

BIOL 3302 – Evolution Fall 2014

Instructor: Dr. Dan H. Foley III
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Office hours: Monday - Thursday 10 am – 12 pm or by
appointment

Required Texts: Sterns, Stephen C. and Rolf F. Hoekstra. 2005. Evolution: an introduction 2nd edition. Oxford University Press. 575 pp.

Course Objective: There are five broad goals for this course:

- Can articulate and explain current Cell Theory of life functions and processes, the role and functioning of DNA as the molecule of heredity and evolutionary change, the evolution of life on Earth and the interactions of biotic and abiotic factors in the development of ecological communities.
- Can write a literature review summarizing and critiquing recent relevant biological literature
- Can articulate and summarize the principals of research design and data analysis
- Improve biological literacy by learning the basic facts, principles and concepts of evolutionary biology
- Improve scientific literacy by learning how biologists construct knowledge.

Tentative Lecture Schedule

(note: exact date are subject to change, be sure to keep abreast of changes).

Date	Topic	Readings
August 26	Introduction Movie: " <i>Darwin's Dangerous Idea</i> "	Chapter 1
September 2	Adaptive evolution	Chapter 2
September 9	Neutral evolution Movie: " <i>Extinction</i> "	Chapter 3
September 16	Genetic Impact of selection on populations	Chapter 4
September 23	Exam 1 (Chapters 1, 2, 3 & 4 and films) Maintenance of genetic variation Homework problem set due today	Chapter 5
September 30	Expression of variation	Chapter 7

Tentative Lecture Schedule Cont'd

Date	Topic	Readings
October 7	The Evolution of Sex Movie: " <i>Why Sex?</i> "	Chapter 8
October 14	Evolution of life histories & sex allocation	Chapter 10
October 21	Sexual selection	Chapter 11
October 28	Exam II (Chapters 5, 7, 8, 10 & 11 and films) Speciation	Chapter 12
November 4	Comparative method	Chapter 14
November 11	Key events in evolution Movie: " <i>Great Transformations</i> "	Chapter 15
November 18	Major events in the geologic theater	Chapter 16
November 25	<i>Thanksgiving Holidays</i> – No Classes Response Paper Due	
December 2	Coevolution Movie: " <i>The Evolutionary Arms Race</i> "	Chapter 18
December 9	Exam III (Chapters 12, 14, 15, 16, & 18 and films)	

Grade assessment:

There will be **3** examinations during this course. All three exams will each be worth 100 points.

Exam Dates: Exam I – September 23rd
 Exam II – October 28th
 Exam III – December 9th

All exams should be considered comprehensive because information in each chapter/unit builds upon previous material. Questions will be drawn from information presented in lecture, contained in the text, and through occasional class notes, handouts or additional assigned readings and video programs. Exam questions may consist of a few definitions or vocabulary/concepts, multiple choice questions and short essay questions. No notes, books, cell phones, PDA's, or other materials will be allowed during the exam. I will provide an English dictionary for your use if necessary. If you are an ESL student, please contact me to make arrangements for use of foreign language dictionaries and translators.

Homework Problem Set:

You will be required to complete one homework problem set dealing with Population Genetics. More specific details will be given in class.

The Response Paper:

You will be required to critically read "*Male Nipples and Clitoral Ripples*" by Stephen Jay Gould and write a 3 – 4 page Response Paper to this classic Gould article. More specific details will be given in class.

Extra Credit

There will be **NO** opportunities for extra credit, so don't even ask!

Therefore, there are a total of 500 possible points during this course:

		<u>Total points</u>	<u>Percent</u>	<u>Letter Grade</u>
Exam 1	100	450 – 500	90 – 100%	A
Exam 2	100	400 – 449	80 – 89%	B
Exam 3	100	350 – 399	70 – 79%	C
Homework	100	300 – 349	60 – 69%	D
<u>Response paper</u>	<u>100</u>	299 or less	> 60%	F
Total	500			

Study Tips:

Everyone has there own unique way of learning. How you study rather than how long you study will have a huge impact on your grade in this course. If you use all the resources available to you and take an active role in the learning process you will likely do much better.

Some specific tips are:

- Spend 15 – 20 minutes to skim through each reading assignment before class.
- Review the lecture notes and read the assigned reading
- Do the study questions at the end of each chapter
- Try to draw diagrams from lecture and the book from memory
- Make flash cards or important concepts and terms
- Call up a friend and try to explain what you have learned in class
- ASK QUESTIONS! You are not in this class alone, if you don't understand something, more than likely your classmates also don't understand.

Attendance:

This is an upper division college course. You are an adult, and you paid for this course. I will not be taking roll call. However, material for the exams will come largely from my lectures, so it is in your best interest to come and participate in class.

Disabled Students:

Reasonable accommodations will be provided for students with disabilities. Please meet with me the first week of class to discuss any special needs you may need.

Academic Honesty:

Cheating will not be tolerated. The University expects all students to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. "Cheating" includes, but is not limited to:

- Copying from another student's test paper, a laboratory report, other report, or computer files, data listings, and/or programs.
- Using, during a test, materials not authorized by the person giving the test.
- Collaborating, without authorization, with another person during an examination or in preparing academic work.
- Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of an unadministered test.
- Substituting for another student; permitting any other person; or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit.
- Bribing another person to obtain an unadministered test or information about an unadministered test.
- Purchasing, or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of the rough and/or final versions of an assignment by a professional typist.

Plagiarism will not be tolerated. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea into one's own work offered for credit. This includes verbatim written answers by colleagues with whom you might discuss laboratories exercises. Plagiarism also includes copying information from internet resources. To avoid plagiarism, make sure you always use your own words to construct your written answers.