Behavioral Ecology, Biology 407.01
Fall 2018

Instructor: Dr. Brent Burt
Class meeting time and place: TR 8:00-9:15, Miller 323
Department: Biology
Office: Science 222
Phone: 468-2482
E-mail: dbburt@sfasu.edu
Office hours: MW 8:00-9:30, TR 9:30-10:30, and by appointment
Additional Reading: Papers from primary literature
Course online resources: see D2L

Course Description:
3 semester hours, 3 hours lecture per week. The study of how animal behaviors influence survival and reproduction of individuals in different ecological settings. The course will examine the ecological context in which behaviors evolve. The course will consist of lectures and class discussions of assigned readings of important behavioral studies. Prerequisite: BIO 313 or FOR 209.

Program Learning Outcomes:
PLO 1. The student will demonstrate a good knowledge base in biological concepts (Knowledge). This PLO is achieved with SLO 3-9.
PLO 4. The student will be able to design, carry out, and analyze experiments to answer biological questions using the scientific method (Methods). This PLO is achieved with SLO 1 and 2.

Student Learning Outcomes:
1. Improve scientific literature analysis skills.
2. Develop skills for quantifying and analyzing animal behaviors
3. Understand how behaviors are influenced both by genes and the environment
4. Learn the basic aspects of animal communication
5. Understand how animals use predator avoidance behaviors
6. Understand how animals make foraging and habitat use decisions
7. Learn how male and female animals choose and attempt to acquire mates
8. Learn the factors that influence different mating systems and how these covary with parental care systems
9. Understand the circumstances in which animals live in complex social systems

Grading Policy:
Your final grade in this course is determined by grades from lecture exams, your research project, literature review class discussions, daily lecture quizzes and participation in the course evaluation.

3 exams 300 pts (100 each)
Research project 100 pts
Paper discussions 60 pts ( 20 each)
Course evaluation 5 pts

Grade are determined by earning 90%, 80%, 70% and 60% of the available points for the associated traditional letter grade.

Course Requirements:
This course is going to run as my version of a “flipped” class. This means all lectures will be posted online for you to view and study at your convenience. We will not meet as a class on Thursdays. I will be available for individual consultations during the class period on these days. We will meet each Tuesday, at which time we will address questions and concerns about lecture materials and research projects. Tuesdays will also be used for exams and discussions of assigned readings from the scientific literature.
Lecture exams will be a combination of fill-in-the-blank, figure interpretation/drawing, and short answer/essay questions. Make-up lecture exams are given prior to regularly scheduled exams (given certain circumstances) or at the end of the semester only (this will be the
comprehensive final exam). Anyone showing up late to take an exam must take the comprehensive final exam (see below) if they arrive after any other student has already turned in their exam and left the room. Latecomers to the final exam will not be allowed to take the exam if they show up after any other student has already turned in their exam.

All students will be required to collect and analyze behavioral data and present their findings in a poster format. Students can work in groups of up to 3 individuals (more if you have a good reason). Groups must document the contributions of each individual to the project. More information on this project will be forthcoming.

For each paper discussion you will be required to bring in a printed copy of two observations concerning the paper that demonstrate you have read and critically assessed the paper. You will not receive full points if you do not have this document prior to the start of the class meeting. Students who do not attend a discussion can receive half the possible points once they email a copy of their observations to me within 24 hours of the discussion.

All students will be given the option of taking an optional, comprehensive final exam. The score for this exam will replace the lowest grade from the regular exams. This exam will serve as the makeup exam for missed exams.

It is departmental policy to require students to fill out online class evaluations at the semester’s end using mySFA.

Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program. Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment will be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Class etiquette-
Do not be late for class.
Do not leave before the class period is over.
Do not anticipate the end of class and start putting your things away.
Do not talk during class.
Turn off your phone.
Stay awake.

Academic Integrity (A-9.1)
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at http://www.sfasu.edu/policies/academic_integrity.asp

Academic dishonesty will result in immediate failure in this class.
**Withheld Grades Semester Grades Policy (A-54)**
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**Students with Disabilities**
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

**Course Calendar (subject to change as needed).**

<table>
<thead>
<tr>
<th>Date</th>
<th>In Class Activity</th>
<th>Video Topics to View for Next Week’s Discussion</th>
<th>Research Project Progress</th>
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</thead>
<tbody>
<tr>
<td>Aug 28,30</td>
<td>Course introduction</td>
<td>Introduction to behavioral studies &amp; natural selection, Testing Hypothesis, Communication I-III</td>
<td>Consider potential projects (make preliminary observations and read background literature)</td>
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<tr>
<td>Sep 4,6</td>
<td>Discuss methods for collection of behavioral data</td>
<td>Antipredator Adaptations I-III</td>
<td>Research project proposal due via email on 5 Sept.</td>
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<tr>
<td>Sep 11,13</td>
<td>Discussion of project plans</td>
<td>Foraging I-III</td>
<td>Project consultation and trouble shooting, data collection</td>
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<td>Sep 18,20</td>
<td>Paper Discussion</td>
<td>Review lecture material for exam</td>
<td>Data collection</td>
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<tr>
<td>Sep 25,27</td>
<td>EXAM 1</td>
<td>Habitat use I-III</td>
<td>Data collection</td>
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<tr>
<td>Oct 2,4</td>
<td>Setting up data in a spreadsheet, JMP intro.</td>
<td>Sexual Selection I-III</td>
<td>Data collection</td>
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<tr>
<td>Oct 9,11</td>
<td>Basic statistical analyses</td>
<td>Mating Systems I</td>
<td>Put initial data into Excel and email copy, additional data collection</td>
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<tr>
<td>Oct 16,18</td>
<td>Basic statistical analyses</td>
<td>Mating Systems II</td>
<td>Wrap up data collection, data analyses</td>
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<tr>
<td>Oct 23,25</td>
<td>Paper Discussion</td>
<td>Review lecture material for exam</td>
<td>Data analyses</td>
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<tr>
<td>Oct 30,</td>
<td>EXAM 2</td>
<td>Parental Care Behavior I-III</td>
<td>Email data analyses</td>
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<td>Nov 1</td>
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<td>Parental Care Behavior I-III</td>
<td>Email data analyses</td>
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<td>Nov 6,8</td>
<td>Poster design</td>
<td>Social Interactions, Cooperative Breeding</td>
<td>Email PowerPoint slide, critique of poster</td>
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<td>Nov 13,15</td>
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<td>Eusociality, Human Behavioral Ecology</td>
<td>Email revised PowerPoint slide, final critique of poster design</td>
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<td>Nov 20,22</td>
<td>Thanksgiving</td>
<td>Thanksgiving</td>
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<td>Nov 27,29</td>
<td>Paper Discussion</td>
<td>Review lecture material for exam</td>
<td>Take poster to print shop early in the week</td>
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<td>Dec 4</td>
<td>EXAM 3</td>
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<td>Email final data file and poster</td>
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<td>Dec 6</td>
<td>POSTER SESSION</td>
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<td>Dec 13</td>
<td>Final Exam 8:00-10:00</td>
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