FO'02

Bio. 20302-Cellular & Organismic Biology
TR 9:30-10:50 am
3 Semester Credits
Chaminade University of Honolulu
3140 Waialae Avenue
Honolulu, HI 96816

Fall 2002
August 26, 2002 to
December 12, 2002
Instructor:
Ronald M. Iwamoto

COURSE OUTLINE AND SYLLABUS
(Subject To Change)

TEXT:

Campbell, Neil A., Jane B. Reece, and Lawrence G. Mitchell 2002 (6th ed.). *Biology*. Benjamin Cummings, Menlo Park, CA.

COURSE DESCRIPTION:

Biology 203 is a 3-credit introductory biological science course for those students desiring advanced studies in the sciences, e.g. biology, forensic science, medicine, dentistry, environmental health, and other areas. It is followed by Biology 204 in the second semester.

The following is from the 2001-2002 General Catalog:

> Concepts of cellular and molecular biology stressed in first semester; second semester devoted to organisms stressing phylogenetic, ecological, and genetic relationships in plants and animals. Recommended for science majors. Offered annually. Recommended: one year each of high school biology and chemistry. *Concurrent registration in BI 203L-BI 204L required.*

AIMS/GOALS OF THE COURSE: This course is designed to fulfill the following goals:

1. To present the basic concepts and principles of biology for use in the present and for future courses.

2. To prepare the student to continue into advanced biology or related fields, such as biochemistry.

3. To examine and analyze specific content areas, such as molecular or cellular biology, evolution, physiology, and related areas of biochemistry and biophysics. Cellular biology will be stressed during the first semester (BI 203) while organismal biology, based on organ systems, will be emphasized in the second semester (BI 204).

4. To impart an understanding of the accomplishments, failures, ambiguities, and the future of the biological sciences drawing on examples and applications of principles in the area of marine sciences, biomedical sciences and other disciplines.

OBJECTIVES FOR STUDENTS: At the completion of the course, the student will be able to do the following:

1. Understand the scientific method;
2. Use cellular biology terminology;
3. Understand chemical components of the cell;
4. Identify cellular structures and understand their functions;
5. Understand cellular respiration;
6. Understand photosynthesis;
7. Understand cellular reproduction, mitosis and meiosis;
8. Understand major principles of evolution

LECTURES:

1. Lectures are either 50 minutes duration, three times per week or one hour and twenty minutes duration, twice per week for approximately 15 weeks. Lectures are accompanied by a single laboratory period of 3 hours duration per week.
2. Text assignments and lecture topics are listed in the course outline. Consult the outline for assignments, announced quizzes, exam dates, and holidays.
3. Supplemental readings may be assigned during the course of the semester.
4. Supplemental reference texts are on reserve in the library at the front desk and will include study guides with sample exam questions. These may be used for additional readings, references for lab reports, or for an alternative approach to your text. Please complete required assignments before using supplemental references.
5. Adjustments may be made to the lecture outline, such as changes in exam dates, or assignments due to conference trips.

GRADE DETERMINATION:

1. Separate grades will be given for lecture and laboratory. It is therefore possible to receive different grades for lecture and laboratory.

2. Quizzes, both announced and unannounced, will be given during the semester. At the end of the semester, the student may substitute the total quiz score average, based on 100%, for one of the lower scored lecture exams, not including the final exam.

3. Each student will submit 5 summaries of current events in biology. Each summary will be worth 10 points and instructions and requirements for the written summaries are given on a separate page. Summaries will be included as a portion of the lecture grade.

4. The lecture grade will be determined in the following manner.

1st lecture exam	100 pts.	Scale
2nd lecture exam	100 pts.	A = 90%
3rd lecture exam	100 pts.	B = 80%
5 summaries @ 10 pts.	50 pts.	C = 70%
Two Hour Comprehensive Final Exam	150 pts.	D = 50%
		below 50%
	500 pts.	=F

5. Lecture exams will include 10 extra credit points each, while the final exam will not include extra credit points. The final examination is a two hour cumulative exam with 50% of the exam including questions repeated from the previous 3 lecture exams.

6. Any exam that the student fails to complete at the expected time can be made up only with a written physician's excuse or valid reason to be determined by the instructor.

POLICIES, CLASS STANDING, OFFICE HOURS, AND EXTRA HELP:

1. Attendance is mandatory for each lecture and laboratory. Attendance will be monitored as required for federal guidelines. Attendance for laboratory is especially important. Unexcused absences for both lecture and laboratory will result in grade penalties to be determined by the instructor.

2. Quizzes missed can not be made up. In cases of excused absences, quizzes will not be counted.

POLICIES, CLASS STANDING, OFFICE HOURS, AND EXTRA HELP CONT'D...

3. Incompletes and early exams are not given. Extra credit work is not normally permitted.

4. Students may obtain their grades any time by consulting the instructor. Those with deficient grades will be notified prior to the withdrawal deadline of November 8, 2002. Students receiving deficiencies must consult with the instructor.

5. Peer tutoring is available. Please consult the instructor for tutoring from the Learning Center or upper-division biology students. There may br tutoring available from the publishers of the lecture text that was to start in fall 2001.

6. The instructor's office is in Henry Hall, Rm 16, phone with Iwamoto's phone 735-4808, e-mail = riwamoto@chaminade.edu. Office hours are posted on the door of the office. If you can not see me during office hours, please make an appointment or see me after lecture.

7. Please note that it is biology department policy to reduce grades by one grade level for late assignments within 24 hours of the deadline. An F grade is recorded for assignments later than 24 hours. This is for summaries, lab reports, and other assignments.

8. Those students with special needs, e.g., learning disabilities, should consult with the instructor during the first or second week of classes.

9. Academic dishonesty including cheating, plagiarism, and other serious offenses, such as allowing another student to copy a paper, will not be tolerated. Appropriate action will be taken.

NEW TEXT SUPPLEMENTS:

1. Several student study guides will be placed in the library on closed reserve exclusively for student use.

2. Each purchased text includes an interactive study partner CD-ROM with interactive exercises, animations, lab, and simulations keyed to the text. Included are a glossary and 20 test questions per chapter, feedback for answers, and page references for studying.

3. A text-related web resource, *The Biology Place*, is available to students with web links, interactive learning activities, current research news, and customized practice exams keyed to the 5th edition.

CHAMINADE UNIVERSITY OF HONOLULU
Honolulu, Hawaii 96816

SESSION: FALL 2002
On Campus

COURSE OUTLINE-SUBJECT TO CHANGE

BIO 20302 (3 Crs) _____ Cellular & Organismic Biology Mr. R. Iwamoto
Dept. No. #Crs. Title Instructor

WEEK	DATE		ASSIGNMENTS	
1	AUG 27	T	Introduction: Syllabus & Course Outline	Chapt. 1 pp. 1-25
	AUG 29	Th	Scientific Method, Characteristics of Life & Evolution	Chapt. 22 pp. 428-444
	SEPT 2	M	**LABOR DAY HOLIDAY, NO CLASSES**	
2	SEPT 3	T	**LAST DAY TO ADD/DROP CLASES** Continue Evolution	**QUIZ** Chapt. 2 pp. 26-40
	SEPT 5	Th	Chemical Structure/Function: Atoms, Chemical Bonds, Water	Chapt. 3 pp. 41-51
3	SEPT 10	T	Chemical Structure/Function: Organic Compounds & Carbohydrates	Chapt. 4 pp. 52-61
	SEPT 12	Th	Chemical Structure/Function: Lipids and Proteins Chemical Structure/Function: Nucleic Acids	**SUMMARY 1 DUE** Chapt. 5, pp. 62-86

4	SEPT 17 T	Chemical Reactions & Enzymes-Structure & Kinetics	Chapt. 6 pp. 87-105
	SEPT 19 Th	Microscopy Cell Theory & Structure	Chapt. 7 pp. 108-137
5	SEPT 24 T	**FIRST LECTURE EXAM INCLUDING 9/19/02**	
	SEPT 26 Th	Cell Structure: Organelles, Cytoskeleton, & Junctions Cell Structure: Cell Membranes Cell Processes: Osmosis & Transport	Chapt. 8 pp.138-154 **SUMMARY 2 DUE**
6	OCT 1 T	Histology	Chapt. 35, pp. 720-738 Chapt. 40 pp. 834-840
	OCT 3 Th	Cell Respiration: Anaerobic Pathways	Chapt. 9 pp. 155-175
	OCT 7 M	**DISCOVERER'S DAY HOLIDAY, NO CLASSES**	
7	OCT 8 T	Cell Respiration: Aerobic Pathways	**QUIZ**
	OCT 10 Th	Cell Respiration: Fats & Proteins	Handouts
8	OCT 15 T	Photosynthesis	Chapt. 10 pp. 176-196
	OCT 17 Th	Photosynthesis: C-3 Pathway/C-4 & CAM	**SUMMARY 3 DUE**

9	OCT 22 T	**SECOND LECTURE EXAM including 10/17/02**	
	OCT 24 Th	Cell Communication	Chapt. 11 pp. 197-214
		Cell Division: Mitosis	Chapt. 12 pp. 215-231
10	OCT 29 T	Cell Division: Mitosis Cont'd…	Chapt. 13 pp. 232-246
	OCT 31 Th	Cell Division: Meiosis	
11	NOV 5 T	Genetics: Mendel	Chapt. 14 pp. 247-268 **SUMMARY 4 DUE**
	NOV 7 Th	Genetics: Mendelian Crosses	Chapt. 15 pp. 269-286
	NOV 8 F	**LAST DAY TO WITHDRAW FROM CLASSES**	
12	**NOV 11 M**	**VETERAN'S DAY HOLIDAY, NO CLASSES**	
	NOV 12 T	Genetics: Chromosomes	
	NOV 13 W	**BEGIN PRE-REGISTRATION FOR SPRING '03**	
	NOV 14 Th	**THIRD LECTURE EXAM including 11/07/02**	
13	NOV 19 T	Molecular Genetics	Chapt. 16 pp. 287-302
	NOV 21 Th	Molecular Genetics: Transcription	Chapt. 17 pp. 303-327

14	NOV 26 T	Molecular Genetics: Translation	Chapter 18 pp. 347-351 "Operon" Chapt. 19 pp. 354-374
	NOV 28-29	**THANKSGIVING RECESS, NO CLASSES**	
15	DEC 3 T	Genetic Control Gene Technology	**QUIZ** Chapt 20 pp. 375-401 **Summary 5 Due**
	DEC 5 Th	Genetic Basis of Development Review	Chapt. 21 pp. 402-425
16	**DECEMBER 9, 2002, Monday, 8:00 AM-10:00 AM, TWO-HOUR CUMULATIVE FINAL EXAMINATION IN HENRY HALL RM 17**		

IMPORTANT DATES: SEPT 3 LAST DAY TO REGISTER, ADD/DROP CLASSES

NOV 8 LAST DAY TO WITHDRAW FROM CLASSES

DEC 9 BEGIN FINAL EXAM WEEK

Bio. 203/204-Cellular & Organismic Biology Mr. R. Iwamoto
Chaminade University of Honolulu

CELLULAR & ORGANISMIC BIOLOGY SUMMARIES

Cellular & Organismic Biology Summaries:

1. The objectives of the summaries are threefold:
   a. To read and report on current topics in biology;
   b. To offer an alternative to quizes and examinations; and
   c. To participate in "writing throughout the curriculum", compositions in each area of the university curricula. This should help you develop the ability to research and write about selected topics.

2. There will be five, one to two paged summaries. Each summary will be worth 10 points and the total will be 50 points that are counted in the lecture grade.

3. The summaries must be from a 2002 publication of a newspaper, magazine, journal, or internet/web pages which must be pertinent to the biology field, e.g., not geology or chemistry.

4. Summaries are to be word processed or typed following university writing standards. The summary must include: author, title of article; title of journal, magazine, or newspaper with titles of sources, e.g., newspapers italicized or underlined; date of publication; page number(s). Please use the following for web site publications from the APA format:
   Author, I. (Date). Title of Article. *Name of Periodical* (Online), XX. Available: Specify path (<URL>date accessed).

   Example:Mestel, R. (March 1999). Drugs from the Sea. Discover, Vol. 20 No. 3. Available: http://www.discover.com_99/drugs.html, Date accessed 3/8/99.

5. Please submit a xerox copy or internet/web page print out of the article with your summary. If you utilize National Geographic or Time articles, you need not xerox the article as the instructor have subscriptions to the above.

6. Due dates for summaries are listed on the course outline. Please submit summaries on time as there are penalties for lateness, reduction in one grade level for submission within 24 hours of the deadline and F for those after 24 hours of the deadline.

7. Examples of summaries are available for examination during the first weeks of classes.

CHAMINADE UNIVERSITY WRITING STANDARDS

All work submitted by Chaminade University students must meet the following Writing Standards. Written assignments which fail to meet these standards will not be accepted by Chaminade University faculty unless alternative criteria have been specified by an instructor for a particular assignment.

(1) A paper must have a title page on which the writer gives the title, his or her name, the course title, and the date of submission. For short papers, it is usually adequate to provide this information on the first page of the paper.

(2) A paper must adhere to accepted manuscript format*.

a) It must be typed on white 8½" by 11" paper (except for in-class essays).
b) It must be double-spaced and typed on only one side of the paper.
c) It must have adequate margins on top, bottom, and sides.
d) References and/or footnotes must be used in accordance with standards specified by the instructor. In the absence of such specification, the writer should use standards given in English 102.

(3) A paper must adhere to conventional standards for written expression.

a) It should be free of errors in spelling, punctuation, capitalization and grammar.
b) The vocabulary and syntax should be appropriate to the assignment.
c) The writer should use proper sentence construction and coherent paragraphing.

*See the handbook of English recommended by the English Department for a complete list of manuscript requirements.

WRITING ASSISTANCE

The Chaminade Learning Center provides assistance for students in proofreading and correcting their written assignments. A writing clinic and tutorials are available to students at no cost to assist them in the mastery of basic writing skills. Typing instruction is available at several locations near Chaminade University and there are also lists of student typists available in the Learning Center.

CHECKLIST FOR GRADING ESSAYS AND RESEARCH PAPERS
Biology 203/204

Student: _____ Points / Grade: _____

GOOD POINTS

Theme/ focus is clearly stated _____
Theme is well-developed _____
Specific examples are given _____
Attempted interpretation _____
Well-structured/ organized _____
Has a conclusion _____
Clearly written _____
Well-documented _____
Good command of topic _____
Good synthesis skills _____
Good use of references _____
Good presentation of data _____

NEEDS IMPROVEMENT

Needs clearer theme/focus _____
Needs deeper analysis _____
Give more evidence _____
Missing interpretation _____
Rethink organization _____
Lacks a conclusion _____
Needs more synthesis _____
Needs more sources _____
Factual/concept errors _____
Poor grammar _____
Multiple spelling errors _____
Poor subject/verb agreement _____
Report Format not followed _____
Poor presentation of data _____
Poor documentation _____
No data analysis _____

Recommend rewrite _____

Additional comments:

_____ _____
Instructor Date