

Instructor: Amaneet Sanghera

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Office Hours: Monday 12 - 12:30 PM, Tuesdays 8 – 8:50 AM, or by appointment

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Labs: Thursdays from 2:00 – 4:50 PM, 211 Naraghi Hall

Text: Symbiosis Lab Manual for BIOL 1050 available at the campus bookstore. Photocopies not allowed.

Course Description: World of Biology is intended to provide students with laboratory experience in various biological contexts. We will explore topics covered in BIOL 1050 with the added luxury of actually performing some of the experiments discussed in lecture.

Learning Goals:

1. To provide an overview of basic knowledge, principles, methodologies, theories, and perspectives in biology.
2. To offer opportunities to work in groups with other students to practice effective communication about concepts and issues in biology.
3. To provide a broad understanding and appreciation of biology and encourage continuous inquiry and lifelong learning.
4. To provide the framework to critically evaluate and use information from various scientific sources to answer questions relevant to biology.
5. To understand the relationship between the fields of biology, chemistry, physics, geology and other sciences.
6. To appreciate the interdependence of humans, natural ecosystems, and diversity of life on earth.
7. To develop more informed and responsible citizens with respect to issues concerning the living world.

Grading

Quizzes	100
Lab Write-ups (5 @ 20 pts ea.)	100
Final Exam	100
TOTAL POINTS	300

Quizzes

This lab includes 11 quizzes worth 10 points each. Questions range from background vocabulary and specific results of each lab to application of concepts to new scenarios. One to two questions on each quiz will be from the upcoming lab, which you are expected to read ahead of time. These questions are general in nature. For example, if we are about to do the enzyme lab, know the definition of an enzyme! 1-2 questions will be review/cumulative from previous labs. This will help you succeed on the final exam. Once you begin a quiz, you may not leave the room and return to it. Quizzes will begin promptly at 2 PM. If you are late you will have less time (or none!) to complete the quiz, so please make every effort to be on time.

Students who have done well in the past re-read the previous lab carefully for examples of concepts. They look over all the trends in data. They practice answering questions listed under Discussion, Questions for Review and Applying Your Knowledge at the end of most labs. Although you will not be

turning those in, expect to see similar questions on quizzes. Consider writing out some of those answers as you are preparing. Often what we think we know in our minds doesn't come out the way we want on paper. Don't wait till the quiz to realize that...

Lab Write-ups

Lab reports are due at the beginning of class. Be on time to earn credit. The format will be explained in detail during class. Although you will be performing these labs with a partner or a group, lab write-ups **are not group activities**. You may discuss the results with others, but do your own work and don't copy the answers from someone else's report. **Plagiarism will earn a zero grade for the course.**

Lab Practical

Different than a typical sit-down test, during a lab practical you will be going around the classroom, answering questions at different lab stations. At each station, you will answer 1-2 questions. The content is cumulative. Once you begin the lab practical, you may not leave the room and return to complete it.

Absences/Tardies

Attendance is required. Do not enroll in this class if you have conflicts or other commitments during your lab period. Every absence will result in one or more zero grades.

If you are late to class, or absent from class, you may not turn in your lab report from the previous lab. If you are late to class, or absent from class, you may not make up the quiz you missed. The only exception to this rule is in the case of illness, and you must provide documentation from a physician. You must e-mail me that week. If I don't hear from you promptly, you get a zero grade.

If you miss a lab, you cannot make it up, and you cannot earn any credit for writing up that lab activity. There are no exceptions to this rule, even in the case of illness.

Student Conduct

Many labs will run the full three hours. Read the lab carefully before class to avoid mistakes that will require you to start over. Always do your share of the work. Remain focused on your lab activity for the entire period. Practice lab safety at all times (no beverages or open-toed shoes). Clean up after yourself.

Safety is paramount! Please work safely in lab all semester. **Biology Lab Safety Quiz** on Blackboard. All students must complete this online safety quiz by the next lab session in order to secure their enrollment in lab. Students who do not pass this quiz are not allowed to be in the lab room at any time. You may take the quiz as many times as you need to.

Do not leave the classroom in the middle of a discussion. Do not use cell phones or other electronic devices during class. After 2 requests, you will be dismissed from lab that day and any assignments pertaining to that lab session will not be graded.

Census Date

Census Date is Feb. 23rd. This is the last day to add/drop the course or change your grading option without my signature. April 3rd is the last day to change your grading option with my signature; it is your responsibility to submit this form to Admissions and Records by 5pm the next day. I will adhere to the

final grading option indicated by Admissions and Records. Final grades will not be changed once they have been submitted.

Tentative lab schedule:

Week of:	Lab Activity:
27-Jan	Syllabus Student Survey
2-Feb	Scientific Investigation
9-Feb	Quiz 1 Microscopes and Cells
16-Feb	Quiz 2 Osmosis and Diffusion Set up seed germination lab
23-Feb	Quiz 3 Collect and analyze data from seed germination Enzyme
2-Mar	Quiz 4 Respiration/Fermentation
9-Mar	Quiz 5 Photosynthesis
16-Mar	Quiz 6 Mitosis & Meiosis
23-Mar	Quiz 7 Genetics
30-Mar	No lab this week No school March 31 st
6-Apr	Spring Vacation
13-Apr	Quiz 8 Bioinformatics and Worm Biology
20-Apr	Quiz 9 DNA Extraction, Pipetting, PCR
27-Apr	Quiz 10 Gel Electrophoresis Evolution
4-May	Population Genetics
11-May	Lab Practical Exam

Please note: The above schedule and procedures in this course are subject to change in the event of extenuating circumstances.