

West LA College-Science Division

Bio 3b #3406: FUNDAMENTALS OF BIOLOGY LAB

FALL 2013

Instructor: Dr. Begona de Velasco
E-mail: develab@wlaac.edu (the best way to contact me)
Off hours: Th 8:30-9:00 pm, via email, OR by appointment
Lab: Th 6:45-10:00 pm, MSA-309

COURSE DESCRIPTION: This is a course in general biology designed to fulfill a laboratory science requirement. This lab emphasizes the diverse types of organisms and their anatomy and physiology. Laboratory topics include an introduction to the microscope, study of the cell, study of enzyme activity, a survey of the microorganisms, plants, and animals that comprise the 5 Kingdoms of life, and the anatomic study of the earthworm, grasshopper and fetal pig.

Student learning outcomes: Upon completion of this course, students should be able to:

1. Identify cell structures, tissues and organs.
2. Compare and contrast different types of plants
3. Differentiate phylum of animals based on evolutionary characteristics and give a couple of examples for each phylum.
3. Recognize the influence of concentration, temperature and pH on an enzyme activity.
4. Describe anatomical parts of a fetal pig.
5. Differentiate the appearance of a prokaryotic & eukaryotic cells when viewed through the microscope
6. Manipulate a light microscope and describe its parts.
7. Analyse and describe the difference between diffusion and osmosis
8. Identify a simple method to test for sugars, starch and protein.
9. Measure using the metric system.
10. Compare the different phases of mitosis and meiosis in both plant and animal cells.

Material required: Laboratory manual Biology 3 Lab Book by Steven Fink, BioBooks Pub, 2003.

Two scantrons (50 questions on a side available at the book store)

GRADING: The grade in this course will be calculated as a percentage of points earned on

- 2 Exams at 100 pts each: 200 pts
- Lab reports: 80 pts
- discussions-participation: 20 pts

Grade Scale (% at the end of the semester): A=100-90%, B=89-80%, C=79-70%, D=69-60%, F=59-0%

Exams will be given during the semester based on the lecture/lab and review questions from the book. The exams will be in the format of multiple choice questions, fill-in the blank, matching concepts. There will be **NO** makeup exams; students who miss an exam **will take the final** and the grade of the final exam will be **doubled**.

Lab reports: They are due the days of the exams. Any late material will be accepted at the instructors discretion and will be marked down: The guidelines to follow:

- The notebook should be neat, organized in chronological order WITH A **table of contents** and a **cover page** must be included and be the first page..
- All work must be **original.. Photocopied work is unacceptable.**
- **Review questions** should be placed SEPRTE FROM THE LAB REPORT.
- Every day lab should contain...
 - **Date, Name, Title**—simple but descriptive
 - **Purpose/Hypothesis**, few sentences with details about WHY you are doing this experiment, and the proposed or expected outcome.

- **Protocol/materials and methods/Data**, A clear, step by step thought process of what you did and why. Include here all results and any pictures/charts/data you produced. You will never do an experiment exactly as the lab protocol is written, so this needs to contain the details that distinguish this experiment including:
- **Conclusion**, In this section you discuss the experiment and data as a whole and whether the experiment worked, whether you got an expected/unexpected result and your thoughts about the result you got. NOT your personal feeling.
- **References**, All the sources of information used.

Discussion and participation points are linked to daily attendance and participation in class or in group discussions

CLASS POLICIES

Lab Safety: There will be NO eating or drinking in lab. Students must follow safety instructions and dress appropriately (no loose fitting or hanging clothing, jewelry or hair that could get caught or burned). Students must follow all directions, take proper care of and be respectful to the live animals.

Attendance is mandatory. No opportunity for make-up labs. Class meetings are to clarify and expand on your readings. **All readings have to be done previous to coming to the lab.** If there is anything you do not understand, I want you to feel free to ask questions during lectures as discussions are welcomed (time permitting). Students absent for 3 class meetings without a valid excuse will be dropped.

Class Rules: Please be respectful of both your fellow students and me, your hardworking instructor. Respect includes: **on time attendance**, no laptops for MOVIES, no cell phones, texting or headphones in class. Audio recording of class is permitted prior permission from me. Violators of this policy will be expelled from class.

Religious observances: Please notify the instructor in advance of religious observances that interfere with class attendance.

Students with disabilities: To receive accommodations, students with disabilities must register with Disabled Student Services.

Academic Integrity and plagiarism: Any student caught cheating or plagiarizing will receive an F on the assignment, may fail the class and will be penalized according to the College regulations. See the College Catalog under Academic Integrity for further information. **I will take pictures/videos if needed** during exams. The following list includes some examples of academic dishonesty:

Plagiarism

- Submitting someone else's scholarly work, such as essays or term papers, as your own.
- Copying, in part or in full, someone else's assignment. Including in your work without proper citation the ideas or language of another author or from the Internet.

Cheating

- Talking or consulting concealed notes during a quiz, test or exam. Using unauthorized prepared materials during a quiz, test or exam.
- Copying information or answers from a classmate's paper.
- Inventing data for a laboratory experiment or case study.

Tips for Success: Successful students usually have utilized the following strategies;

- Budgeted 2 hours of study per lab hour.... That equals to 6 hours/week.
- Formed study groups.
- Completed and understood **all** the problem/review question/study guide sets.
- Had excellent lab attendance.
- Participated in class discussions and asked questions.

TENTATIVE SCHEDULE

Wee k	DATES	LABORATORY TOPIC	Lab manual section
1	Aug 26 - 30	Lab Orientation	
2	Sept 3 - 6	Measurement in Biology	A
3	Sept 9 - 13	The Microscope & Its Uses	B
4	Sept 16 - 20	The Cell	D
5	Sept 23 - 27	Cell Division	F
6	Sept 30 - Oct 4	Identification of Organic Molecules	C
7	Oct 7 - 11	Introduction to Graphing, Diffusion, Osmosis	X,E
8	Oct 14 - 18	Enzymes	CC
9	Oct 21 - 25	MIDTERM	
10	Oct 28 - Nov 1	Classification of Organisms; Viruses, Kingdom Monera & Protista	G, H, I, J
11	Nov 4 - 8	Kingdoms Protista, Fungi & Plants	J,K, L
12	Nov 12 - 15	Vegetative Organs & Repro in Angiosperms, Dichotomous Keys	M, N, MM
13	Nov 18 - 22	Thanks giving	
14	Nov 25 - 27	Invertebrates & Vertebrate Animals, Histology	O,P,R,S,T
15	Dec 2 - 6	Fetal Pig	U
	Dec 9 - 13	FINAL EXAM PERIOD	