

Bi 380 Evolution, Fall, 2010
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This course emphasizes patterns and mechanisms of Darwinian evolution. Lectures will generally follow the text but will also include material not in the text. Discussion will generally cover assigned readings from the original literature. Grades are based on a mid-term (25%), discussion participation (25%) and a final exam (50%). Exams will cover material in lecture, from the text, and from assigned readings in the original literature and will be in short answer/essay format. Lectures are in PowerPoint. Lectures for the coming week will be available on Blackboard by midnight of the preceding Saturday.

Text: Douglas J. Futuyma, *Evolution*, 2nd Edition

Week 1. Introduction and classification of organisms
Text: Ch 1-2

Week 2. Patterns of evolution & the fossil record
Text: Ch 3 & 4

Week 3. Genetic variation in populations
Text: Ch 8-9

Week 4. Genetic drift, natural selection & adaptation
Text: Ch 10-11

Week 5. Genetical theory of natural selection
Text: Ch 12

Week 6. Phenotypic evolution & evolution of life histories
Text: Ch 13-14

Week 7. Species and speciation
Text Ch 17-18

Week 8. Coevolution
Text Ch. 17-18

Week 9. Evolution of genes & genomes
Text Ch. 20

Week 10. Macroevolution
Text Ch. 22

Bi 380 is a course in **Darwinian** evolution.

Expectations: You have to be able to demonstrate mastery of the material and ability to integrate lecture, reading in the text and reading from discussion.

Translation: Attending lecture and discussion and reading the assigned material are not, in themselves, sufficient for a passing grade in this course.

What to know:

Be able to discuss and explain the basic concepts

Be able to define terms and explain their relevance to evolution

Be able to integrate lecture, text and discussion

Hints to success:

1. Form a study group
2. Make up a term and concept list from
 - a. the list at the end of each chapter
 - b. terms given in bold in the text
 - c. terms & concepts in italic or capitalized in the text
 - d. terms and concepts introduced in
lecture, discussion or reading from discussion
3. A former student (A+ in this course) says that terms & concepts that appear in both discussion and the text, repeatedly in the text, or repeatedly in lecture are particularly important and likely to appear on tests.