

Tentative Syllabus:



BIOL A324-001 Evolutionary Biology **Fall 2002 - MW 6:20-7:35**

Instructor: Don Hauber, Monroe 319, 865-2769(or 2288)-office
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Website: <http://www.loyno.edu/~hauber/>
Textbook: Freeman and Herron -*Evolutionary Analysis*, 2nd ed., 2001.
Other readings: On reserve in the Monroe Library
Office hours: 3:00-4:30 TR or by appointment

q = quiz

CLASS MEETING	LECTURE TOPICS	TEXT REFERENCES	PROBLEM SETS
8/26, 8/28	Introduction - Evolution and HIV Assignment: essay critique	Ch 1	1, 3-6
9/2	Labor Day Holiday		
9/4q, 9/9	Evidence for Evolution	Ch, 2	1-8
9/11, 9/16q	Darwinian Natural Selection	Ch. 3	1-8`
9/18	Mutation and Genetic Variation	Ch. 4	1,3, 4
9/23	Exam 1		
9/25, 9/30	Mechanisms of Evolutionary Change - Hardy-Weinberg; patterns of selection; selection on quantitative traits	Ch. 5, 7	Ch 5: 1-3, 5, 7 Ch 7: 8-10
10/2q, 10/7	Kin Selection and Behavior	Ch. 10	1-6, 9, 12
10/9	Life History Characters	Ch. 11	1, 3-9
10/14	Loyola Day Holiday		
10/16q	Life History Characters (cont'd)	Ch. 11	1, 3-9
10/21	Mechanisms of Speciation: Introduction	Ch. 12	1-9
10/23	Exam 2		
10/28, 10/30,	Mechanisms of Speciation	Ch. 12	1-9
11/4q, 11/6			
11/11, 11/13q,	Precambrian Evolution and Cambrian	Ch. 14, 15	Ch. 14: 8-17 Ch. 15: 1-8
11/18	Explosion		
11/20	Exam 3		
11/25	Reconstructing Evolutionary Trees	Ch. 13	1-10
11/27	Thanksgiving Holiday		
12/2, 12/4	Human evolution		

COURSE GOALS

The intent of this course is to address fundamental questions about the world: where do living things come from? Why are there so many different kinds of organisms? How have organisms managed to adapt to their various environments? A detailed presentation of evolutionary mechanisms and processes is important not only for students wishing to further their studies in evolution, but even for students planning careers in medicine, conservation, education, science journalism or other areas of biological research.

Evolutionary Biology is intended to provide students with a facile understanding of the evolutionary synthesis.

ATTENDANCE POLICY:

Because this course will involve group discussions, I expect you to attend all of the class meetings. You are responsible for any and all material presented and announcements made in class. Attendance will be taken daily in an effort for the instructor to familiarize himself with those students that regularly attend.

FINAL EXAM

Dec. 11 (7:00-9:00 p.m.) - will be comprehensive.



GUIDELINES FOR ESSAY CRITIQUES

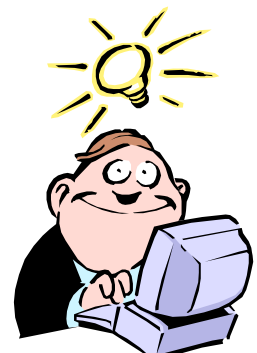
1. Each student will select an essay on evolutionary biology from a short list provided by the instructor.
2. Students will read the essay and write a 1-3 page (single-spaced, 12 pt, 1" margins) critique briefly summarizing the article, addressing specific areas of agreement, areas of disagreement, what about the work is compelling, and/or what about it is not.
3. Student *may* use scientific references to support their arguments but references are *not required*. IF references are used, they must be listed at the end.
4. Due at the end of the second week of class (**SEPT. 9th**). May be emailed as an attached file.

TIMELINE AND TERMS FOR RESEARCH PAPERS

1. Select and sign up for a topic from the posted list - one student per topic. You may not resubmit or slightly modify a previously submitted term paper authored by you or someone else.
2. Find at least 3 journal articles from the primary literature as references for your topic. Photocopy the first page of each article and submit these pages for approval (Deadline: **SEPT. 18TH**).
3. Read over the outline for "Writing a Research Report" and "Science Writer's Format" below and produce a first draft (Deadline: **OCT. 30TH**).
4. Literature cited must include at least 6 different cited references: at least three must be from the primary literature; at least two must be recent (1998-2002).
5. Final draft (5-10 pages, single-spaced, 12 pt, 1" margins) due **NOV. 18th**.

Writing a Research Report

1. Organize ideas - write notes on index cards; throw out insignificant ideas
2. Create outline - hierarchically arrange major topics and divide into subtopics
3. Produce rough draft - "writer's block" = insufficient information or ideas. Don't worry about grammar or flow. Just write.
4. Review rough draft



- a. Do you really have something to say?
 - b. Have you told readers (i.e., average student from this class) everything they need to know? - too little detail or too much?
 - c. Did you follow your outline?
 - d. Have you clarified why this is an important biological question?
5. Refine paper paying close attention to organization, content, thoroughness and proper citation.
 6. Submit 1st draft
 7. Final draft: refine and consider instructor's suggestions; grammar and spelling *will* be graded here.

Science Writer's Format

1. Title - informative, specific, concise, and representative of content - catch the reader
2. Introduction - Describes what your research topic is about; explain why this topic is of importance; explicitly state objective of the paper; 1-2 paragraphs; get to the point quickly; proceed from general to specific.
3. Main body - Present your topic in a logical and cohesive manner. For example, you may use a historical or chronological approach, or you may organize by research methodologies, for instance. Use literature citations throughout the text.
4. Closing - you may summarize here, drawing together the primary emphasis of the paper, and/or provide indication of future direction; 1 paragraph
5. Literature cited - always examine the original references yourself; check for correct format (Harvard, etc.); use at least six references



GRADING:

IMPORTANT! Missed exam or quiz will result in an automatic "0" unless I have been contacted prior to or on the day of the exam and have determined that the reason for your absence warrants a make-up exam.



All deadlines are absolute!! Assignments/papers received past the assigned deadline will receive a letter grade deduction for each day past the deadline (including Sat. & Sun.).

**I will adhere to the university policy on Integrity of Scholarship and Grades regarding cheating and plagiarism in this course. Please consult the Undergraduate Bulletin at <http://www.loyno.edu/undergraduate.bulletin/>

Three exams @ 15%	45%
Quizzes (5)	15%
Critique and Research paper	25%
Final exam	15%

Scale - A:100-90, B:89-80, C:79-68, D:67-55