student who has difficulty accessing or affording groceries, food, healthcare, or safe and stable housing and feels this may affect their performance in the course should contact the Office of the Dean of Students at 541-346-3216 or visit <https://blogs.uoregon.edu/basicneeds/>. The Student Sustainability Center also provides help including free “produce drops”.
<https://emu.uoregon.edu/sustainability>

The **UO Access Shuttle** is an on-campus ride service provided at no cost to students with conditions that limit mobility. More information and a sign-up form can be found on the parking & transportation department website: <https://parking.uoregon.edu/content/access-shuttle>.

Safe Ride 541-346-7433 ext 2 pages.uoregon.edu/saferide

Safe Ride is an **assault prevention shuttle** that works to provide free, inclusive, and accessible alternatives to traveling alone at night for **UO students, faculty, and staff.**

Discrimination and Harassment

Prohibited Discrimination and Harassment

Any student who has experienced sexual assault, relationship violence, sex or gender-based bullying, stalking, and/or sexual harassment may seek resources and help at safe.uoregon.edu. To get help by phone, a student can also call either the UO’s 24-hour hotline at 541-346-7244 [SAFE], or the non-confidential Title IX Coordinator at 541-346-8136. From the SAFE website, students may also connect to Callisto, a confidential, third-party reporting site that is not a part of the university.

Students experiencing any other form of prohibited discrimination or harassment can find information at respect.uoregon.edu or aaeo.uoregon.edu or contact the non-confidential AAEO office at 541-346-3123 or

the Dean of Students Office at 541-346-3216 for help. As UO policy has different reporting requirements based on the nature of the reported harassment or discrimination, additional information about reporting requirements for discrimination or harassment unrelated to sexual assault, relationship violence, sex or gender based bullying, stalking, and/or sexual harassment is available at [Discrimination & Harassment](#).

Reporting

The instructor of this class is a Student-Directed Employee. As such, **if you disclose to me, I will respond to you with respect and kindness. I will listen to you, and will be sensitive to your needs and desires. I will not judge you. I will support you.** As part of that support, I will direct students who disclose sexual harassment or sexual violence to resources that can help. **I will only report the information shared to the university administration when you as the student requests that the information be reported** (unless someone is in imminent risk of serious harm or is a minor). Please note the difference between ‘privacy’ and ‘confidentiality.’ As a Student-Directed Employee I can offer privacy because I am not required to report certain information to the university. However, I cannot be bound by confidentiality in the same way that a counselor or attorney is. Confidential resources such as these means that information shared is protected by federal and state laws. Any information that I as a student-directed employee receives may still be accessed by university or court proceedings. This means, for example, that I could still be called as a witness or required to turn over any related documents or notes that I keep.

Please note also that I am required to report all other forms of prohibited discrimination or harassment to the university administration. Specific details about confidentiality of information and reporting obligations of employees can be found at titleix.uoregon.edu.

Mandatory Reporting of Child Abuse

UO employees, including faculty, staff, and GEs, are mandatory reporters of child abuse. Child abuse pertains to individuals who are under the age of 18. This statement is to advise you that your disclosure of information about child abuse to the instructor may trigger my duty to report that information to the designated authorities. Please refer to the following links for detailed information about mandatory reporting: [Mandatory Reporting of Child Abuse and Neglect](#).