

Dr. Tony Barnosky
Dr. Peter Quail

Biology 11
Introduction to the Science of Living Organisms

Spring 2005
UC Berkeley

Description: Principles of biological organization and function using examples from plant and animal kingdoms. Similar in scope to Biology 1, except that knowledge of physical sciences is neither required nor assumed. Sponsored by Plant and Microbial Biology.

Lectures: MWF 12:00 n - 1:00 p.m., 101 Morgan

Labs: T 9-12 ; W 9-12; W 2-5; all in 209 Genetics and Plant Biology Teaching Building (GPBT)

WEEK	DATE	TOPIC	READING	LABORATORY	LECTURER
1	M January 17	No Class		No Laboratory	
	W January 19	1. Intro, hierarchy	Ch. 1		Barnosky
	F January 21	2. Atoms, molecules	Ch. 2, 3		Barnosky
2	M January 24	3. Cells	Ch. 4	Techniques	Barnosky
	W January 26	4. Enzymes, metab.	Ch. 5, 7		Barnosky
	F January 28	5. Inheritance	Ch. 10, 11		Barnosky
3	M January 31	6. DNA/Proteins	Ch. 12, 13	Enzyme Action	Barnosky
	W February 2	7. Evolution Geologic Time	Ch. 17, 18		Barnosky
	F February 4	8. Taxonomy Phylogenetics	Appendix 1		Barnosky
4	M February 7	9. Invertebrates 1	Ch. 23	Respiration	Barnosky
	W February 9	10. Invertebrates 2	Ch. 23		Barnosky
	F February 11	11. Vertebrates	Ch. 24		Barnosky
5	M February 14	12. Tissues	Ch. 29	Animal Div. 1	Barnosky
	W February 16	13. Skeletal, Muscle Systems	Ch. 33		Barnosky
	F February 18	MIDTERM 1			Barnosky/Quail
6	M February 21	NO CLASS		NO LAB	
	W February 23	16. Digestive sys.	Ch. 37		Barnosky
	F February 25	14. Circulatory and Respiratory syst.	Ch. 34, 36		Barnosky
7	M February 28	15. Nervous and sensory systems	Ch. 30, 31	Animal Div. 2	Barnosky
	W March 2	17. Repro. & dev	Ch. 39		Barnosky
	F March 4	18. Immune system	Ch. 35		Barnosky

8	M March 7	19. Biosphere/origins	Ch. 2, 3, 19	Anatomy	Quail
	W March 9	20. Origins/cell basis	Ch. 4, 19		Quail
	F March 11	21. Cellular reprod.	Ch. 8, 20		Quail
9	M March 14	22. Cell div./Mitosis	Ch. 8, 9, 20	Development	Quail
	W March 16	23. Mitosis/Meiosis	Ch. 8, 9		Quail
	M March 18	24. Meiosis	Ch. 8, 9		Quail
10	M March 21	NO CLASS		NO LAB	
	W March 23	NO CLASS			
	F March 25	NO CLASS			
11	M March 28	25. Mutation/Select.	Ch.12,13,15	Microorganisms	Quail
	W March 30	26. Genetic engin.	Ch.12,13,15		Quail
	F April 2	MIDTERM 2			Barnosky/Quail
12	M April 4	27. Genetic engin.	Ch.12,13,15	Cell Reproduction	Quail
	W April 6	28. Prok. & protists	Ch. 20		Quail
	F April 8	29. Euk. fungi /plant	Ch. 21, 22		Quail
13	M April 11	30. Euk. plants	Ch. 21, 22	Algae & Fungi	Quail
	W April 13	31. Plant reprod.	Ch. 22, 28		Quail
	F April 15	32. Plant body	Ch. 26		Quail
14	M April 18	33. Photosynthesis	Ch. 6	Plant Structure	Quail
	W April 20	34. Photosynthesis	Ch. 6		Quail
	F April 22	35. Stomates	Ch. 5, 26,27		Quail
15	M April 25	36. Osmoreg/Transp	Ch. 5, 26,27	Plant Function	Quail
	W April 27	37. Mineral cycles	Ch. 43		Quail
	F April 29	38 Ecology	Ch. 40, 42		Barnosky
16	M May 2	39. Biodiversity	Ch. 44	Plant Diversity	Barnosky
	W May 4	40. Global Change	Ch. 45		Barnosky
	F May 6	41. Gene expression	Ch. 14		Quail
17	M May 9	42. Gene expression	Ch. 14	No Laboratory	Quail
	W May 11	NO CLASS			
18	T May 17 12:30-3:30 p.m.	FINAL EXAM			Barnosky/Quail

INSTRUCTORS:

Dr. Tony Barnosky, Office hours Wednesday 1-2 pm, 5002 Valley Life Sciences Building (VLSB), phone (510) 643-6275, email: barnosky@berkeley.edu.

Dr. Peter Quail, Office hours and location TBA, phone (510) 559-5900, e-mail quail@nature.berkeley.edu.

GRADUATE STUDENT INSTRUCTORS:

Jin Hoe Huh, Office hours Tuesday 2pm to 3pm at 231 Koshland hall, phone (510) 642-6405, email: huhjh@berkeley.edu

Joshua Povich, Office Hours Monday 11-12, 2011 VLSB, e-mail povich@berkeley.edu

REQUIRED TEXTS, ETC:

For Lecture

Biology: Concepts and Applications. Starr, Fifth Edition. 2003. Brooks/Cole.

For Lab

Lab manual, Spring 2005 edition. Available at Cal Student Store on campus. Composition book and pencils (colored pencils optional but recommended)

GRADING:

For Lecture

Your lecture grade in Bio 11 is based on your grades on two cumulative midterms (100 points each) and one comprehensive final lecture exam (200 points). Lecture exams consist primarily of multiple choice, true/false, fill-in, short answer, and short essay questions.

Midterm 1 (February 18)	100 points	25% of final grade
Midterm 2 (April 1)	100 points	25% of final grade
Final Exam (May 17)	<u>200 points</u>	<u>50%</u> of final grade
TOTAL	400 points	100%

If you have a question regarding the grading of a lecture exam, describe the problem or question in writing, in a clear, concise, and well-organized statement. Attach the exam to this cover letter and give it to the Lecturer **within 5 working days** from the date the exam was returned to you. No corrections can be made after this time. Written replies to regrade requests will be available after lecture when they are completed.

Lecture grades will be determined by the percentage of the total points received in the course: There are 400 total points.

A- \geq 90% B- \geq 80% C- \geq 70% D- \geq 60% F < 60%

Lecture grades are assigned on a percentage basis, not on the basis of a “curve”. This means that you are not competing with other students in the course for each grade. We encourage you to help one another learn the material, to study together, and to work together in the laboratory portions of the course. If we didn’t think the material was important, we wouldn’t cover it in lecture or lab, so we expect you to understand at least 90% of the material to get a high grade.

For Lab

Lab grades are based on quizzes and lab reports.

6 Quizzes (20 points each)	120 points	48% of final grade
13 Lab Reports (10 points each)	<u>130 points</u>	<u>52%</u> of final grade
TOTAL	<u>250 points</u>	100%

MAKE-UP EXAMINATIONS:

Midterm exams - Make-up Mid-term examinations are given at the discretion of the instructor. These will be given only under the following conditions: (1) exceptional circumstances prevent your attendance, for example a sudden hospitalization (subject to documented verification); (2) you have contacted the Lecturers at least 24 hours before the exam is scheduled to begin [Dr. Barnosky's email: barnosky@berkeley.edu or phone: (510) 643-6275; Dr. Quail's email: quail@nature.berkeley.edu or phone (510) 559-5900]. When you write or call, be prepared to state the problem and provide a phone number where you can be reached. Note that Dr. Barnosky's and Dr. Quail's email and phone numbers can be obtained from information at UCB if you forget it. (3) Make-up examinations may consist of an oral examination with the Lecturers. We will email or call you to schedule the makeup as soon as possible after the original examination date.

There is no make-up or rescheduling of the final exam.

Make-up labs: No make-up labs, but section can be switched with advance permission of GSI.

COURSE WEB PAGE:

<http://ib.berkeley.edu/courses/bio11>

EXPECTATIONS:

1. Read the text chapters assigned to a lecture before the lecture.
2. Attend lecture (and lab if enrolled in both); hand in lab reports and take quizzes in lab.
3. Take exams at the scheduled exam date and time.
4. Ask for help when you need it. Don't let yourself get behind where it will be difficult to recover.

COURSE POLICIES:

All students have the responsibility to know and abide by the standards of intellectual honesty expected in an academic community.