



Biology 180 - Concepts in Cellular Mechanisms FALL 2008

Lecture:	MWF	12:00 - 1:15	MLH 130
Lab:	Tue (section 01)	1:30 - 4:30	MLH 210
	Thu (section 02)	1:30 - 4:30	MLH 210
Text:	Campbell and Reece, BIOLOGY, 8 th edition, Pearson / Benjamin-Cummings		
Instructor:	Dr. Elizabeth M. Skendzic		
Office:	MLH 243		
e-mail:	emskendzic@lcsc.edu or using the mail tool in BbCE		
Phone:	(208) 792-2782		
Office hours:	Mon 2:00 – 3:00; Tue/Thu 9:00 – 10:00, or by appointment		

Course objectives

- To understand the process of science.
- To read and comprehend scientific literature.
- To encourage thoughtful observation, critical thinking and biological inquiry.
- To acquire knowledge on the cellular and molecular principles of biology.
- To participate in the scientific process by performing experiments, obtaining data and presenting results.

Course description

This is a lecture and lab course which makes use of a variety of learning approaches. Topics are presented and explained using images from the text. Examples of applications, current research focus and health-related issues are used for better understanding of the material. In addition, current science reports are discussed in class as a science literacy component. The laboratory includes exercises that follow a three-component format with preliminary work required before attending lab, an emphasis on data acquisition during the lab and completion of data analysis after the lab.

This is a Web Enhanced Course

Course materials are available through BbCE. The purpose is to make available course announcements, laboratory exercises, lecture outlines and readings. It is essential that you retrieve this information on a regular and timely basis. If you need help using BbCE call (208) 792-2239 or email bbce@lcsc.edu

Lecture

Class materials are presented in a traditional lecture format and follow the schedule below. You are expected to review the text material before coming to class and to download lecture outlines to facilitate note taking.

- Lecture exams and final exam will consist of essay, multiple choice, short answer, and true/false questions. No exam score will be dropped and there are no exam make-ups and no exams can be taken earlier. If an exam is missed due to a medical reason, a doctor's note is required. Approved make-up exams will be completed at the end of the semester; format may vary. Exam dates are included in the schedule below. If changes are required they will be announced in class.
- Twelve quizzes will be given randomly throughout the semester. Ten scores will be part of your grade; the two lowest or missed scores (including absences due to illness) will be dropped. Quizzes will be multiple-choice, true/false, fill in the blank or short answer, or a combination. They will include material covered the previous class (if given at the beginning of the class period) or material just covered (if given at the end of the class period). You cannot use your class notes or text to answer the quiz.
- Twelve in-class exercises will be given randomly throughout the semester. Ten scores will be part of your grade; the two lowest or missed scores (including absences due to illness) will be dropped. In-class exercises will vary in content and may include readings, concept map design and/or group discussions. The idea is to help you study the material covered in class and to extend your scientific literacy. You **can** use your class notes, handouts and/or your text. You **cannot** borrow class notes or texts from your classmates and you cannot get help or communicate with your classmates. Remember, these exercises are also part of your grade and aim at helping you practice alternative learning methods.
- Extra credit will be given at the discretion of the instructor. Attendance to departmental seminar series and other activities may be considered for extra credit and will be announced in class.
- Attendance, participation and continuous work are key elements for success in this class. This is a course that covers a considerable amount of basic information required for upper level courses.

Laboratory

Attendance is required in laboratory and ONLY those students attending lab will get credit for any of its components. There is no lab manual, individual lab exercises will be available through BbCE. You MUST print your own lab exercise in advance. Pre-Lab worksheets will help you prepare for the lab. The instructor will introduce the lab exercise and will answer questions at the beginning of the session. Please be on time and do not expect to leave until the lab is complete. You will work in teams of 3 students.

- Lab exercises consist of a *Pre-Lab Worksheet*, detailed instructions and procedures, a *Data Collection / Review Questions Worksheet* and a *Post-Lab Worksheet*. You MUST print all lab components before coming to your lab section.
- The *Pre-Lab Worksheet* is due (individually) at the beginning of the lab period. If you miss a lab session or are late for the lab you will not be allowed to turn in the *Pre-Lab Worksheet* and will lose points accordingly. Each lab section is at capacity, therefore you will not be allowed to make up a lab at a different time.
- As you work on the lab exercise you should (individually) enter data in the *Data Collection / Review Questions Worksheet*. You will need the data to answer the *Post-Lab Worksheet*, so make sure you gather all

the information you need. You may discuss the results with your team members as you gather your data. The instructor must initial this worksheet BEFORE you leave. You will staple the initialed Worksheet to your *Post-Lab Worksheet*.

- As a final component of your laboratory exercise you will answer the questions and/or prepare graphs as requested in the *Post-Lab Worksheet*. Your *Post-Lab Worksheet* is due (individually) the following lab period and must include the initialed *Data Collection / Review Questions Worksheet*. *Post-Lab Worksheets* turned in late will lose 5 points per calendar day.
- There will be two lab practical exams. They will include materials reviewed in lab exercises and the format will be multiple choice, true/false, short answer or a combination. They may involve experimental set ups used in the lab exercises.

Course grading will be based on **900** points:

LECTURE	Points	LABORATORY	Points
3 exams @ 100 points each	300	11 pre-lab worksheets @ 10 points each	110
Final exam	100	11 post-lab worksheets @ 10 points each	110
10 Quizzes @ 10 points each	100	2 Lab Practical exams @ 40 points	80
10 In-class exercises @ 10 points each	100		
	600		300
TOTAL 900			

Cheating will not be tolerated.

In the event of academic dishonesty, those involved **will receive an "F" grade for the assignment and** will be referred to the Director of Student Life. As defined in the LCSC Student Handbook, Academic Dishonesty includes:

- a) **Cheating**—intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. The term "academic exercise" includes all forms of work submitted for credit hours.
- b) **Fabrication**—intentional and/or unauthorized falsification or invention of any information or the source of any information in an academic exercise.
- c) **Collusion facilitating academic dishonesty**—intentionally or knowingly helping or attempting to help another to commit an act of Academic Dishonesty.
- d) **Plagiarism**—the deliberate adoption or reproduction of ideas or words or statement of another person as one's own without acknowledgment.

The Code of Conduct can be found online at: <http://www.lcsc.edu/osl/SHB/SHBcodeofconduct.htm>

If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share, or if you need special arrangements in case the building must be evacuated, please make an appointment to discuss this with me as soon as possible.

Date	Lecture topics and Exams	Textbook chapter	Laboratory
Aug 25	Introduction	1	Aug 26 / 28
27		1	No labs
29	Carbon and the molecular diversity of life	4	
Sept 1	<i>Labor day – no classes</i>		Sept 2 / 4
3		4	LAB 1
5		4	Measurements
8*	Large biological molecules	5	Sept 9 / 11
10		5	LAB 2
12		5	Organic molecules
15	A tour of the cell	6	Sept 16 / 18
17		6	LAB 3
19		6	Microscopy
22	EXAM 1		Sept 23 / 25
24	Membrane structure and function	7	LAB 4
26		7	Membranes / Osmosis
29		7	Sept 30 / Oct 2
Oct 1		7	LAB 5
3	Introduction to metabolism	8	Enzymes
6		8	Oct 7 / 9
8		8	LAB 6
10	Cellular respiration	9	Respiration
13		9	Oct 14 / 16
15	Photosynthesis	10	
17		10	LAB PRACTICAL 1
20	EXAM 2		Oct 21 / 23
22	Cell cycle – mitosis	12	LAB 7
24*		12	Photosynthesis
27	Cell cycle - meiosis	13	Oct 28 / 30
29		13	LAB 8
31*	Mendel and the gene idea	14	Mitosis and meiosis
Nov 3		14	Nov 4 / 6
5		14	LAB 9
7	Chromosomal basis of inheritance	15	Mendelian genetics
10		15	Nov 11 / 13
12	EXAM 3		LAB 10
14	Molecular basis of inheritance	16	Human genetics
17		16	Nov 17 / 21
19	From gene to protein	17	LAB 11
21		17	Biotechnology
24-28	THANKSGIVING BREAK		
Dec 1			Dec 2 / 4
3	Regulation of gene expression	18	LAB PRACTICAL 2
5		18	
8	Viruses	19	Dec 9 / 11
10		19	LAB CLEANUP
12	Biotechnology	20	
15 - 18	FINAL EXAM Wednesday 12/17 12:00 – 1:50		

The instructor reserves the right to make changes to this schedule.