

**Biology 140 – Summer 2014**  
**Behavioral Ecology**

Tuesday/Thursday 9:00am – 12:30pm; Earth & Marine Sciences B210

Instructor	Email	Office	Office Hours
Susanna Honig	shonig@ucsc.edu	Thimann 389A	Tues/Thurs 12:45-1:45 pm
		Long Marine Lab COH 249	By Appointment

Teaching Assistant	Email	Office	Office Hours
Max Michelson	memichel@ucsc.edu	Thimann Greenhouse	Thurs 1:00-3:00 pm

*Tentative* course schedule (All dates and assignments are provisional and subject to change):

Week	Date	Topics	Assigned Reading
1	24-Jun	Natural Selection and History of Behavioral Ecology; Testing Hypotheses, Economic Decisions	Chapters 1–3
	26-Jun	Sexual Selection; Communication *Guest lecture by Caroline Casey <b>Quiz 1</b>	Chapters 7 & 14
2	1-Jul	Predators versus Prey * <i>Dark-eyed Junco Fieldtrip</i>	Chapter 4
	3-Jul	Competing for Resources * <b>Paper discussion</b> <b>Quiz 2</b>	Chapter 5 Calsbeek & Sinervo 2002
3	8-Jul	Proposals <b>MIDTERM EXAM</b>	
	10-Jul	Parental Care; Mating Systems * <b>Ethogram Due</b>	Chapters 8 & 9
4	15-Jul	Social Behaviors * <b>Paper discussion</b> * <b>One page draft of proposal due</b>	Chapters 11 & 12 Krakauer 2005
	17-Jul	Living in Groups; Altruism and Conflict *Guest lecture by Joe Sapp <b>Quiz 3</b>	Chapters 6 & 13
5	22-Jul	Sex Allocation; Sex Determination; Review * <b>Paper discussion</b> * <b>Proposal due</b>	Chapter 10 Clutton-Brock et al. 1984
	24-Jul	<b>FINAL EXAM</b>	

### COURSE DESCRIPTION:

Behavioral ecology is the study of the evolutionary and ecological basis of behavior. In this class we will explore the proximate causes and ultimate functions of animal behavior utilizing case studies for illustration. We will cover theories from evolutionary biology, ecology, and game theory that make predictions about animal behavior. For each theory, we will cover specific experiments and observations that support the theory, in order to learn how to test hypotheses in behavioral ecology. We will also consider the role of behavior in shaping evolutionary and ecological processes.

### COURSE WEBSITE:

The course website is available via eCommons under “BIOE 140 Summer 2014”  
Login via [its.ucsc.edu/ecommons/](http://its.ucsc.edu/ecommons/)

### OFFICE HOURS:

Students are **enthusiastically** encouraged to attend the office hours. You are welcome to come with specific questions or to just “talk biology.” Office hours at other times are available by appointment. Please refer to the eCommons page for all class instructions and assignments.

### REQUIRED TEXTBOOK:

Davies, N.B., Krebs, J.R., and West, S.A. 2012. *An Introduction to Behavioural Ecology*. 4<sup>th</sup> ed.  
Oxford: Wiley-Blackwell. ISBN: 978-1-4051-1416-5 (Available at the Bay Tree Bookstore for purchase)

This book is also available to check out for 2 hour periods at the Course Reserves desk at the UCSC Science & Engineering Library (Call number QH371.K73)

### GRADING RUBRIC:

Midterm	25%
Final	35%
Quizzes	10%
Paper discussion questions	10%
Proposal	15%
Ethogram	5%

### QUIZZES:

The quizzes are study aids. They are intended to help keep you from falling behind in the material and to help you see where you need to study more. Any material (lecture or reading) that has been covered before the quiz is given is fair game. There will be 3 quizzes total. Quizzes will be graded and handed back to you the following period or at latest two classes later. Quizzes are solitary exercises to be completed **BY YOURSELF IN CLASS**. Missed quizzes cannot be made up and the lowest score will NOT be dropped.

### PAPER DISCUSSIONS:

Students are expected to have read and thought about the papers before arriving to class. Student groups will be assigned to specific papers in order to prepare for leading in-depth paper discussions. All students (whether you are leading the discussion or not) are required to submit one discussion question about each paper by 5pm the day *before* each paper discussion (10% of final grade; questions to be submitted into student dropbox folders on eCommons). Selected student questions will be discussed during class.

### PROPOSAL:

You will write a paper that proposes an experiment to investigate a topic in behavioral ecology; a 1 page draft will be due **July 15th** and the final proposal will be due **July 22<sup>nd</sup>**; additional instructions provided. *No late assignments will be accepted.*

### ETHOGRAM:

Assignment based on your observations of an animal's behavior due **July 10th**. *No late assignments will be accepted.*

### FIELD TRIPS:

There will be one required field trip during the class period of **July 1**. The field trip will take place on the UCSC Campus, and we will meet in EMS B210 at our scheduled class time before heading outside. Please wear appropriate shoes and clothing for hiking around campus. There will be two opportunities for optional field trips, and the locations and times are still to be decided.

### DRC STUDENTS:

If you qualify for classroom accommodations because of a disability, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me as soon as possible, preferably within the first week of the Summer Session. Contact DRC by phone at 831-459-2089 or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu) for more information.

### EXAM POLICIES & ACADEMIC INTEGRITY:

No exams will be given prior to the specified dates. **No makeup exams will be given**, except in case of serious accident, illness, or death in the family. In such cases **verification will be required**, and instructors must be notified within 24 hours of the exam.

**Note on missed classes:** The instructor is not responsible for providing notes should a student miss class nor is it acceptable to expect wholesale review of all covered material in office hours should a student miss class.

We embrace communal learning and encourage students to form informal study and discussion groups. However, cheating will lead to a failing grade on the assignment or potentially in the course. Cheating includes (but is not restricted to): copying from a classmate's exam with or without their consent, completing work for another student, or missing/improper citation of primary sources. All cases of cheating will be discussed with the student and then reported to the University for possible additional disciplinary action, according to the university's Policy on Academic Integrity, [http://www.ucsc.edu/academics/academic\\_integrity/undergraduate\\_students/](http://www.ucsc.edu/academics/academic_integrity/undergraduate_students/)

OTHER BOOKS YOU MAY ENJOY:

(Mostly for fun, though they may also help with the class)

Dawkins, Richard. 1976. The Selfish Gene. Oxford: Oxford University Press. ISBN: 9780199291151

Judson, Olivia. 2003. Dr. Tatiana's sex advice to all creation: The definitive guide to the evolutionary biology of sex. United Kingdom: Vintage. ISBN: 9780099283751

Lorenz, Karl. 1952. King Solomon's Ring. United States: Thomas Y. Crowell Co. ISBN: 0452011752