1. Course Number: Biological Sciences 5350/6350

Course Title: Behavioral Ecology

Credit Hours: 3 (3 hours of lecture)

Prerequisites: BIOL 3030, BIOL 3060, or departmental approval.

Corequisites: none.


Supplementary reading from the journals “Animal Behaviour” and “Behavioral Ecology.”

3. Course Description: The evolution of behaviors via natural selection, sexual selection, and kin selection; evolutionary influences on social groupings, mating systems, cooperative breeding, other behavioral interactions. In addition to 3 hours of class lecture per week, graduate students will complete a written project based on the latest literature in behavioral ecology and give a class presentation.

5. Course Objectives: An advanced course in the evolution of behavior, focusing particularly on social behavior. Students will enjoy an in-depth examination of the most recent developments in evolutionary theory as it relates to behavior and the environmental context of behavioral evolution.

6. Course Content and Schedule:

The following topics are covered in the lecture portion of the course.

Hours of coverage are approximate.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Introduction</th>
<th>Natural Selection</th>
<th>Behavioral Traits and Environmental Contexts</th>
<th>Kin Selection</th>
<th>Sexual Selection</th>
<th>Mating Systems</th>
<th>Evolutionary Stable Strategies</th>
<th>Cooperative Breeding</th>
<th>Dispersal Behavior</th>
<th>Optimality Models</th>
<th>Evolution of Group Size</th>
<th>Cooperation, Spite, and Selfishness</th>
<th>Reciprocity and Cooperation</th>
<th>Review</th>
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</thead>
<tbody>
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7. Course Requirements/Evaluation:
BIOL 5350:
Grading: two midterm lecture examinations will be given, one after a third and one after two thirds of the lecture material. Grade points will be divided up as follows:

<table>
<thead>
<tr>
<th>2 hour exams @ 100 pts each</th>
<th>200 points</th>
<th>67%</th>
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</thead>
<tbody>
<tr>
<td>Final exam</td>
<td>100</td>
<td>33%</td>
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<tr>
<td>Total Points</td>
<td>300</td>
<td>100%</td>
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Grading Scale:

A = 90 - 100.0% = 270-300 points
B = 80 - 89.9% = 240-269 points
C = 70 - 79.9% = 210-239 points
D = 60 - 69.9% = 180-209 points
F = Below 60.0% = Below 180 points

BIOL 6350:
Grading: two midterm lecture examinations will be given, one after a third and one after two thirds of the lecture material. An independent research paper will also be required. Grade points will be divided up as follows:

<table>
<thead>
<tr>
<th>2 hour exams @ 100 pts each</th>
<th>200 points</th>
<th>50%</th>
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</thead>
<tbody>
<tr>
<td>Independent research paper</td>
<td>100</td>
<td>25%</td>
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<tr>
<td>Final exam</td>
<td>100</td>
<td>25%</td>
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<tr>
<td>Total Points</td>
<td>400</td>
<td>100%</td>
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</tbody>
</table>

Grading Scale:

A = 90 - 100.0% = 360-400 points
B = 80 - 89.9% = 320-359 points
C = 70 - 79.9% = 280-319 points
D = 60 - 69.9% = 240-279 points
F = Below 60.0% = Below 240 points

8. Class Policy Statements:

**Policies on Unannounced Quizzes and Class Attendance and Participation:** there are no unannounced quizzes. Attendance is required and recorded in lecture. A 5th unexcused absence will result in grade reduction by one letter grade, a 9th unexcused absence will result in grade reduction by two letter grades, etc. Examination dates are announced in class at least one week in advance. Attendance at examinations is required. Class participation is encouraged but not graded.

**Make-Ups:** in accordance with the policies outlined in the *Tiger Cub*, make-up exams and papers will be allowed for verifiable and formally documented cases of hardship or illness and that the professor is contacted by the student within one week of the end of the absence. (A description of excused absences is included in the *Tiger Cub*.) All exams must be completed within two weeks of contacting the professor to request make-up.

**Students with Disabilities:** students who need special accommodations are encouraged to see me after class or in my office to make an appointment so we can discuss your situation confidentially. Please bring your memo from the Program for Students with Disabilities (PSD) to me as soon as possible; we can discuss it during your appointment. Exam accommodations should be arranged at least 1 week in advance. If at any time
during the quarter you feel that the accommodations we have put in place are not working, please consult with me and the professional staff from the PSD office. If you do not have a memo from the PSD office that tells me about your accommodations, please make an appointment to see them in 1232 Haley Center (844-2096).

**Academic Honesty:** Auburn University’s SGA Code of Laws defines the Student Academic Honesty Code (Title XII, Chapter 1200, Chapters 1200-1208). The Honesty Code applies to all students taking classes at Auburn University and is premised upon personal integrity and honesty in all academic work. Sanctions imposed for violations of the Honesty Code may include: a zero grade for an exam or assignment; a course grade of F with the transcript notation “assigned for academic dishonesty”; suspension from the University; and/or expulsion from the University.

9. **Justification for Graduate Credit:** Graduate credit for this course is earned by writing a term paper that reviews recent literature on a topic and a short presentation of the topic to the class during a lecture period. The term paper is not simply a recitation of studies, but requires synthesis and hypothesis testing. The increased intellectual experience of writing a paper and presenting an oral description that demonstrates in-depth understanding of a class topic through advanced study of the primarily literature justifies the graduate credit for the 6000 level course.