tritonlinBILD 3
ORGANISMIC AND EVOLUTIONARY BIOLOGY
Fall semester, 2010

COURSE OUTLINE

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Office Hours:
Thursdays, 4:00-6:00 PM

email correspondence encouraged,
please put BILD 3 in the subject line

This course covers one of the most important theories in science – the theory of evolution through natural selection – and one of the most important issues of our times – ecology and our present and future environmental challenges. We start by investigating Charles Darwin's theory of natural selection, its impacts on how we think about life, and its applications to how we live life. The middle section of the class leads us through a brief history of life on earth, from how life may have started, to a history of our own species. The last section of the course focuses on ecology, covering many levels of organization from individuals, populations, species, communities, ecosystems to the globe itself. We will also study how mankind is affecting our world and how we can address such problems.

LECTURES: Monday, Wednesday and Friday, WLH 2001

READINGS:
Our class text is "Biology" (Eighth Edition), by Campbell and Reece, Benjamin-Cummings, 2008. We will cover material from units Four, Five, Seven (Chapt. 51) and Eight of the text.

1. Sept 24 (Fri)	Our aims	Chapter
2. Sept 27 (Mon)	Beginning Darwin's journey: evolution as a pattern of change	22
3. Sept 29 (Wed)	Following Darwin's journey: natural selection as a mechanism of evolution	23
4. Oct 1 (Fri)	Evolution: religion, politics, and questions	
5. Oct 4 (Mon)	What Darwin didn't know: genetics and natural selection	
6. Oct 6 (Wed)	Splits on the tree: speciation.	24
7. Oct 8 (Fri)	From speciation to tree-thinking.	26
8. Oct 11 (Mon)	Phylogeny and systematics.	
9. Oct 13 (Wed)	Molecular evolution and "Evo-devo"	
10. Oct 15 (Fri)	Midterm I	
11. Oct 18 (Mon)	An overview of the history of life	25
12. Oct 20 (Wed)	Early life and bacteria	27, 28
13. Oct 22 (Fri)	Conquering the land: a history of the plants	29, 30

14. Oct 25 (Mon)	A different strategy: fungi and the early animals	31, 32, 33
15. Oct 27 (Wed)	Enter the backbone	34
16. Oct 29 (Fri)	The evolution of us	
17. Nov 1 (Mon)	Intro to behavior: nature vs. nurture	51
19. Nov 3 (Wed)	Behavior as an adaptation	
19. Nov 5 (Fri)	Evolutionary psychology: behavior applied to humans	
20. Nov 8 (Mon)	Midterm II	
21. Nov 10 (Wed)	Life at different scales: an introduction to ecology	52
22. Nov 12 (Fri)	The ecology of populations	53
23. Nov 15 (Mon)	Populations II: more complex models and other species	
24. Nov 17 (Wed)	What is a community?	54
25. Nov 19 (Fri)	Communities II: explaining biodiversity	
26. Nov 22 (Mon)	The ecosystem as a level of organization	55
27. Nov 24 (Wed)	Ecosystems: nutrient cycles (and what we're doing to them)	
-- Nov 26 (Fri)	THANKSGIVING	
28. Nov 29 (Mon)	Our environmental health: problems and challenges	56
29. Dec 1 (Wed)	Our environmental health: mitigation and restoration	
30. Dec 3 (Fri)	Review	
31. Dec 8 (Wed)	Final: 3:00 – 6:00 PM, Place: TBA	

GRADES:

Your grade will be composed of the following:
22.5% Midterm I
27.5% Midterm II
35% Final
10% Quizzes
5% Clicker points

Grading will be conducted on a curve. The approximate grade distribution will be:
20% of the scores – A
30% of the scores – B
30% of the scores – C
20% of the scores – D or F
This is a BILD-wide grading policy, not specific to our class.

Your final letter grade will be based on your TOTAL number of points. The final course curve is determined based on the students that are enrolled in the course at the end of the quarter (always less than in the beginning of the quarter). I do give plus and minus grades, but only on the final course grades. The pluses and minuses do not make the curve easier, they only help to differentiate the scores within the ranges above.

SECTIONS:
Sections are mandatory and allow you to learn the material and in a smaller class setting

and through some hands-on activities. Sections will have both quizzes and activities that will count towards your grade. Our TAs have been selected because of their performance in BILD 3 and/or their interest in ecology and evolution, and they will be an important part of your learning in the class.

Section registration will start the week of Sept 27 and details will be announced in class. **https://sections.ucsd.edu/**

Section policy: If you know a week ahead of time that you will miss a section, you may go to another section, as long as you have contacted your section leader and they have approved.

SECTION TIMETABLE:

		TA Name	**E-mail**	**Room**
1	M 4:00p - 4:50p	Jessica Kim	jsk033@ucsd.edu	TM102 1
2	M 5:00p - 5:50p	Thomas Wootton	twootton@ucsd.edu	TM102 1
3	M 6:00p - 6:50p	Faiza Morado	fmorado@ucsd.edu	TM102 1
4	W 3:00p - 3:50p	Elizabeth Miller	ecmiller@ucsd.edu	CENTR 217B
5	W 4:00p - 4:50p	Pial Hossain	phossain@ucsd.edu	CENTR 217B
6	W 5:00p - 5:50p	John Pham	j1pham@ucsd.edu	CENTR 217B
7	W 6:00p - 6:50p	Christina Van	chvan@ucsd.edu	CENTR 217B
8	W 7:00p - 7:50p	Ni Sun	nsun@ucsd.edu	CENTR 217B
9	Th 08:00a - 08:50a	Elizabeth Sibert	esibert@ucsd.edu	HSS 1315
10	Th 09:00a - 09:50a	Taylaur Smith	t9smith@ucsd.edu	HSS 1315
11	Th 3:00p - 3:50p	Gha-hyun Kim	gjk004@ucsd.edu	HSS 1315
12	F 10:00a - 10:50a	Melody Lin	mwlin@ucsd.edu	SSB 106
13	F 11:00a - 11:50a	Stephen Leung	s6leung@ucsd.edu	SSB 106

SECTION schedule

Week starting	Section / No Section	Reason
Sept 20	No Section	1st class only
Sept 27	No Section	
Oct 4	Section	
Oct 11	Exam Review	Midterm I (Fri, 15th)
Oct 18	Section	
Oct 25	Section	
Nov 1	Section	
Nov 8	No Section	Midterm II (Mon, 8th) Veteran's day (Thurs, 11th)
Nov 15	Section	
Nov 22	No Section	Thanksgiving
Nov 29	Section	

CLICKERS:

Clickers: We will be using i>clickers in this course. They are white with grey buttons. Other types of clickers will not work. During lecture, I will ask questions that you will respond to with your clickers. The point of the system is to encourage more interaction between students and between the students and the instructor, despite the fact that there are many of us in this lecture hall. The clickers will give you feedback on your comprehension and will give me feedback on my teaching.

We will go over the use of clickers, Monday Sept 27. Please bring your clickers to class that day and every subsequent lecture. They are not needed during exams, nor will you use your clicker for homework or discussion section.

Please read the instructions below BEFORE you register your i>clickers:
Every student in this course must have their own clicker. For the first two weeks of class, we will be practicing with the clickers - the points will not count. This is a great opportunity to make sure you know how to use your clicker and your clicker is working properly. I will post the points on WebCT so you can check. If you have any problems with your clicker during these 1st two weeks, I will do whatever I can to help you. The clicker technology is not perfect– there are occasionally technical difficulties. So use these first two weeks to make your clicker work for you.

Starting October 11 you will receive points for answering clicker questions in lecture. I will assume your clickers are working properly by this time. I also assume that you will only operate one clicker, for yourself, during lecture, and the TAs and I will be watching to check that everyone is following this policy.

PREREQUISITES: The recommended prerequisite for the course is Biology 1 or a good high school course in biology. **The course assumes that you know Mendelian genetics, mitosis and meiosis, and the basics of molecular biology — the transfer of genetic information from DNA to RNA and then to proteins**. If you don't have a command of these topics, you will be at a disadvantage unless you do some extra reading in Units 1 and 3 of the text.

WEB SITE: Enrolled and waitlisted students should have access to the course website at http://webct.ucsd.edu/.

REGRADES: If a grading error has been made on your exam, you may submit a **regrade petition** to the professor within one week of return of the exam. *A regrade petition must clearly and concisely state the reason(s) why you think your answer is deserving of additional credit. Regrade requests will not be processed without a written petition.* **No regrades will be given for exams written in pencil or non-permanent ink**. Students who submit exams for regrading do so with the knowledge that we may (1) regrade the entire exam (and your score could go up or down) and (2) compare the submitted regrade to photocopies of the original exams.

MISSED EXAMS: *There are no make-up exams and missed exams will normally be considered zeroes.* If you know in advance that you cannot be present for an exam, you must contact the professor at least one week before the exam and make arrangements. If you do not inform the professor and miss a midterm or final exam, then you will be required to provide official documentation of an unavoidable emergency (e.g., serious illness, etc.) Without such documentation, you will receive a zero for that exam. For a missed exam with valid documentation (e.g., from a doctor or a funeral director), the professor will determine the method of makeup.

CHEATING: Students are expected to do their own work, as outlined in the UCSD Policy on Academic Integrity (http://www.senate.ucsd.edu/manual/Appendices/app2.htm). Cheating will not be tolerated, and we will fail any student caught engaging in academic dishonesty. All exams will be closed book and closed-notes; all personal materials must be stowed under your seat while exams are in progress. Because all exams are required for satisfactory completion of this course, any student caught cheating on an exam will receive a failing grade for the course. He or she may also be suspended from UCSD.

HOW TO DO WELL IN CLASS:

1) **Do your readings before class.** That way you'll be prepared. Understand that I expect you to read and comprehend all the assigned textbook material, even if I don't explicitly go over all of the material during lecture. The questions in the back of each chapter are a good way to study.
2) **Take notes in class.** I suggest that you take notes the old-fashioned way, by writing them out long hand. This requires you to process the information in your head while in lecture and is worthwhile. For those who want it, abbreviated notes will be available before lecture (minus clicker points and other questions I want to ask in class).
3) **Go to lecture.** You are rewarded by the clicker points, and as importantly, there will be topics and examples that I cover that the book does not. Before tests, I will distribute an outline of the material covered on the test, making sure to point out what material was from lecture.
4) **Go to section.** You are rewarded by the quiz points. Also, this is your opportunity to go over material that was difficult for you and for you to ask questions.