Life Sciences 2
Life Sciences 2: Cells, Tissue, and Organ Systems
Summer 09
Session A

Instructor: Joseph Esdin, Ph.D.
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Office Hours: Wed 7:30-8:30 am
Fri: 10:30-11:30 am
Slichter 2847

TAs: Zach Burkett (zburkett@ucla.edu)
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Class Time: Mon, Wed, & Fri 8:30 - 10:20 am, Lakretz 110

Website: http://www.lsic.ucla.edu/classes/summer09/
http://lslab.lscore.ucla.edu/

Lab Management: Dr. Gaston Pfluegl. Slichter 2875 (gaston@lifesci.ucla.edu)

LS Administrator: Lily Yanez. LSB 2305, x5-6614 (lyanez@lifesci.ucla.edu)

Textbook: Purves, Orians, and Heller, Life, The Science of Biology, 8th edition.
Sinauer Associates, Inc.; Sunderland, Freeman and co.
The textbook will be on reserve in the Powell Library.

Life Sciences 2, Laboratory Manual, 7th edition.
Available at ASUCLA Bookstore.

Grading:
Total points for this class will be 530 points:

Exam 1 (7/6)	100 points
Exam 2 (7/20)	100 points
Lab Experiments and quizzes	80 points
Lecture Assignments	40 points
Attendance and Participation	10 points
Final Exam (7/31)	200 points
(20 points from the lab will be on the final exam)	
Total:	**530 points**

Exams:
There is going to be two exams and a final examination during this quarter. The first exam will be held on Monday 7/6 and the second exam is on Monday 7/20. The final exam will be held on Friday (7/31). Examinations will cover material from the lecture, reading, and discussion sections. The lecture component of the final exam is cumulative. All exams will have both multiple choice type questions and short answers type questions. Requests for regrades must be submitted in writing with a detailed explanation and justification within one week after the exams have been graded.

Make-up Policy:
No make up examination will be given. If you are unable to take an examination due to illness or other emergency, you are responsible for contacting the Life Sciences Core Curriculum Office (LSB 2305, (310) 825-6614) before the examination. You are required to have written verification from a physician or parent regarding the illness or emergency.

Lecture Notes:
Lecture notes are available on the class webpage (http://www.lsic.ucla.edu/classes/summer09/) Make sure you download the lecture notes before coming to class. Having the lecture notes with you will facilitate taking notes in class.

Discussion Section:
Attendance to the weekly discussion/lab sections is an important component of the course. Assigned papers (read below) will be discussed during each section. Weekly assignments pertaining to the papers will be posted on the class webpage the Friday before the first discussion section meeting on Monday. Assignments must be turned in at the beginning of each section. All assignments must be turned in on time. Late assignments will not be accepted. The discussion sections will concentrate on experimental issues and problem sets that will help you understand the lecture and succeed when taking the exams. Some of the questions on the exams will come from the discussion sections. About thirty percent of your final grade comes from discussion section, lab, attendance, written assignments, and class participation. Lecture material and papers will be presented in discussion sections. Attendance to the discussion and lab sections is mandatory. Tardiness and absences will not be tolerated. If you are late or absent from the discussion section you will not get participation points.

Assigned Papers:
1- Paper 1 (Assignment due 6/29-7/2)
How Cancer Arises.
Robert A. Weinberg. *Scientific American*, September 1996, Vol. 275 Issue 3, p62, 9p
Assignment will be posted on the course webpage on Friday 6/26.

2- Paper 2 (Assignment due (7/15-7/16)
Building a Brainier Mouse.
Joe Z. Tsien. *Scientific American*, April 2000, Vol. 282 Issue 4, p62, 7p

Assignment will be posted on the course webpage on Friday 7/10.

3- Paper 3 (7/22-7/23)
Infectious Diseases and the Immune System.
Paul E. William, *Scientific American*, September 1993, Vol. 269 Issue 3, p90, 8p
Assignment will be posted on the course webpage on Friday 7/17

4- Paper 4 (7/29-7/30)
Managing Diabetes.
Sara Sklaroff and John Rennie. *Scientific American*, December 2007, Vol. 17 Issue 4, p46, 12p
Assignment will be posted on the course webpage on Friday 7/24.

Instructions to Download Papers:
These instructions will work from on-campus computers only or on computers that has Bruin On Line Proxy Server Set Up.
Go to http://www2.library.ucla.edu
Place mouse cursor on Search and Find (upper left)
Move mouse cursor to E-resources
Click on E-Journals
On the Search for e-journals titles, type Scientific American and hit enter
From the right side menu, select v.268 (1993) Scientific American Archive, Restricted to UC campuses
Type in the title of the desired article in the find box
Download the PDF file

UCLA Student Conduct Code
102.01: Academic Integrity
All forms of academic misconduct, including, but not limited to, cheating, fabrication, plagiarism, multiple submissions or facilitating academic misconduct.

For the purposes of the *UCLA Code*, the following definitions apply:
102.01a: Cheating
Cheating includes, but is not limited to, the use of unauthorized materials, information, or study aids in any academic exercise; or the failure to observe the expressed procedures or instructions of an academic exercise (e.g., examination instructions regarding alternate seating or conversation during an examination).

102.01b: Fabrication
Fabrication includes, but is not limited to, falsification or invention of any information or citation in an academic exercise.

102.01c: Plagiarism
Plagiarism includes, but is not limited to, the use of another's words or ideas as if they were one's own, including, but not limited to, representing, either with the intent to deceive or by the omission of the true source, part of or an entire work produced by

someone other than the student, obtained by purchase or otherwise, as the student's original work or representing the identifiable but altered ideas, data, or writing of another person as if those ideas, data, or writing were the student's original work.

102.01d: Multiple Submissions
Multiple submissions includes, but is not limited to, the resubmission by a student of any work which has been previously submitted for credit in identical or similar form in one course to fulfill the requirements of a second course, without the informed permission/consent of the instructor of the second course; or the submission by a student of any work submitted for credit in identical or similar form in one course to fulfill the requirements of a concurrent course, without the permission/consent of the instructors of both courses.

102.01e: Facilitating Academic Dishonesty
Facilitating academic dishonesty includes, but is not limited to, knowingly helping another student commit an act of academic misconduct (e.g., cheating, fabrication, plagiarism, multiple submissions).

102.02: Other Forms of Dishonesty
Other forms of dishonesty, including, but not limited to, fabricating information or knowingly furnishing false information or reporting a false emergency to the University.

Discussion/Lab Schedule:

Week 1:	6/22-6/25	Lab 1: Scientific Methodology *Exploring scientific methodologies, Memory Interference Test* Lab 2: Photosynthesis *Spectrophotometry and chromatography of photosynthetic organisms*
Week 2:	6/29-7/2	Discussion 1 (Lecture assignment 1 due) Discussion 2 (Review for exam 1)
Week 3:	7/6-7/9	Lab 3: Metabolism *Respiration in Goldfish*
Week 4:	7/13-7/16	Lab 4: Rat Dissection *Focusing on structure and functions of organ systems* Discussion 3 (Lecture assignment 2 due) Review for exam 2
Week 5:	7/20-7/23	Discussion 4 (Lecture assignment 3 due)

Week 6: 7/27-7/30 Lab 5: Histology
Microscopy and characterization of tissues
Discussion 5 (Lecture assignment 4 due)
Review for final exam

Week	Lab	Activity	Assignment	Points	Due
1	1	Scientific Method	Individual lab report	10	Week 2
		Research Proposal		5	
1	2	Photosynthesis	Group lab report	15	Week 2
		Quiz		4	In Lab
3	3	Metabolism	Individual lab report	18	Week 4
		Quiz		4	In Lab
4	4	Rat Dissection	In Class Assignment	8	In Lab
6	5	Histology	In Class Assignment	16	In Lab
			Lab questions for final	20	
Total				**100**	

Lecture Schedule:

Week 1:

6/22	Introduction Biological Molecules	 Chapters 2 & 3
6/24	Cell Structure: Prokaryotes & Eukaryotes Cellular Membranes	Chapter 4 Chapter 5
6/26	Introduction to Enzymes & Energetics How Cells Produce Energy	Chapter 6 Chapter 7

Week 2:

6/29	Photosynthesis & Organelles Nervous System I	Chapter 8 Chapter 44
7/1	Nervous System II Structures and Higher Functions	Chapter 46
7/3	**Fourth of July Holiday**	

Week 3:

7/6	**Exam 1**	

7/8	Effectors	Chapter 47
	Sensory Systems	Chapter 45
7/10	Differential Gene Expression	Chapter 19
	Animal Development	Chapter 43
Week 4:		
7/13	Structure & Function of the Immune System	Chapter 18
7/15	Homeostasis & Temperature Regulation	Chapter 40
	The Endocrine System	Chapter 41
7/17	The Endocrine System	Chapter 41
	Review for Exam 2	
Week 5:		
7/20	**Exam 2**	
7/22	The Digestive System	Chapter 50
	The Renal System	Chapter 51
7/24	Gas Exchange & The Respiratory System	Chapter 48
	The Cell Cycle (Mitosis & Meiosis)	Chapter 9
Week 6:		
7/27	The Circulatory System	Chapter 49
7/29	The Reproductive System	Chapter 42
	Review for Final Exam	
7/31	**Final Exam**	