F D '02

BI 101 General Biology I
Fall 2002 TuTh 11:00-12:20 AM
Henry Hall 17

Dr. Joan Kuh
Office: Henry Hall 16, 735-4807
jkuh@chaminade.edu
Office Hours: WF 12-2; T 1-2

LECTURE COURSE OUTLINE AND SYLLABUS

TEXT:
Audesirk, Teresa, Gerald Audesirk and Bruce Byers. 2002. Biology, Life on Earth. 6th edition, Prentice Hall.

COURSE DESCRIPTION:
General Biology I is a biology course for non-science majors at Chaminade University of Honolulu. A survey of living organisms at the "subcellular" level is the subject of this course that includes study of the basic biochemical and cellular processes of a cell as well as the organization of both prokaryotic and eukaryotic cells.

OBJECTIVES FOR STUDENTS: At the completion of the course the student will be able to:
1. Understand the scientific method and its representation in scientific publications and writing;
2. Use scientific terminology, specifically in the life sciences;
3. Demonstrate a working knowledge of the chemistry of life particularly the four classes of biomolecules;
4. Understand basic biochemical processes of a living cell including energy processes and enzymes;
5. Understand cell structure and function including cell membrane transport;
6. Understand Mendelian modes of inheritance and analyze genetic crosses;
7. Understand how cells replicate and faithfully transmit the genetic material;
8. Understand how DNA fulfills the role of "genetic material" and how it is expressed ultimately in the cell.

GRADE DETERMINATIONS:
1. Since lecture and laboratory are two distinct classes, separate grades will be given for each course.
2. Grades will be derived from three of four components: three midterm exams (100 points each) and a FINAL lecture exam (200 points). The lowest grade from the three midterms will be dropped.
3. *No makeup exams will be administered.* If you miss an exam, that will be the grade (e.g., zero) that is dropped from the accumulative exam/quiz portion of your grade.
4. The final exam grade cannot be dropped. *Any exam the student fails to take at the appointed time cannot be made up.*
5. Tentatively, grades will be assigned as A>or= 90%, B>or= 80%, C >or= 70% and D >or=50% of the possible points. Before the **November 8** deadline to drop classes, students currently receiving a D or F will be notified with deficiency reports. Students who receive one of these reports *MUST* come see the instructor.

ATTENDANCE:
Attendance to class and a student's course grade, with few exceptions, appear to be directly correlated (*anecdotal* observation by your instructor). That is, the more a student comes to class the better he or she does in the course as reflected in the final grade. From my own experience as an undergraduate student sometime back in the Triassic Period, I discovered after three years of experimentation that IF I read the material before going to class, then went to class and took notes in class, THEN the course material was much easier to understand and to master---exams became a matter of review, not learning mass amounts of information the evening before an exam.

Chaminade University is also aware of this correlation and encourages all students to attend classes. While I do not want to penalize students for missing class, what I will do is this: I will note attendance at each class meeting and allow three unexcused absences (EXCEPT on exam dates---no missing exams!!!!!!!). After that I will deduct 5 points for each unexcused absence from a pool of 15 EXTRA CREDIT points. Any remainder will be applied to your grade at the end of the semester. This may come in handy particularly if you are 5, 10 or 15 points away from a grade.

Extra Credit

See attached for three opportunities for extra credit due at each midterm. Each extra credit is worth 7 points. Only **1** extra credit will be collected at each exam. No late extra credits. Address the following items about the extra credit <u>in your own words</u>:

1. What is the article about---try to *summarize in a sentence or two*.
2. Clearly state the source of the article (and attach a copy of the article with your extra credit).
3. What area of biology does the article apply to?
4. What about the article interested you, e.g., why did you select it?
5. Are you comfortable with the information given in the article, e.g., can you see any problems with the deductions made or the source of the data?

Tentative Course Schedule for BI101 General Biology I (Fall 2002)

Date	Topic	Reading	Lab
Tu-Aug 27	Getting going/ Introduction	Chapter 1	
Th-Aug 29	Living Things/Chemistry of Life	Chapter 1-2	#1 Intro/Microscopes
Tu-Sep 03	Chemistry and Water	Chapter 2	
Th-Sep 05	Biological Molecules	Chapter 3	#2 Scientific Method/Writing
Tu-Sep 10	Biological Molecules/Proteins	Chapter 3	
Th-Sep 12	Cell Membranes	Chapter 4	#3 Food Analysis
Tu-Sep 17	Getting through membranes	Chapter 4	
Th-Sep 19	Cells Are Us	Chapter 5	#4 Osmosis
Tu-Sep 24	Cell Structure and Function	Chapter 5	
Th-Sep 26	**Midterm I**	Chapters 1-4	#5 Cell Morphology
Tu-Oct 01	Energy and Metabolism	Chapter 6	
Th-Oct 03	Enzymes	Chapter 6	#6 Enzymes
Tu-Oct 08	Photosynthesis	Chapter 7	
Th-Oct 10	Glycolysis/Cellular Respiration	Chapter 8	#7 Photosynthesis
Tu-Oct 15	Cellular Respiration	Chapter 8	
Th-Oct 17	Energy Wrap-Up	Chapter 8	#8 Lab Exam I
Tu-Oct 22	Deoxyribonucleic Acid	Chapter 9	
Th-Oct 24	Replicating DNA	Chapter 9	#9 DNA
Tu-Oct 29	**Midterm II**	Chapters 5-8	
Th-Oct 31	From DNA (genes)to protein	Chapter 10	#10 Mendelian Genetics
Tu-Nov 05	Central Dogma	Chapter 10	
Th-Nov 07	Cell Divison & Reproduction	Chapter 11	#11 Cell Division & Chromosomes
Tu-Nov 12	Sex and Meiosis	Chapter 11	
Th-Nov 14	Gregor Mendel & Genetics	Chapter 12	#12 PCR and Fingerprinting
Tu-Nov 19	Genes, Alleles & Heredity	Chapter 12	
Th-Nov 21	Non-Mendelian Genetics	Chapter 12	#13 Biodiversity
Tu-Nov 26	**Midterm III**	Chapter 9-12.5	
Th-Nov 28	**Thanksgiving Recess**		
Tu-Dec 03	Gene Wrap-Up	Chapter 12	
Th-Dec 05	Biotechnology	Chapter 13	#14 Lab Exam II

Wednesday, December 11 **Final Exam 8:00-10:00 AM** *Cumulative*