

**Instructor:** Amaneet Sanghera  
**Phone:** (209) 667-3025

**Office:** 324A Naraghi Hall  
**Email:** [asanghera1@csustan.edu](mailto:asanghera1@csustan.edu)

**Office Hours:** Tuesday 5PM – 6PM, Wednesday 5PM – 6PM, or by appointment

**Labs:** Tuesdays from 2 – 4:50PM, 211 Naraghi Hall

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

**Course Description:** This component of BIOL 1050 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
In Class Activities & Assignments	100
Lab Practical	50
<b>TOTAL POINTS</b>	<b>250</b>

### **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 Assignments**

**Lab assignments 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 assignments **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. Two instances of plagiarism will earn an F grade in 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. **You will receive more information the first day of lab.**

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 September 19<sup>th</sup>. This is the last day to add/drop the course or change your grading option. Final grades will not be changed once they have been submitted.

**Tentative lab schedule:**

<b>Date</b>	<b>Lab</b>	<b>Quiz</b>	<b>Quiz Grade</b>
8/28	Introduction to course and lab safety		
9/4	Scientific Investigation		
9/11	Microscopes and Cells	Quiz 1	
9/18	Practice Pipetting, DNA Extraction, & PCR	Quiz 2	
9/25	Restriction Digest, Running gels, & Bioinformatics	Quiz 3	
10/2	Enzymatic Activity	Quiz 4	
<b>10/9</b>	<b>No Lab</b>		
10/16	Mitosis & Meiosis	Quiz 5	
10/23	Solving Genetics Problems	Quiz 6	
10/30	Photosynthesis	Quiz 7	
11/6	Respiration/Fermentation	Quiz 8	
11/13	Population Genetics & Evolution	Quiz 9	
<b>11/20</b>	<b>No Lab</b>		
11/27	Diffusion & Osmosis	Quiz 10 & 11	
<b>12/4</b>	<b>Comprehensive Lab Practical</b>		

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