Biology 3600/6600 Evolution
Tentative schedule, Spring 2007
Class time: TR, Noon – 1:30PM

Instructors:
Lock Rogers, Ch. Emerson 331, lock.rogers@biology.gatech.edu, 385-0539
Mirjana Brockett, Ch. Emerson A114, mirjana.brockett@biology.gatech.edu, 385-6885
Todd Streelman, EST 2244; todd.streelman@biology.gatech.edu, 385-4435

General Information

Goal: To gain a comprehensive knowledge of evolutionary biology. This includes focus on processes (e.g., natural selection, genetic drift) and resulting patterns (e.g., genome organization, phylogeny, the fossil record). Emphasis will be placed on a conceptual understanding of the subject with examples taken from the recent primary literature.

Textbook: *Evolutionary Analysis, 3rd Edition*; S. Freeman and J.C. Herron, 2004

Honor Code: Students are expected to abide by the Academic Honor Code (viewed online at http://www.registrar.gatech.edu/rules/18.php).

Exams: There will be three exams during the semester and a cumulative final (which will focus on material from the last fourth of the course). Exams may consist of multiple choice, short answer, and/or essay questions. Questions will be taken from assigned readings and class lecture. You are responsible for material covered in assigned readings even if it is not presented in class; similarly you are responsible for material presented in class even if it is not in the textbook. There will be no make-up exams, unless the absence is excused by the Dean of Students. Exams will typically be worth 100 points, with the final exam worth from 150-200 points.

Problems/Essays: In addition to exams, students will complete a problem set or essay associated with each fourth of the class (i.e., a set of problems prior to Test 1, an essay or set of short answer questions prior to Test 2). Problems and Essays will each be worth ~20 – 25 points, or 1/4 to 1/5 of a test.

Graduate Students Only: Graduates students will meet for an additional hour with Dr. Streelman (time to be announced). Each graduate student will be required to research a topic in evolutionary biology of their choice, and will present a short (20 – 30 minute) lecture and lead discussion on this topic. The goal here is to present current ideas in greater depth than the class will cover. Students are encouraged to choose a topic close to their own research, if applicable. Graduate students will also submit a 10-page research paper on a topic of interest to Dr. Streelman prior to the end of the semester.

Grading: The final class grades will be standardized and assigned as follows: A = 90 to 100%; B = 80 – 89%; C = 70 – 79%; D = 60 – 69%; F = < 60%. You may request that any question on any exam be re-graded, however, we reserve the right to re-grade the

entire exam. Unfair questions will be identified based on the class results; if more than 85% of students incorrectly answer a question, the question may be dropped from the exam at our discretion.

Attendance: Performance in this class correlates strongly with attendance in lecture. Students who anticipate the necessity of being absent from class because of religious observance must provide written notice of the date(s) by the fourth class meeting. Lecture material in the form of Powerpoint presentations will be made available on WebCT.

How do you get an A in Evolution? READ, READ, READ! And READ more! Ask questions and discuss topics in class. Understand concepts and how they are applied rather than memorizing names or formulas. Take careful notes and review them regularly, perhaps in small study groups. Good luck!!

SCHEDULE

Date	Topic	Reading
January 9	Course Intro and Basics	1 & 2
January 11	The Pattern of Evolution	2 and 3
January 16	Mutation and Genetic Variation	4
January 18	Selection and Mutation	5
January 23	Selection and Mutation	5
January 25	Migration and Genetic Drift	6
January 30	Migration and Genetic Drift	6
February 1	EXAM 1	
February 6	Linkage and Sex	7
February 8	Quantitative Genetics	8
February 13	Quantitative Genetics	8
February 15	Adaptation	9
February 20	Sexual Selection	10
February 22	Sexual Selection	10
February 27	Kin Selection	11
March 1	Kin Selection	11
March 6	EXAM 2	
March 8	Aging and Life History	12
March 13	Aging and Life History	12
March 15	Human Health	13
March 19 – 23	SPRING BREAK	
March 27	Human Health	13
March 29	Reconstructing Evolution	14
April 3	Speciation	15
April 5	Speciation	15
April 10	EXAM 3	
April 12	Origin of Life, Cambrian Explosion	16 & 17
April 17	Evolution and Development	18
April 19	Evolution and Development	18
April 24	Human Evolution	19

April 26	Human Evolution	19
April 27	LAST DAY OF CLASSES	
May 1	FINAL EXAM: 8 – 11am	

Color Code
Streelman Lectures
Brockett Lectures
Rogers Lectures