

SYLLABUS and COURSE INFORMATION -- BIOLOGY: A HUMAN APPROACH
EBIO 1040, SECTION 200, 9:15-10:50 M-F, RAMY N1B23
SUMMER SESSION B - JULY 5 TO AUGUST 5, 2011

DATE	DAY	LECTURE TOPICS	READINGS – CHPTS.
5 July	Tue	Physiological stability: keeping warm	pp: 464-467; 720-735
6	Wed	Adaptations to keeping warm: S / V role + CVS adaptations	"
7	Thu	Insulation, perspiration, behavior	
8	Fri	Metabolism is the furnace; the body thermostat; heat exhaustion; heatstroke,	
11	Mon	Frostbite; hypothermia; video, "Survival;" hibernation; frozen organs	
12	Tue	Circulatory functions, body fluids, blood composition & vessels	37
13	Wed	Nutrient exchange at the capillaries; lymphatic system	
14	Thu	Video: "Cholesterol: Understanding is the Key" (25 minutes) Mid-Term Exam I (short-answer/short-essay type: 30% of grade)	
15	Fri	Heart function; cardiovascular control center (CVCC); heart attacks; strokes; hypertension	37
18	Mon	R.S.: pulmonary membrane; respiratory control and failures including pneumonia	39
19	Tue	Emphysema and lung cancer; altitude sickness; acclimatization	
20	Wed	Explosive decompression in an airliner; diving mammals and near drownings	
21	Thu	N.S. control: neuron; reflex arc; nerve impulse; synaptic transmission	33
22	Fri	The "fight vs. flight" response; N.S./endocrine system link; brain functions: medulla; cerebellum	35 33
25	Mon	More brain functions; integrative capacity of the brain	33
26	Tue	Mid-Term Exam II (short-answer/short-essay type: 30% of grade)	
27	Wed	Reticular formation; split-brain studies; nervous system malfunctions	33
28	Thu	Sensory receptors – the first link in the response chain	34
29	Fri	Digestion: table foods to cellular foods starts in the mouth	40
1 Aug.	Mon	Stomach; small & large intestine: roles & disorders; absorption; blood-glucose control; sugar diabetes	40
2	Tue	Finish digestive disorders. Nutrition: historical & recent inadequate studies; carbohydrates	
3	Wed	Lipids; proteins; vitamins; minerals; additives and contaminants	
4	Thu	Vertebrate reproductive adaptations. Menstrual cycles.	42
5	Fri	FINAL EXAM - COMPREHENSIVE (short-answer/short-essay type: 40% of grade)	

Text: Cecie Starr and Ralph Taggart, 2009. *Biology: The Unity and Diversity of Life*. 12th edition (11th & 13th editions are also okay), Wadsworth Publishing Co., California

See on-line textbook at: <http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookTOC.html>

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**BIOLOGY: A HUMAN APPROACH
SUMMER 2010**

**EBIO 1030-1040
COURSE INFORMATION**

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 majors’ course in Ecology and Evolutionary Biology (EBIO 1210/1220).

In Summer term A, EBIO 1030 emphasizes an environmental and evolutionary approach to biology, covering population and community ecology, ecosystems, and natural resource conservation. Genetics, the synthetic theory of evolution, and plant and animal diversity are also discussed. This course is a prerequisite for EBIO 1040.

In Summer term B, 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.

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 major exams. Should you miss one, the text will of course be helpful, but study the lecture notes from at least two different students in the class.

EXAMINATIONS AND GRADING IN EBIO 1040

MID-TERM EXAMS AND THE FINAL EXAM: These will be short-answers/short-discussion exams given at the times indicated on the attached “Syllabus.” The Mid-Term Exams will include only that material covered since the previous exam, but the Final Exam will be comprehensive, covering the entire course. The proportion of coverage of a certain subject matter in lecture will dictate an equal proportion of questions on that subject on an exam. The comprehensive Final Exam will consist of approximately two-thirds of the questions over new lecture material, with the other one-third coming from material presented during the first two-thirds of the course.

COURSE GRADES IN EBIO 1040: Each MID-TERM EXAM will equal 30% of the course grade and the FINAL EXAM will equal 40%. Students can expect approximately the following course grade distribution: A-15-20%; B-30-35%; C-35%; D-10%. The median course grade will be the lowest B. Interpret this to mean that 50% of the students will receive an “A” or a “B.”

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 authors 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

COURSE COORDINATOR: Dr. Mel Cundiff, RAMY C170, 303-492-8549

Office Hours: MTW 10:50-11:50AM, during the Summer B Term **only**.

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