



Animal Behavior

BIOL 480

Fall Semester 2011



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Office: SL 3306, 650-2976 (office), 650-3923 (lab)

Office Hours: M, T 12:30 - 2:00, *or by appointment (preferred)*

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Course Blackboard Site Under Construction

Textbook: "Animal Behavior: Mechanisms, Ecology, Evolution"

Drickamer, Vessey, and Jakob; 5th Edition (2002)

Additional readings from other publications and primary literature provided in class
or on the Course Blackboard site.

Grading Policy

Your grade in this class will be determined by a combination of lecture exam and writing exercise scores. There will be three lecture midterm exams at 100 points each; a pseudo-cumulative final lecture exam at 150 points; two writing exercises at 100 and 150 points respectively; laboratory questions to total 100 points; and a laboratory group project (to be presented in oral and written form) at 150 points. Thus, there are a total of 950 points available in the course; there will be no extra credit opportunities in this course.

Your grade will be calculated on a straight scale (rounded percentages): 90 + % = A, 80 - 89% = B, 70 - 79% = C, 60 - 69% = D, < 60 % = F. Grades will be curved in your favor if necessary (i.e., if you get 81% of the points, you will receive at least a B regardless of how well other students in the class perform). Participation will be considered in calculating your final grade in borderline cases, and grammar and spelling will count on writing assignments and laboratory questions. Make-up midterm exams will only be given if you must miss a midterm exam for a valid, verifiable reason; however, I reserve the right to simply remove that midterm from the calculation of your grade and not offer a make-up exam. I will determine "valid" reasons for missed midterms or other exercises; the final exam must be taken on the specified date. Writing assignments and group projects will have a set percentage of points removed from their final score for each day late.

Course Objectives:

- ✓ To familiarize you with the history, approaches, and research techniques of the field of animal behavior (ethology);
- ✓ To expose you to methods of understanding complex phenomena through the use of verbal and graphical models;
- ✓ To increase your experience with designing, executing, and analyzing data from an independent research project;
- ✓ To sharpen your abilities to critically analyze and discuss the structure of scientific hypotheses.

Attendance/Grading Philosophy

Attendance in lecture is not absolutely required, but strongly advised. You will be responsible for everything discussed in lecture regardless of its nature (e.g., information not present in any readings, material on handouts, changes in test dates, etc.). Attendance in lab is required; missing more than two labs will jeopardize your future in the course.

I typically operate under a fairly simple grading rule... Your Grade is Your Business. I do not *give* you a grade; rather, you *earn* a particular grade. I consider myself to be a very fair test-writer and grader. If you perform below your expectations on a particular exam or writing assignment, I will not entertain the notion that this is somehow my fault. *However*, that being said, I am fully cognizant that I *am* human and that I *can* make logistical and/or judgement errors in grading. I am very willing to address any such errors, one-on-one or with the class as a whole, as long as they are brought to my attention in a timely fashion. I am also interested in having all students perform as well as they can in this class (ethology is a cool topic!). I encourage you to ask questions during lecture and lab exercises, come to my office hours, make appointments to see me, use e-mail to contact me and ask questions, and work together with your colleagues in this class as much as you can.

Academic Dishonesty

Like yelling "Go Cubs!" at a Cardinals' game or wondering aloud why NASCAR is even considered a sport (since all the cars go in the same direction), academic dishonesty is never a good idea. While I certainly do not expect this to be a problem at any stage in this course, be aware that I will deal with cases of academic dishonesty on a case-by-case basis. Any cheating on exams or passing off work copied from published sources, internet sources, your colleagues, friends and/or relatives or anyone else as your own may result in a loss of credit for that exercise and possible removal from the course.

Textbook Usage

I rely on the textbook to provide background material to support discussion during the lectures, but I will also bring in handouts from other sources as well as do "case studies" involving primary scientific publications to supplement the lectures. Readings from the textbook are given below in the lecture schedule; note that I tend to skip back and forth through the book. Page ranges for reading material generally go from the most major heading on the first page through to the most major heading on the end page given, unless beginning/ending subheading designations are given.

Laboratory Schedule and Comments

At this point, there is no fixed laboratory schedule that I'm going to pass along to you. The availability of study organisms is driven strongly by weather and their own personalities, and so the tasks we can accomplish in lab at any point in time will depend on a variety of factors out of my control. There will be a fair amount of independent research in this course. We will not meet for laboratories *per se* during Group Research weeks (later in the semester), and during those periods of time I will likely be meeting with specific groups by appointment. However, we will have scheduled labs during the semester during the Friday 12:00 - 3:00 pm period; **therefore, do not schedule any other activities during that period of time.** If we don't have lab during that time on any particular week, you can use that time for your research projects as they get going.

The Group Research Projects will likely require time outside of class time. This is a normal expectation in an upper-division course, and one that you will be expected to meet through your own scheduling prowess. However, several of the lab meeting times will also be available for your group projects. Therefore, the claim that you were unable to make progress on your group projects "because we couldn't find times during which we could all meet" will be met with great skepticism and incredulity.

Lecture Schedule	
Week	Topic(s); Readings
8/23, 8/25	Introductory Material, Evolutionary Biology; Handouts, pp. 4 - 7, pp. 9 - 19, Ch. 4 (esp. for review)
8/30, 9/1	Behavioral Genetics, Phenotypic Plasticity (Reaction Norms); Chs. 5 (pp. 52 - 57), 6, Lecture, Handouts; Phenotypic Plasticity, Proximate vs. Ultimate Explanations; pp. 7 - 8, Lecture
9/6, 9/8	Neurobiology of Behavior, Hormonal Basis of Behavior; Ch. 7 (pp. 80 - 84 [review], pp. 85 ['Sensory receptors...'] - 91, 92 - 94, 94 - 102)
9/13, 9/15	Neurobiology, Hormonal Basis of Behavior; Ch. 8 (pp. 104 - 108, pp. 110 - 116), Handouts
9/20, 9/22	Hormones and Behavior <u>- EXAM #1 -</u>
9/27, 9/29	Economics of Behavior (Optimality Theory); Handouts, Ch. 15 (pp. 256 - 264 ['Techniques...'], 268 - 276 for examples of group hunting and group defense)
10/4, 10/6	Optimality / Foraging, Evolution of Cooperation; Handouts, 338 ['Reciprocity'] - 339)
10/11, 10/13	Examples of Cooperation; Ch. 16 (pp. 297 ['Evolution of Restraint...'] - 300,
10/18, 10/20	Orientation and Migration; Ch. 13 (pp. 220 - 237)
10/25, 10/27	<u>- EXAM #2 -</u> Dominance Hierarchies; Handouts, Ch. 16 (pp. 287 - 292) Mating Behavior, Alternative Mating Strategies; Ch. 17 (pp. 302 - 304, 317 - 321)
11/1, 11/3	Mating Strategies, Sexual Selection, Parental Care; Ch. 17 (pp. 307 - 314, 323 - 330)
11/8, 11/10	Intra- and Inter-Specific Communication; Ch. 12 (pp. 196 - 216)
11/15, 11/17	<u>- EXAM #3 -</u> Primitive Social Behavior, Kin Selection; Handouts, Ch. 19 (pp. 332 - 336, 341 - 345)
11/29, 12/1	Kin Selection, Inclusive Fitness, Eusociality; pp. 337 - 341, pp. 345 - 349, Handouts
12/6, 12/8	Eusociality, Human Behavior, Sociobiology; Handouts

Final Exam: Monday, December 12, 201, 8:00 – 9:40 am (150 points)

Last Day to Withdraw without Permission: 10/28

Last Day to Withdraw: 11/18

A final note: As this course is still a “work in progress,” this syllabus is subject to change. You will be informed of changes to this schedule well ahead of major events in the course (e.g., exams, writing assignments, etc.).

Remember that you are responsible for everything discussed in lecture and the laboratory: changes to the syllabus, including changes in topics discussed, changes in exam dates, and changes in scheduled laboratory exercises are included in this policy.