GENERAL BIOLOGY (I)

Fall 2011

Class Web: www.lavc.edu/huang

SECTIONS 8095 & 8096 PROF. SARA HUANG
OFFICE: AHS 223 TEL. (818) 947-2877
OFFICE HOURS: MW 11:00 -12:30; T.TH: 10:00 – 11:00 (Week 2-15)
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Course Description

Welcome to Biology 6. This is a five unit course in general biology designed for students who are biology majors or pre-professionals. This course will focus primarily on cellular, molecular biology, human form and physiology; and genetics.

Prerequisites

- Math 125 and
- Chemistry 101 or 68 with a "C "or better

You will be excluded before the third week of the semester if you do not meet the prerequisites.

Required Texts and Supplies

Lecture Text	*Biology* By Campbell and Reece 9th Master Biology Access Code Required ISBN 1256118338 A copy of old text book (8th) is reserved at the AHS 232.
Lecture Notes	Lecture notes, Chapter study questions, test information for each unit can be downloaded from the class web site.
Lab Text	*General Biology Laboratory* by Huang (Print from the class web site)
Scantron	One package of Scantron Form No. 882-E
	Two package of Scantron Form 815-E Quizzstrips
#2 Pencil	Several
Eraser	Several
3-ring Binder	1

Objectives

- Lecture
  - Define the characteristics of Life; describe classification system and scientific methods.
  - Illustrate or explain the chemistry of life.
  - Describe cellular structures, and functions; and explain physiological and reproductive processes.
  - Recall and describe the animal structure and function.
  - Explain Mendelian and modern genetics and its applications.

- Lab
  - Employ laboratory safety and aseptic technique, and gain experience in scientific writing by completing laboratory reports.
  - Demonstrate the proper use of science laboratory equipment in preparing experiments, collecting scientific measurements and recording of data, including: microscopes, balances, pipettes, spectrophotometers, paper chromatography, and gel electrophoresis.
  - Analyze scientific data collected from experiments they conduct and interpret the results.
  - Distinguish and locate a scientific research article, interpret an original scientific paper, generate a report and deliver an oral presentation.

Student Learning Outcomes

- Student will be able to describe the importance of the cell as it relates to living organisms.
- Student will be able to apply the scientific method: Organize and interpret data as they apply to the scientific investigation.

Exams and Quizzes

- There will be five lecture exams, 120 points each. The format will be of short answers, essay, multiple choices, and matching, labeling and true/false types. Questions will be drawn mainly from lecture notes. No exam will be dropped.
- Each quiz contains twelve to fifteen questions. They could be multiple choices, true/false or short answer questions.
- All lab quizzes are close book quizzes.
- Students who come to take exam and quiz late are not allowed to take the exam or the quiz if someone has already completed and turned in the exam or the quiz.

Labs

Lab work is completed by a group of 2-3 people. Each person shall actively get involved. The lab answer sheet is submitted at the end of each lab. No lab will be dropped. **Each person is required to complete his or her lab answers in his or her own words.**

Final Grades

- Total Possible Points (Subject to change):

  60 pts – Lab Quizzes
  240 pts – Lab Answer Sheets
  50 pts – Lab Midterm
  30 pts – Human Chromosome PowerPoint Presentation
  180 pts – In Class Open Book Quizzes & Critical Thinking Exercises
  600 pts - Lecture Test
  1160pts

- Final Class Grade = Total Points Earned/ Total Possible Points

Symbol	Definition	Percentile	Grade Point
A	Excellent	90 - 100%	4
B	Good	80 – 89.999%	3
C	Satisfactory	70-79.999%	2
D	Less than satisfactory	55 – 69.999%	1
F	Failing	<55%	0
I	Incomplete	For emergencies and medical reasons	

- **The instructor of this class will not negotiate with you regarding your final grade at the end of the semester. Please remember instructors do not GIVE grades. Students EARN grades. To bump up marginal grades:** Each person can take an extra credit quiz (1% of total points).
- **Extra Credit Points:** There are a few extra credit questions on your tests (about 15 points total).

Class Policies

- Attendance
  - Students are advised to read the scheduled chapter before coming to class. A major key to success in this class is good attendance. Students with excess Absences usually do not do well in the class. **If you do not wish to attend the class anymore, please drop yourself, other wise you may get an "F".**

- Make up and late assignment
  - There will be NO MAKE - UP LAB EXAM.
  - **Late assignments (15 minutes pass the beginning of the class) and reports would carry** a 15% deduction per day and 30% deduction per weekend.
  - Lab answer sheets may not be accepted at all if they have been corrected and returned to the class.
  - **Makeup Exam**: A written note should be submitted to the instructor to request a make-up exam together with a doctor note or other documentation for emergency situations. An approved make up exam will be done together with Test 5. Makeup exam contains 60 multiple choice or true/false questions only.
  - **Makeup missed labs and quizzes** (20 points max): Poster at the end of the semester.

- Academic dishonesty
  - **Academic dishonesty** is a violation of Standards of Student Conduct and Disciplinary Action (code 9803.12). Cheating = copying word for word answers from any books, internet, fellow students, or fail to prevent cheating (e.g. not keeping your answers covered).
  - Group work is commonly conducted in this class. You are not permitted to put down your group member's name if she or he did not make a contribution to your projects.

- **Each individual needs to write lab answers in his or her words. Do not copy word for word from the lab manual, book or each other. Do not turn in identical answers.**
- Anyone found to be cheating or plagiarizing will
  - receive a zero on the assignment.
  - re suspended for the remainder of the day.
  - be reported to the Dean of Student Services for further disciplinary action. Such disciplinary action may be place in your student record permanently.

- Bathroom break and use of electronic devices.
  - No restroom break is allowed during the exams.
  - **Students are not allowed to use dictionary or any electronic devices during exams.**
  - Please turn off your pagers and cellular phones during the class and while you are taking an exam.

- Lab safety
  - No food or drinks allowed in any classroom in Biology Department.
  - No open toe shoes are allowed in the labs.
  - Lab coats and gloves (for some labs) are required (Please see schedule below).
  - You may not be allowed to attend the labs if you do not have the proper lab attires.

- Checking grades and test review
  - Please check your grades periodically; save all returns in case of discrepancies. Your grades will be posted periodically on class web page under your code name.
  - Tests are not returned; please go over tests within two weeks after the test is taken.
  - A request of grade discrepancy correction shall be done within one week after the grades are posted.

- Reference letter
  - Reference letter will be given only at the end of the semester after the letter grade is issued. A request has to be submitted to the instructor. You can download the request form from the class web site.

- Personal hygiene
  - Please do not come to class if you are sick and may be contagious to other people.
  - Cover your mouth with your elbow when you sneeze.
  - Wash your hands thoroughly with soap and warm water.

Available Helps

- Professor's office hours
- Biology Free Tutor Program (AHS 232): A schedule can be found in AHS tutor center. Answers to quizzes are reserved with the Biology tutors. **You must have a Monarch card to enter AHS 232.**
- For study tips, please go to: http://www.cse.buffalo.edu/~rapaport/howtostudy.html#intro
- Writing Center: Humanities 100 Tel: (818) 947-2810
- Student With Disability Services: Student Services Annex, Room 175 or call SSD at (818) 947-2681 or TTD (818) 947-2680 for individualized diagnostic assessment.
- Early alert counseling service
- Financial Aid Office: (818) 947-2412
- Text book web site: www.masteringbio.com
- Free Psychological Counseling at the Student Heath Center: Dr. Carl King (818)778-5504.

Important Dates

- September 8 at 4 pm:
  - Students, who observe **religious holidays**, need to ask your religious leader provide the instructor a list of holiday observed. The letter has to be written on an official letter head paper and signed by your religious leader.
  - Students with **disability** shall inform DSS office and the instructor.
- September 09: Last Day to Add
- September 12: Last day to drop without incurring fee.
- September 23: Last day to drop classes without receiving a "W" in- person.
- November 18: Last day to drop with a "W" in-person.

Section 8096 Honors

- Additional requirement:
  - Completion of one Biology 185 classes successfully with a letter grade "C" or above during fall 2011;
  - Or take a deduction of 50 points from your class total points.

Biology 6 Tentative Schedule (Subject to Changes)

Week	Date	Day	Lecture Topic	Lab
1	8/30	T	Ch.1. Exploring Life Ch.2. The Chemical Context of Life (Review on your own)	Learning Style Assessment and Study Skill
	9/01	TH	Ch.3 Water and pH (Review) Ch.4. Carbon and the Molecule Diversity of life	Lab Safety and Inventory
2	**9/06**	**T**	**Closed Book Quiz: Chapters 2-3, Bring a Quiz Scranton** Ch.5. The Structure and Function of Macromolecules	Lab 1 Scientific Measurement
	9/08	TH	Ch.6. A Tour of the Cell	Lab 2. Spectrophotometer
3	**9/13**	**T**	Ch. 7. Membrane Structure and Function **(Open Book Quiz)**	Lab 3. Biological Molecules
	9/15	**TH**	Ch. 8. An Introduction to Metabolism (**Open Book Quiz)**	Lab 4. Microscope
4	**9/20**	**T**	**Test 1 Chapters 1, 4-7**	Lab 5. Cells
	9/22	**TH**	**Quiz 1: Labs 1-4,** Ch.9. Respiration & ATP Formation & **Exercise**	Lab 6. Cell Physiology
5	**9/27**	T	Ch.10. Photosynthesis & **Exercise**	Lab 7. Enzyme Reaction
	9/29	**TH**	Ch.11. Cell Communication (**Open Book Quiz)**	Lab 8. Mitochondria Structure and Function; Separation of Photosynthetic Pigments
6	**10/04**	T	Ch.12 Cell Cycle and **Exercise**	Lab 9. Photosynthesis
	10/06	TH	Ch. 40. Animal Structure and Function	Lab 10 Cell Cycle Lab 11 Histology
7	**10/11**	**T**	**Test 2 Chapters 8-12**	Lab 12 Nutrients and Metabolism (One hour lab, DVD on reproduction)
	10/13	TH	Ch.42. Circulation and Gas Exchange	Lab 13. Animal Structure and Function: Rat Dissection (I) **Bring gloves**
8	**10/18**	T	**Quiz 2 Labs 5-9** Ch.44. Urinary System Ch.46. Reproduction.	Lab 13. Animal Structure and Function: Rat Dissection (II) **Bring gloves**
	10/20	**TH**	Ch. 45. Hormone and Endocrine **Open Book Quiz**	Lab 14. Physiology of Circulation and Respiration
9	**10/25**	**T**	Ch. 43. Immune System **Open Book Quiz**	Lab 15 Mystery Hormone
	10/27	TH	Ch. 48. Neurophysiology	Lab 16.Nervous System and Skeleton and Sensory

Week	Date	Day	Lecture Topic	Lab
10	**11/01**	**T**	**Test 3 Chapters 40, 42-45, and 48 (Labs)**	Ch. 13 and Lab 17. Meiosis and Sexual Life Cycle Meiosis Video
	11/03	TH	Ch. 14. Mendel and the Gene Idea **Genetics Exercise**	Lab 18. Genetics
11	11/08	T	Ch.15. The Chromosomal Basis of Inheritance (Read on your own) Class does not meet during the lecture period.	**Lab Midterm (Labs 10-16)** **2:00 -3:00 pm** **Be on time or loose points**
	11/10	TH	Ch.16. The Molecule Basis of Inheritance	Lab 19. Human Genetics & Genetics Exercise
12	11/15	T	Ch.17. From Gene to Protein	Lab 20. DNA Exercise
	11/17	**TH**	**Lab Quiz 3: Labs 17 -18** Ch.20. DNA Technology	Lab 21. DNA Transformation (**Bring gloves**) Web Evaluation @ 2:30 pm
13	**11/22**	**T**	**Test 4 Chapters 13-17, Labs 19-20**	Lab 22. Gel Electrophoresis
	11/24	TH	Thanksgivings	
14	11/29	T	Lab 23 DNA Digestion (**Bring gloves**) Lab starts at 11:20 am sharp. Lab 24 Isolation of GFP (Part I)	
	12/01	**TH**	Ch.18. Regulation of Gene Expression **Open Book Quiz**	Lab 24 Isolation of GFP **(Bring Gloves)** The Ghost of your genes
15	**12/06**	**T**	Ch.19. Viruses **Open Book Quiz**	Required PowerPoint presentation (Marginal Grades Bump up Quiz)
	12/08	**TH**	**Quiz 4: Labs 22-24** Ch.21**.** Genomes and Their Evolution **Open Book Quiz**	Required PowerPoint presentation (Marginal Grades Bump up Quiz)
16	**12/13**	**T**	**12:30-1:55 pm** **TEST 5 Chapters 18 - 21** **Makeup Test 2:00 – 2:45 pm**	