Biology 132: Introduction to Animal Behavior/ Fall 2017

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

Graduate Teaching Fellows (and office hours):
Stacy Levichev-Connolly  Office Hr: Tuesday 2:00-3:00
aleviche@uoregon.edu  32 Klamath
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Kylea Garces  kyleag@uoregon.edu
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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. This helps to 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 genetic, environmental, and social effects.
• Apply concepts in animal behavior to novel situations.
• Examine how we think about other animals in relation to ourselves.

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 (Tuesday and Thursday 12:00-1:20 pm, GSH123)
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 (Mondays, 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. Students are expected to attend the section in which they are registered.

Grading Evaluation

19% Midterm 1
20% Midterm 2
21% Final Exam

19% Term Project Paper
3% for project-related assignments (Proposals, Draft Part 1, Draft Part 2)

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

Exams 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 Monday 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 question 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 or on Canvas as noted. A Project Proposal and Project Updates 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 11/13. 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.

**Section 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 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) 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 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.

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<tr>
<th>WK</th>
<th>Discussion Sections and Lecture Topics</th>
<th>Assignments</th>
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| 1  | 9/25: No Discussion Sections first week | Read syllabus and project information on Canvas.  
Lectures  
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? | Register your clicker. |
| 2  | 10/2 Discussion Sections Introduction to project and hypothesis testing.  
CLICKERS required.  
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? | Assigned reading:  
Project Proposal Information. Begin to formulate your proposal.  
Research your proposed study animal. Make observations. |
| 3  | 10/9 Discussion Sections Meet for Duck Lab outside at Millrace (corner of Onyx across Franklin Blvd.)  
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? | Read up on your study animal. Fill out initial project proposal form on Canvas.* by Tuesday 10/10.  
Look for references. |
| **Question Set 1 Due before 11:00 pm, Friday 10/13** | |
| 5  | 10/23 Discussion Sections. Isopod experiments.  
10/24 Anti-predator Strategies: How to keep from being someone’s dinner.  
10/26 Sexual Selection. What adaptations have arisen in animals to | Assigned reading on Canvas. Answer guided reading questions.  
Collect data for term project. |
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Notes</th>
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<tbody>
<tr>
<td>6</td>
<td>attract a mate and compete with rivals?</td>
<td><strong>Assigned reading</strong> on Canvas. Answer guided reading questions. Data collection should be complete. Draft Part 1 due.</td>
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<td>10/31</td>
<td>Mating Systems. How do mating strategies affect reproductive success?</td>
<td><strong>Question Set 2 Due Friday, 11/3 before 11:00 pm</strong></td>
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<td>11/2</td>
<td>Parental Care. Who takes care of the kids?</td>
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<td>11/7</td>
<td>Social Groups: What are the Benefits, Costs, and Dynamics of living in social groups?</td>
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<td>11/9</td>
<td>EXAM 2</td>
<td>PROJECT PAPER DUE* Turn in print copy in section AND post digital copy on Canvas.</td>
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<td>11/13</td>
<td>Discussion Sections: PROJECT PRESENTATIONS</td>
<td>PROJECT PAPER DUE*</td>
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<td>11/14</td>
<td>The evolution of altruism. Under what conditions does it pay to help others?</td>
<td>PROJECT PAPER DUE*</td>
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<td>11/16</td>
<td>Conflict and cooperation. Under what circumstances might individuals in a group cooperate?</td>
<td>PROJECT PAPER DUE*</td>
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<td>11/20</td>
<td>Discussion on animal welfare issues: Animals in industry, research and entertainment.</td>
<td>PROJECT PAPER DUE*</td>
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<td>11/21</td>
<td>Social Groups: Awareness and Social Intelligence. How aware are animals of others in their groups? How aware are they of their own knowledge?</td>
<td>PROJECT PAPER DUE*</td>
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<td>11/23</td>
<td>Thanksgiving. No class.</td>
<td>Reading assignment on animal welfare due. Come prepared to discuss.</td>
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<td>11/27</td>
<td>Discussion Sections: Review</td>
<td>Bring questions for review.</td>
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<td>11/28</td>
<td>The Human Animal: Evolutionary psychology. How do we examine human behavior from an evolutionary perspective?</td>
<td>Bring questions for review.</td>
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<td>11/30</td>
<td>Communication among animals and conclusions.</td>
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<td><strong>Question Set 3 Due before Friday, 12/1, 11:00 pm.</strong></td>
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<td><strong>FINAL EXAM</strong> (NOTE: time has been updated)</td>
<td>8:00am Monday, December 4</td>
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