

BioS 101 Fall 2008 Syllabus

Lecture in 250 SES at 10 AM

Laboratory in 3084 SEL

You must be registered for the lecture (#13602) and one of the LABD that goes with this lecture.

Lecture Text: Freeman 2007 *Biological Science, Third Edition*

Laboratory Text: Murray and Molumby 2008 *Adventures in Populations and Communities, Third Edition*
STAFF

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where you will find grading policies, a list of teaching assistants and other information pertinent to our course.

Date	Topic	Reading (Freeman)	Laboratory
Aug 25	Introduction to Ecology	Chapter 50	Species, Populations, Communities
27	Life Histories and Demography	Chapter 52	
29	Population Dynamics	Chapter 52	

Sept 1	NO CLASS		Demography- Human Life History
3	The Biology of Competition	Chapter 53	
5	The Biology of Predation	Chapter 53	

Sept 8	The Biology of Producers	Chapter 53	Ecology - Interspecific Interactions
10	Tri-trophic Interactions	Chapter 53	
12	Food Webs	Chapter 53	PS1 Due

Sept 15	EXAM 1		Medieval Science
17	Trophic Structure	Chapter 54	
19	Energy Flow	Chapter 54	

Sept 22	Nutrient Cycles	Chapter 54	Ecology-Food Web in a Pond
24	Eutrophication	Chapter 54	
26	Climate Change	Chapter 54	Medieval Science Report Due

Sept 29	Nitrogen Deposition	Chapter 54	Biodiversity and Nitrogen Deposition
Oct 1 3	Conservation Biology Threats to Biodiversity	Chapter 55 Chapter 55	

Oct 6	Life Histories and Harvesting	Chapter 55	Soil and Roots
8 10	Conservation Genetics EXAM 2	Chapter 55	
			Problem Set 2 Due
Oct 13 15 17	What is Out There? Genetics: Genomes, Information Variation and the Gene	Chapter 1 Chapter 13	<u>What is Life?</u>
Oct 20	Segregation, Assortment	Chapter 13	<u>Human Genetic and Environmental Variation</u>
22 24	Epistasis, Pleiotropy, Linkage Sex Linkage and Polygenic Inheritance	Chapter 13	
Oct 27	More Genetics		<u>Genetics-Maize Crosses</u>
29	Mating Systems: Sexual Selection, Why Have Sex?	Chapter 51	
31	The Evidence for Evolution	Chapter 23, 26	Interspecific Competition Report Due
Nov 3 5 7	Microevolution: Population Genetics The Hardy-Weinberg Equilibrium Mutation, Genetic Drift Neutral Theory	Chapter 24 Chapter 24	<u>Population Genetics, Drift, and Allele Flow</u>
10	EXAM 3		Problem Set 3 Due
12 14	Mechanisms of Evolution Drift and Allele Flow	Chapter 24	<u>Human Mate Choice</u>
17	Natural Selection	Chapter 24	<u>Evolution-Natural Selection</u>
19	Natural Selection		<u>Mate Choice Report Due</u>
21	Macroevolution: Isolation Mechanisms	Chapter 25	
24	Speciation		<u>Beer Bottle Systematics</u>
26 28	Phylogeny and Systematics Thanksgiving-No Lecture	Chapter 25 Chapter 26	<u>Problem Set 4 Due</u>
DEC 1	Extinction	Chapter 26	<u>Grade Conference</u>

3 ***Ethics and Biodiversity*** Chapter 55

5 **EXAM 4**

Wed Dec 10 Optional Final Exam (8-10 in 250 SES)

COURSE GRADING

The total points which can be earned in this course are 515. This total includes 350 points that can be earned on Examinations and 165 points associated with the Discussion and Laboratory. The point minima listed below are guaranteed to result in the following letter grades:

A 515 - 444 B 443 - 381 C 380 - 300 D 299 - 250 E <=250

EXAMINATIONS: Each exam is worth 80 points and will consist of 40 multiple choice questions drawn from Lecture, Discussion, Laboratory and assigned readings. The 4 EXAMS (50 minutes each) will be given during the scheduled lecture on the following dates:

Sept 15, Oct 10, Nov 10, Dec 5

There are NO specially prepared make-up exams. If you miss an exam, provide a written explanation to your teaching assistant and get a copy of the missed exam. Use it, along with your other exams, to study for the Optional Final. Your score on the Optional Final will be your score for the missing exam. During the last week you will have a conference that will enable you to determine your PROJECTED GRADE once you learn your score of the 4th scheduled exam. Some students will be able to improve their Letter Grade by doing well on the Optional Final, but for others it will be impossible to improve their Letter Grade by taking the Optional Final. Additional details on this procedure will be forthcoming.

In addition, there will be clicker questions, given in lecture. Answering a series of clicker questions is worth $\frac{1}{2}$ point for attendance and $\frac{1}{2}$ point for having all or most of them right. Each series is worth a total of one point each. There will be more than 30 sets of clicker questions (they will be given most lectures), but total points will be capped at 30. There is no make-up them up, if you are not there, you miss the points, but since the total number of clicker questions exceeds 30, students who miss many correct answers, or are absent a few times, can still get full credit.

The OPTIONAL FINAL EXAM will be given during the scheduled final exam time: The Optional Final will be comprehensive and the score on this exam can replace your lowest exam score.

DISCUSSION & LABORATORY: A total of 165 points may be earned. Before each Discussion students will answer the Discussion questions/problems. This answer will be submitted at the beginning of the assigned Discussion period. Each Discussion is worth a maximum of 1 points for a total of 15 points. Four 10 point problem sets will be posted online and due in laboratory. During each Laboratory students will fill in Data Sheets based on their observations and understanding of observations. Each data sheet is worth a maximum of 2 points for a total of 30 points.

LABORATORY REPORTS: All lab reports are due one week after completion of collection of data. Additional details and requirements will be forthcoming. There will be 3 formal written reports. Two will be worth a maximum of 20 points, and another will be worth a total of 40 points, for a total of 80 points. The 1st report will be on Medieval Science (20 points, data collected week 4). The 2nd report will be on Population Interactions (40 points, data collected weeks 3 through 9). The 3rd report will be on Human Mate Choice (20 points, data collected week 12).