BIO 368: Behavioral Ecology
UNCW Spring 2015

SYLLABUS

Course time and location

9:30 am –10:45 pm Tuesdays and Thursdays in Friday Hall 1014

Course website: http://people.uncw.edu/whitejw/courses/Bio368/S2015.html

Instructor contact information

Dr. J. Wilson White
Office: Friday Hall 1051
Office phone: 910-962-3058
E-mail: whitejw@uncw.edu

E-mail is the best way to reach me; please include "Bio 368" in the subject line to get my attention. I will usually respond quickly, but please allow 24 hours for a response before you send a follow-up.

Office hours by appointment. Please contact me via email to setup an appointment.

Course goals and philosophy

Prerequisites and Co-requisites: BIO 201, BIO 202, BIO 366

Course Catalog Description: Evolutionary approach focusing on both proximate and ultimate causes of behavior. Feeding and antipredatory behavior, habitat selection, territoriality, reproductive behavior, mating systems, parental care, animal communication, and the evolution of social behavior. Emphasis on birds, fish, and mammals. Three lecture hours each week.

Course Goals: By the end of this course, students will be able to

1) Distinguish between proximate and ultimate (evolutionary) explanations for animal behaviors
2) Understand neuroendocrinological and developmental mechanisms of behavior
3) Apply economic theory to predict animal decisionmaking
4) Explain physical and ecological factors affecting animal communication
5) Design experiments to test behavioral hypotheses
6) Read and critique journal articles in behavioral ecology

Course expectations:

You are responsible for reading and preparing for class in advance, attending class regularly, completing assignments, and conscientiously studying for examinations. Students who fail to meet those expectations are not likely to succeed in the course.

Readings

The primary textbook for lecture readings is:
Davies NB, Krebs JR, West SA (2012) *An introduction to behavioral ecology*. 4th Ed. Wiley-Blackwell.

Older editions of of this book should be adequate, although the reading assignments may not match exactly.

Additional readings noted on the course calendar will be posted as pdfs on the BlackBoard site for the course.

As a supplemental text, you should use the following book (any version is fine) for guidance in writing literature critiques:

Pechenik, J.A. 2007. *A Short Guide to Writing About Biology*. Pearson-Longman Publishing.

Evaluation

1. Exams. There will be two exams during the semester plus a final exam. The final exam will be cumulative and will also cover material covered since the second exam.

2. Literature critiques. You will write critiques of three assigned articles from the behavioral ecology literature. After reading each article, you will write a one-page critique following the rubric provided on the course website.

2. Short assignments. You will complete written assigments during class and as homework periodically throughout the semester.

Attendance Policy: You are expected to arrive on time for, and participate in, all class meetings. Attendance will be taken for record-keeping purposes, but is not formally graded. However, absent students may miss in-class assignments, which may not be announced ahead of time. *There are no make-up in-class assignments*.

If you have a planned absence on official university business (and tell me ahead of time) or have a documented medical emergency that prevents attendance on the day of an exam, I will arrange to subsitute the exam grade. There are no other acceptable reasons for a substitution. The substitution will consist of double-counting the portion of the final exam corresponding to the material that would have been covered on the missed exam (i.e., the missed exam score is replaced by the score on the corresponding questions on the final exam).

Grading Policy

The final course score will be calculated as follows. Individual assignment grades may be curved but there is no curve on the final course grade.

Assignment	Proportion of total score
Exam I	0.15
Exam II	0.25
Final Exam	0.30
Literature critique I	0.05
Literature critique II	0.10
Literature critique III	0.10
Short assignments	0.05

The final course letter grade will be assigned based on the following scale (final scores are rounded up to the nearest integer percentage):

Total course score (%)	Grade
≥ 93	A
90–92	A-
88–89	B+
83–87	B
80–82	B-
78–79	C+
73–77	C
70–72	C-
68–69	D+
63–67	D
60–62	D-
< 60	F

Class Meeting Calendar

This is only a rough guide, and is subject to change. The definitive course schedule, including updates and other information, is maintained on the course website. All readings listed are from Davies, Krebs, & West unless otherwise noted. Non-textbook readings will be provided on BlackBoard.

Mtg #	Date	Topic	Reading
1	Jan 13	Introduction, natural selection	Ch 1
2	Jan 15	Testing hypotheses	Ch 2
3	Jan 20	Economic theory	Ch 3
4	Jan 22	Economic theory, cont.	Ch 3
5	Jan 27	Social behavior	Ch 11, 12
6	Jan 29	Eusociality	Ch 13
7	Feb 3	Optimality & dynamic programming	Ch 11, 12, 13
8	Feb 5	Foraging theory	Ch 3
9	Feb 10	Competition theory	Ch 5
10	Feb 12	**Exam I**	
11	Feb 17	Communication: environment	Ch 14
12	Feb 19	Communication: signal transmission	Ch 14
13	Feb 24	Communication: game theory	Ch 14
14	Feb 26	Navigation	
15	Mar 3	Nervous systems	Alcock Ch 12
16	Mar 5	Guest lecture: endocrinology & behavior	Alcock Ch 13
	Mar 10	***Spring Break***	no class
	Mar 12	***Spring Break***	no class
17	Mar 17	Development & learning I	Alcock Ch 10, 11
18	Mar 19	Development & learning II	Alcock Ch 10, 11
19	Mar 24	**Exam II**	
20	Mar 26	Sexual selection	Ch 7
21	Mar 31	Parental care & family relationships	Ch 8
	Apr 2	***Easter Break***	no class
22	Apr 7	Mating systems	Ch 9
23	Apr 9	Sex allocation	Ch 10
24	Apr 14	Predator-prey I	Ch 4
25	Apr 16	Predator-prey II	Ch 4
26	Apr 21	Living in groups	Ch 6
27	Apr 23	Human behavior	Alcock Ch 14
28	Apr 28	Review/catch up	
29	**May 5**	**Final Exam 8:00 AM – 11:00 PM**	

Course Policies

Personal electronics
The use of cell phones and other personal electronic devices is not permitted in the class. Please turn off all such devices prior to class.

Laptops may be used in class for the purpose of taking notes and viewing course materials. Out of respect for the rest of the class, please do not engage in non-course-related activity. I reserve the right to ban laptops from class if it becomes apparent that they are a distraction.

Food, etc.
No food is permitted in the classroom. Drinks in lidded containers are acceptable. Smoking, including e-cigarettes, is not permitted in class.

University Policies

Disabilities
I am happy to make accomodations to students with disabilities. Students with diagnosed disabilities should contact the Office of Disability Services (962-7555). Please give me a copy of the letter you receive from Office of Disability Services detailing class accommodations you may need. If you require accommodation for test-taking please make sure I have the referral letter no less than three days before the test.

Violence and harrassment
UNCW practices a zero tolerance policy for any kind of violent or harassing behavior. If you are experiencing an emergency of this type contact the police at 911 or UNCW CARE at 962-2273. Resources for individuals concerned with a violent or harassing situation can be located at http://www.uncw.edu/wsrc/crisis.html.

Academic Honor Code
The Department of Biology and Marine Biology and I strongly support the Academic Honor Code as stated in the Student Handbook and Code of Student Life. We will not tolerate academic dishonesty of any type. This includes plagiarism, as outlined in the Student Handbook.

I encourage you to study together and work on homework assignments in groups outside of class. However, by submitting a homework assignment with your name on it, you are certifying that you contributed to the group effort. If you do work in a group I ask that you acknowledge your collaborators.