

TENTATIVE SYLLABUS FOR BIOLOGY 213 (EVOLUTION) 4 Units
Fall 1998 CRN 43090
CLASS MEETS 2:00 PM - 3:50 PM MONDAYS & WEDNESDAYS IN 3-128

WEEK AND DATE	LECTURE TOPIC	CD & Read Chapters in Ridley
02 M 28 Sep	Intro, epistemology. hist. of evol. theory	
	Geological Time Scales & dating	
W 30 Sep	Fossils	CD: Morris & Kirschner videos + CD Timeline + Ch. 1, 19
03 M 05 Oct	Evol. evidence, quant. assessment exercise	3
W 07 Oct	Human Evolution (lecture, slides, start video)	
04 M 12 Oct	Human Evolution (finish video)	
W 14 Oct	genetics review	2
05 M 19 Oct	<u>TEST 1 -- $\frac{1}{3}$ of GRADE</u>	
W 21 Oct	Variation, Natural Selection	4, 5, 6, + skim & read summary of 7, + CD virt. expts*
06 M 26 Oct	Evolutionary Genetics	
W 28 Oct	Quantitative traits, heritability, genome evolution	9, 10
07 M 02 Nov	Analysis of Adaptation, units of selection	CD: Partridge video + Ch. 11, 12
W 04 Nov	Adaptive Explanation	CD: Lewontin & Hamilton videos + Gould & Lewontin article + Ch. 13
08 M 09 Nov	Species and speciation, Review	15, 16 + CD: Coyne & Orr article
W 11 Nov	<u>TEST 2 -- $\frac{1}{3}$ of Grade</u>	
09 M 16 Nov	Classification, Evolution, Cladograms	14
W 18 Nov	Evolutionary biogeography	18
10 M 23 Nov	Rates of evolution; macroevolution	20, 21
W 25 Nov	Coevolution and species selection	22
11 M 30 Nov	Extinction and mass extinction	CD: Cronin & Dawkins videos
W 02 Dec	Catch-up and Review, course evals., quantitative assessment exercise	23
12 M 07 Dec	<u>FINAL EXAM -- 1:40 AM - 3:40 PM -- $\frac{1}{3}$ OF GRADE</u>	

* For the CD Virtual Experiments, do each experiment with high and low values of the experimental parameter. Summarize the differences between the outcomes with the high and low values in 2-3 sentences, so you know the results of the experiments when you are asked on the tests.

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TENTATIVE SYLLABUS FOR BIO 213 FALL 1998
ADDITIONAL COURSE INFORMATION

OBJECTIVES: The main objective of this course is to give you a solid understanding of the modern study of evolution in living organisms. In addition, the course will introduce you to the fundamentals of evolutionary genetics, adaptation and natural selection, classification and phylogenetics, paleobiology and macroevolution.

INSTRUCTOR: Dr. Stephen H. Bryant Bldg. 8 - Room 9 (office); Room 16 (lab). Phone: 869-4094. Office Hours: MW: 4:00 - 5:18, TR: 5:15 - 6:15, or by appointment. If I'm not in my office during office hours, check my lab (8-16). Email address is shbryant@csupomona.edu. I prefer email to voice mail, and you'll get a faster response therefrom.

REQUIRED MATERIALS:

TEXT: Ridley, Mark. 1997 (the book says 1996, but it wasn't really published until 1997). *Evolution, 2nd ed.* Boston: Blackwell Scientific Publications. This is a brand-new edition of a fairly new comprehensive text on evolution. Ridley's book is well-illustrated, straightforward to read, and gives a good general overview of the types of evolutionary research being conducted at this time (along with the standard classical examples). It is important that you read the whole book, as assigned, for I will lecture mainly on the topics that Ridley covers less thoroughly. Tests, however, will cover the reading, CD-ROM material, and lecture material. Also do the tutorials for each assigned chapter from the CD-ROM.

CALCULATOR: Bring a calculator with you to tests; any calculator with a square root key will do; you can use as fancy a calculator as you want. If your calculator has a memory, you must clear the memory before starting the test.

PREREQUISITE: Biology 110, 115/L or equivalent. Your basic biology course should have given you the fundamentals of genetics, evolution, ecology and classification necessary for this course. In addition, I assume you have had the equivalent of college algebra, and can solve simple algebraic equations and work with graphs of various sorts.

EXAMS: Two midterm exams and a final will be given; each counts $\frac{1}{3}$ of your grade. Exams will be closed book, and consist of a mix of question types, and may include objective, short answer, problems, essay etc. About a third to a half of the points on each exam will be over material covered by the assigned reading which is NOT covered in lecture. Bring your student ID to each test; instructor may check IDs. Students not having proper ID may have their tests invalidated. **WARNING: You MAY NOT take the final exam at any time other than the scheduled time (even if it is the middle final of the day for you).**

GRADING: Grading will be done more or less on a curve. Instructor will supply statistics of exam scores. The grading will be no more stringent than 90% = A; 80% = B; 70% = C, 60% = D. Thus, it is possible for every student to earn an "A". NOTE: If you wish your final grade mailed to you, bring a self-addressed, stamped envelope (the bookstore has grade mailing envelopes, if you wish to buy one) to the final. Grades, for those giving permission, will probably be posted outside the instructor's office by the Wednesday following finals week. You may give your permission to have your exam scores and grades posted by a 4 digit number.

WEB MATERIALS: Lecture notes are available from my web site, which contains previous tests and more information on evolution, including a copy of this syllabus. The URL is <http://www.is.csupomona.edu/~shbryant>. From there, go to Classes Taught, and then to Bio 213 for this quarter. Get the Adobe Acrobat viewer as instructed to view the documents.

ACADEMIC INTEGRITY: See the statement on academic integrity in the 1997-99 Cal Poly Catalog on page 49. (Also available at <http://www.csupomona.edu/~academic/catalog97-99/> under "General Information" — Acrobat page 29, catalog page 49) I will follow University Policy and "... report each instance of academic dishonesty to the Director of Judicial Affairs and Student Development."

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