

Evolution: BIOL 3110

Fall, 2005 Semester
Tues. & Thurs., 10:00 – 11:20, SC 130

Dr. Helen Boswell

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Fall office hours: M, W, F: 9:00 – 10:00; Tues: 2:30 – 4:30; plus open door/appointment policy

Course Objectives:

To understand the form and function of living organisms and the diversity of those organisms on our planet, you must understand the processes that cause evolutionary change and adaptations within species. This course will focus on the mechanisms and outcomes of evolutionary change. By the end of this course, you will be expected to:

1. Understand mechanisms that underlie evolutionary change in living systems.
2. Understand consequences of evolution, including adaptation & speciation.
3. Be able to apply methods to study evolution, including direct observation, experimentation, and phylogenetic reconstruction.
4. Be able to apply critical thinking and hypothesis testing skills to address common misconceptions from a scientific standpoint.

WebCT:

Access grades, study guides, extra readings.
Access www.suu.edu. Follow “Current Students” link. In upper left corner of page, follow “WebCT” link. Your username and password are the same ones that you use to log onto university computers.

Your Responsibilities as a Student:

- Show up to class on time!
- Turn off cell phones during class!
- Course requirements must be completed independently. Plagiarism of any materials in the course will not be tolerated. If you have been determined to be dishonest in completion of any course requirement, you will receive a zero for that work and depending on the extent of the dishonesty, may fail the course and receive further action from the university.

Required Text:

Ridley, M. 2004. Evolution, 3rd edition.
You will have certain reading and discussion assignments out of this text.

Course Requirements:

Two in-class exams, one final exam.
Three short papers.
Five discussions and outlines from readings.

Grades:

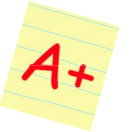
A: ≥ 92 ; A-: 90-91; B+: 88-89; B: 82-87;
B-: 80-81; C+: 78-79; C: 72-77; C-: 70-71;
D: 65-69; F: < 65
Exam 1: 25%
Exam 2: 25%
Final Exam: 25%
Short papers: total 10% (2%, 3%, 5%)
Readings & outlines: total 15% (5 @ 3%)

Policy on Missed or Late Work:

Assignments are due in the beginning of the indicated class period. A letter grade will be deducted for each day that an assignment is turned in late. An exam *may* be taken outside of the scheduled period and/or assignment turned in late if you experience a serious injury/illness or have a death in the family. You must notify me immediately and take the missed exam/turn in the assignment within a day of your return back to school. Other excuses must be evaluated by me on an individual basis.

American Disabilities Act Statement:

Students with medical, psychological, learning, or other disabilities desiring academic adjustments, accommodations, or auxiliary aids need to contact the Southern Utah University Coordinator of Services for Students with Disabilities (SSD) in Room 206F of the Sharwan Smith Center, phone (435) 865-8022. SSD determines eligibility for and authorizes the provision of services.



Semester Schedule

<u>Date</u>	<u>Topic</u>	<u>Reference/discussion readings</u>	<u>What's Due?</u>
Aug 30	Introduction	1.1, 1.2, 1.3	
Sept 1	Evolutionary Mechanisms	3.1, 3.2, 3.3, 3.8, 3.10	
6	Natural Selection	4.1, 4.2, 4.3, 4.4, 4.5, 4.6	Paper 1 due
8	Testing the Assumptions	"	
13	Causes of Variation	2.5, 2.6, 2.9, 4.7, 4.8	Ch. 4 reading due
15	Hardy-Weinberg Equilibrium	5.1, 5.2, 5.3, 5.4, 5.6	
20	H-W Equilibrium (cont')	"	
22	Violations of Hardy-Weinberg	5.14, 6.1, 6.3, 6.4	Paper 2 due
27	Violations (cont')	"	
29	Adaptations	10.1, 10.2, 10.3, 10.4, 10.7.1-10.7.5	
Oct 4	Adaptations (cont')	"	Ch. 10 reading due
6	Exam 1		Exam 1
11	Levels of Selection	11.1, 11.2	
13	Levels of Selection (cont')	"	
18	Altruism and Group Selection	"	
20	Sexual Selection	12.4	
25	Sexual Selection (cont')	"	Ch. 12 reading due
27	Coevolution	22.1, 22.2, 22.5, 22.6	
Nov 1	Species: Testing the Concepts	3.4, 3.5, 3.6, 13.1, 13.2, 13.3, 13.8	
3	Speciation	"	Ch. 22 reading due
8	Speciation (cont')	"	
10	Exam 2		Exam 2
15	Phylogenetics	15.1, 15.2, 15.3, 15.8, 15.9.2	
17	Phylogenetics	"	
22	Human Evolution	18.7	Paper 3 due
29	What is Culture?		
Dec 1	Memes and Cultural Evolution	Blackmore reading	Blackmore reading due
6	Memes and Cultural Evolution	"	
8	Modern Human Evolution		
Dec 16	Final Exam, 11:00 – 12:50		Final Exam

Information contained in this syllabus, other than grading, late assignments, makeup work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.