

Dr. Tom Langen: tlangen@clarkson.edu, phone 268-7933,

OPEN OFFICE HOURS: Mon, Wed 10:00 – 12:00 PM in Science Center 163, 170G; *or by appointment*

TEXTS: Bolhuis & Giraldeau – *The Behavior of Animals*, Laland & Brown – *Sense & Nonsense*,

Alcock – *The Triumph of Sociobiology*, Ecobeaker Behavior Pack

MEETINGS: Mon-Wed-Fri @ 1:00-1:50 PM in Snell 112

COURSE OBJECTIVES: *Behavioral Ecology & Sociobiology* is about the design and functions of animal behavior. Using Darwin's theory of evolution by natural selection as a conceptual starting-point, we will examine how the environment and social interactions have resulted in the evolution of complex behavioral adaptations. We will then critically examine how well the adaptive explanations that have been applied to non-human animals can be used to understand human behavior. Obviously, this is a very controversial subject and is one that requires thoughtful, skeptical analysis of the arguments and evidence.

By the end of this course, you will (1) be able to explain the conceptual and methodological techniques used to investigate animal and human behavior from the standpoint of BE&S, (2) be familiar with the major topics of investigation in BE&S, (3) be able to critically evaluate the evidence that BE&S provides a reasonable explanation for human behavior, and (4) have learned how to intellectually review and critique academic books on human sociobiology. This course counts as an *Individual & Group Behavior* Knowledge Area course.

LECTURES: Lectures will be illustrated (usually) by PowerPoint presentations. Lecture notes will be placed on the web at Blackboard. I will provide instructions on how to enroll and use Blackboard. These pages will be made available by the morning of the lecture for printing before class. However, **THE NOTES ARE NO SUBSTITUTE FOR ATTENDING LECTURE.** Attendance is expected - if you must miss class, please email a note with the date and excuse for my records.

TEXTBOOK READINGS: It is essential to read the assigned material to do well in this course. The textbook readings complement the lectures, often providing essential background. I will use assigned readings in class discussions.

DISCUSSIONS: Most weeks, there will be an in depth discussion on an assigned text. You should bring an outline of the assigned chapters, plus notes on questions or concerns about it. I will evaluate students every week on participation; you will receive a grade of 0 – 4, where 0 = not present, 1 = unprepared & uninvolved, 2 = unprepared but adequately involved, 3 = adequately prepared and involved, 4 = excellent preparation and involvement.

VIDEO: During some weeks, I will assign one video that provides supplementary material on a course topic. The video can be seen on **Clarkson Closed-circuit Television Channel 68**. I will post the day/times on Blackboard. Each video runs one hour. Get together with some friends, pop some popcorn, open a can of your favorite beverage, and enjoy! Viewing the video is mandatory, since it will be used as a basis of discussion. If you do not have access to the video because you live off campus or other reasons you have two options: (1) Bring a blank video to class and have a classmate record it on his/her VCR or (2) Watch the video in the Clarkson Library. All videos will be placed on reserve in the library after they have been shown.

FINAL ESSAY: You will write a critical essay / book review on the two books we discuss in the course (Alcock, Laland & Brown). This will be an extended (minimum ten pages, double spaced) review and critique of the books, and thoughtful essay focused on the question *Does sociobiology provide a reasonable explanation for human behavior?* The format will be similar to Quarterly Review of Biology; I will provide guidelines later in the course. The paper is due 4:00 PM Friday 4/27 (the last day of class). I will dock 10% for each day thereafter that it is late. You may submit a rough draft for critique any time up until Friday 4/20.

EXAMS: All exams are in-class written exams. They are 'open book' and include material from the lectures, readings, discussions and videos.

Requests for regrades must be submitted *in writing* within one week of receiving the graded exam. A grading key will be posted, please refer to it before making a regrade request that is not due to clerical error (i.e. I added the points incorrectly). Exams cannot be made up except under extraordinary circumstances. Discuss any conflict with me ASAP.

GRADES: I will post grades on Blackboard. The final grade will be based on two take-home midterm exams (15% grade per exam), the book review (20% of grade), class participation (20% of grade), and one cumulative final (30% of grade). There are no 'A' exemptions for the final exam. Course grades are calculated by converting the points earned within each category to the proportion of possible points, then multiplying that proportion by its weighting. For example, if the first midterm is worth 150 points, and you receive 125 points on it, when figuring your final course grade I will calculate: $(125/150) * 0.15$. It is possible, if you do extra-credit, to get credit for more than 100% of the possible points of a category. Grades will be based on a percentage of the total points, scaled to meet the above breakdowns: 90% or greater = A, 86-89% = B+, 80-85% = B, 76-79%=C+, 70%-75% = C, 66-69% = D+, 60-65% = D, 59% or less = F. However, I reserve the right to curve down (lower the grade cutoffs) if I judge it warranted. In the past, I have gone as low as 85% for an A.

MISC. POLICY: I do not cancel classes before or after midterm breaks. You are responsible for the consequences of missing class.

I take a serious view of cheating, forbidden collaboration, and plagiarism on exams and assignments. I will take measures to detect plagiarism of online sources. If you do not know what plagiarism is, refer to <http://www.clarkson.edu/library/research/plagiarism.html>; if you are unclear about whether something is considered unacceptable in my class, ask me BEFORE submitting an assignment. If I do detect cheating by you, you will receive a zero on the exam, paper or homework assignment, and your name will be submitted to the Clarkson University Academic Integrity Committee.

Tentative Semester Schedule

<i>WEEK</i>	<i>DATE</i>	<i>TOPIC</i>	<i>CHAPTER</i>	<i>Other Assignments</i>
1	1/11	What is Sociobiology?	1 Giraldeau	
2	1/15	Natural Selection		
	1/17	Behavioral Genetics	13 Giraldeau	
	1/19	Adaptationism		
3	1/22	Book Discussion	1 & 2 Laland	
	1/24	Mind's Big Bang		Guppy Selection HW Due
	1/26	TBA		
4	1/29	Class Canceled		
	1/31	Methodology of Sociobiology		
	2/2	Hominid Evolution	17 - Giraldeau	
5	2/5	Hominid Evolution		
	2/7	Book Discussion	3 - 5 Laland	
	2/9	Exam		
6	2/12	Break!		
	2/14	Optimal Foraging		
	2/16	Optimal Foraging	9 Giraldeau (pp 199-211)	
7	2/19	Optimal Group Size & Game Theory	9, 14 Giraldeau (pp 222-225, 315-323)	Foraging Video
	2/21	Fighting & Game Theory		
	2/23	Book Discussion	6 - 8 Laland	Opt Forage HW
8	2/26	Fighting & Game Theory		
	2/28	Fighting & Game Theory	9 Giraldeau (pp 211-222)	
	3/2	Mutualism, Reciprocity, Punishment	14 Giraldeau (pp 330-334)	Opt Forage Computer Sim
9	3/5	Mutualism, Reciprocity, Punishment		Fighting Video
	3/7	Sexual Selection	11 Giraldeau (pp 255-271)	
	3/9	Book Discussion	1 - 4 Alcock	Game Theory HW
10	3/12	Sexual Selection		
	3/14	Cryptic Sexual Selection	12 Giraldeau (all)	
	3/16	Exam		
11		Spring Break		
12	3/26	Mating Systems	11 Giraldeau (pp 253-255)	Courting Video
	3/28	Mating Systems		
	3/30	Parental Care		
13	4/2	Kin Selection	14 Giraldeau (pp 323-329)	
	4/4	Kin Selection		Kin Select HW
	4/6	Book Discussion	5 - 8 Alcock	
14	4/9	Parental Investment		Friends & Rivals Video
	4/11	Parental Investment		
	4/13	Book Discussion		
15	4/16	Cooperative Breeding and Eusociality	14 Giraldeau (pp 335-341)	Winning Teams Video
	4/18	Cooperative Breeding and Eusociality		
	4/20	Book Discussion	9 & 10 - Alcock	Book Review Outline
16	4/23	Cooperative Breeding and Eusociality		
	4/25	Cooperative Breeding and Eusociality		
	4/27	Summing Up.		Review Due
17		Final		