

Biology: A Human Approach Fall 2011 EBIO 1030 Syllabus

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 Office: RAMY C170 Office Hrs: TR 1:45-2:45pm; ABA. Phone: 303-492-8549
 Lectures: Tuesdays & Thursdays in RAMY C250: **Section 001** = 9:30 – 10:45 am; **Section 002** = 12:30 - 1:45pm
 TEXT: Starr & Taggart, 2009. BIOLOGY: The Unity and Diversity of Life, 12th Edition (11th & 13th editions are okay)
 See on-line textbook at: <http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookTOC.html>

WK	DATE	LECTURE TOPIC	READING
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ECOLOGY UNIT

1	Aug 23 & 25	Introduction / Science / Ecology Biological Molecules	Chapter 1 Chapters 2 & 3 (overview)
2	Aug 30 & 9/1	Ecosystems, Nutrient Cycles, & Energy Flow Biodiversity (Biomes)	Chapters 47 & 48
3	Sept 6 & 8	Ecosystem Ecology continued	Chapters 47 & 48
4	Sept 13 & 15	Population and Community Ecology	Chapters 45 & 46
5	Sept 20 & 22	Ecol. Succession; Human Impacts on Ecosystems	Chapters 46 & 49

EXAM I – MONDAY, Sept 26 at 6:30pm. Sec. 1 in DUAN G1B20; Sec. 2 in DUAN G1B30; (+ G1B25)

GENETICS AND EVOLUTION UNIT

6	Sept 27 & 29	Cell Structure and Cell Division	Chapters 4, 9 & 10
7	Oct 4 & 6	Cell Division conclusion & Mendelian Genetics	Chapters 9, 10 & 11
8	Oct 11 & 13	Mendelian and Non-Mendelian Genetics	Chapters 11 & 12
9	Oct 18 & 20	Chromosomal Changes/Mutations Genetics Problems & Population Genetics	Chapters 11, 12 & 18
10	Oct 25 & 27	Population Genetics/Microevolution and measuring gene frequencies in populations	Chapter 18

EXAM II – MONDAY, OCT 31 at 6:30pm. Sec. 1 in DUAN G1B20; Sec. 2 in DUAN G1B30; (+ G1B25)

11	Nov 1 Nov 3	Macroevolution/Natural Selection, No Lecture	Chapters 17 & 18
12	Nov 8 & 10	Isolating Mechanisms, Speciation Early life/Origins; an hypothesis	Chapters 17 & 18 Chapter 20

DIVERSITY OF LIFE UNIT

13	Nov 15 & 17	Whitaker's 5-Kingdom System of Classification Monerans, Protista, Fungi, Early Plants	Chapter 19 (overview) Chapters 21 - 24
14	Nov 21 & 25	FALL BREAK / THANKSGIVING	
15	Nov 29 & 12/1	Vascular Plants; Early Animals	Chapters 23 & 25h
16	Dec 6 & 8	Flatworms through the Invertebrates	Chapter 25
17	Dec 14	FINAL COMPREHENSIVE EXAM – Wednesday, Dec. 14, 10:30 – 1:00 pm.	

Sec. 1 in DUAN G1B20; Sec. 2 in DUAN G1B30; Special Cases in G1B25?

BIOLOGY: A HUMAN APPROACH COURSE INFORMATION

EBIO 1030-1040

This is a three-credit-hours-per-semester lecture course and is designed expressly for non-science majors. It is meant to be a terminal course in that students are not expected to take further courses in biology. Note that this course fulfills the “Two-Semester Sequence” part of the Arts and Sciences Content Areas of Study for the Natural Sciences. If you are “science” or “health-science” oriented and/or feel that you might wish to pursue a major in biology, you should register for the introductory majors’ course in Ecology and Evolutionary Biology (EBIO 1210/1220 & 1230/1240).

In the fall semester, EBIO 1030 emphasizes an environmental and evolutionary approach to biology, covering ecosystems, population and community ecology, and natural resource conservation. Genetics, the synthetic theory of evolution, and plant and animal diversity are also covered. Ideally, EBIO 1030 should be taken before EBIO 1040.

In the spring semester, EBIO 1040 focuses on the function of the human body, emphasizing how, in the face of a fluctuating external environment, organisms maintain a constant internal environment. Factors which influence this internal dynamic equilibrium and how and why it malfunctions are topics of discussion.

Note that if you wish to take the companion one-hour lab course (“Biology: A Human Approach Laboratory,” EBIO 1050), it may be taken with either EBIO 1030 or EBIO 1040. This lab course fulfills the one-hour “Laboratory/Field Experience” requirement of the Arts and Sciences Content Areas of Study for the Natural Sciences.

Lectures, emphasizing conceptual aspects of biology, will be given as per the *Schedule of Courses* and the attached “Syllabus.” The most efficient use of your time would be to complete the reading assignments before attending the lectures. Remember, you have only one shot at the lectures, so being prepared for them will improve your understanding of the material and improve the efficiency of your note-taking capabilities. The lectures will be the primary source of information for the hour exams. Should you miss a lecture, the text will of course be helpful, but study the lecture notes taken in class from at least two different students!

EXAMINATIONS AND GRADING

HOURLY EXAMS AND THE FINAL EXAM: These will be machine-scored, multiple-choice exams given at the times indicated on the attached “Syllabus.” You are responsible for providing your own soft-lead pencil (#2 or softer) and eraser. The Hour Exams will include only that material covered since the previous exam, but the Final Exam will be comprehensive, covering the entire semester. The proportion of coverage of a certain subject matter in lecture will dictate an equal proportion of questions on that subject on an hour exam. The comprehensive Final Exam will consist of approximately one-half the questions over new lecture material, with the other one-half coming from material presented during the first two-thirds of the course. **Note that Hour Exams are scheduled in the evening and in a location other than your lecture hall. If this presents a conflict with work or other activities, it would be wise to make alternative plans now. IMPORTANT: Check now to see if an exam comes just before or just after a scheduled vacation. The times of scheduled exams are inflexible!** A sincere effort has been made to eliminate “trick” and/or ambiguous questions, but some questions may still be confusing. Therefore, you may, by carefully following the directions on the exam, defend your answer in writing if you feel the question has more than one correct answer. **Note that the final exam for “Biology: A Human Approach” is not given according to the final exam schedule for class meeting times, but at a dedicated time for all introductory biology courses. Make sure there is no conflict with your other final exams. Important: Bring your CU ID card with your photo to the final exam.**

No make-up exams will be given, but there is no penalty for missing an Hour Exam. The Final Exam percentage score will be substituted for any Hour Exam missed. Since there is significantly more pressure on taking the Final Exam which is comprehensive, the option to miss an Hour Exam should not be taken lightly! Any exam which is attempted **must be completed** for a score.

If, and only if, you complete **both** “Hour Exams,” you may contract with the professor to drop the lower score (only) and have the Final Exam percentage score count in its place. Be aware that the mean percentage scores on the Final Exams in this non-majors biology course tend to be lower than those of the Hour Exams. To proceed with this option you **MUST** sign a written contract available from the professor **no later than ten calendar days following Hour Exam II**. Once this contract is signed it **CANNOT** be rescinded! Look for a posted SAMPLE CONTRACT after Exam II, and save time for signing it during the professor’s office hours. A student missing one hour exam does not need to sign a contract. The posting cabinet for this course is located in the northeast basement of Ramaley, across from the stairway (near room N1B54).

COURSE GRADES: Each HOUR EXAM will equal 25% of the course grade and the FINAL EXAM will equal 50%. The distribution of grades in this course will be equalized so that individual professor grading differences will not compromise the student. The median course grade will be the lowest B and the following course grade distribution will be approximately: A-15-20%; B-30-35%; C-35%; D-10%. Interpret this to mean that 50% of the students will receive an “A” or a “B” course grade.

GENERAL COURSE INFORMATION

Introductory biology can be a demanding course. Some students are overwhelmed with the details and foreign vocabulary of the subject. Considerable effort has been made to minimize the details and vocabulary, to emphasize fundamental principles, and to orient the course specifically to the non-science student. The textbook author(s) have the same goals and the same audience in mind.

Spend study time wisely, and **DO** study. Non-science majors often find that **biology** demands more out-of-classroom study time than their other courses. If you wish to achieve a “B” -- or better -- grade in this course, you should plan on studying 3-6 hours a week outside of the time you spend in lecture. Non-science students who regularly “**cram**” for their exams are commonly disappointed with their performance level when they study for a biology test in this way. **BE FOREWARNED!**

It is hoped that you will come away from this course with a better understanding of some major biological concepts. They will be developed logically with the background information necessary for you to understand them and their significance. Wherever possible these principles will be related to your everyday life. If something doesn’t seem relevant, ask about it. Your professors encourage you to stop by during their office hours.

If you have a strong biology background, a standardized CLEP exam can be taken in the Testing Office (Willard Hall) with the possibility of receiving six hours of college biology credit. There is an extra cost for taking this test.

Highest standards are expected for all work, and academic honesty is a part of this expectation in the College of Arts and Sciences and in this course. Refer to the *University of Colorado at Boulder, Catalog* “Campus Policies-Academic Integrity,” the university publication *Ralphie’s Guide to Student Life*, “Academic Honesty” and the “Honor Code.” Information about this subject is also on the UCB web page. If there are questions about this, please ask the professor. Please don’t discard this information. Read it again in a week or two when you are more familiar with the various parts of the course.

If one qualifies for accommodations because of a disability, please submit to the professor a letter from Disability Services by the end of the second week of classes so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Center for Community, N200, and <http://www.colorado.edu/disabilityservices>. If there are religious conflicts with any part of this course, bring them to the professor’s attention by the end of the second week of classes. See http://www.colorado.edu/policies/fac_relig.html

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NOTE: MAKE SURE THIS SYLLABUS IS UP TO DATE