

# BIOL 1050 Lab

Spring 2016

**Instructor:** Erica Fleming

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**Office Hours:** N 255 Mondays 1-1:50, and Thursdays 2-4 or by appointment.

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

**Blackboard:** Access required for course documents and grades.

**Email:** Check your csustan email frequently.

## 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 in biology.
3. To provide a broad understanding and appreciation of biology and encourage continuous inquiry and lifelong learning.

## Grading

Quizzes	100
Assignments	150
Final Exam (Lab Practical)	50
<b>TOTAL POINTS</b>	<b>300</b>

## Quizzes

This lab includes 11 quizzes worth 10 points each. Your lowest quiz score will be dropped. Questions range from background vocabulary and specific results of the previous lab to application of concepts to new scenarios. One or two 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 begin promptly at the start of lab. If you are late, you may have less time (or none) to complete the quiz. There are no make-ups except for dire emergencies which require documentation (doctor's note, tow truck receipt, jury duty summons).

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. If you are late, you work is late. Late work is not accepted.** Some assignments are lab REPORTS, written the format of a scientific paper. This format will be discussed in detail in class. After each lab is conducted, you will be notified if there is an associated lab report due the following week. Some lab assignments involve answering questions from the manual, or questions assigned by the instructor during lab. Although you will be performing these labs with a partner or a group, lab write-ups **are not group activities, unless otherwise specified.** 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 result in a zero 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 have 2 minutes to answer 1-2 questions. Once the 2 minutes are up, you will not have access to that question again. The content is cumulative. Once you begin the lab practical, you may not leave the room and return to complete it.

### Student athletes and DRS students

Please to notify me at the first lab meeting, or during my office hours.

### Recording Lectures and Special Accommodations

Students with documented disabilities should seek special accommodations for all classes through the DRS office on campus. If DRS sends me a file on you that lists recording lectures as an acceptable accommodation, then you may record lectures. Otherwise, you have to do it the old-fashioned way with pen and paper. If you record lectures in any form (video, audio, still pictures, etc.) without accommodation from DRS, that constitutes intellectual property theft, will result in a zero in participation points, and preclude you from turning in any assignments related to the lab session.

### 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 or traffic emergency, and you must provide **documentation**. Documentation must be provided at the next office hour, which is also a good time to make up your quiz and turn in your lab assignment. **Do not wait until the next week during lab to begin this process. The opportunity to make up missed points will expire.** If you missed lab (with an excused absence) on a day where an assignment was issued, you must contact your lab partner in order to get your groups' data. Your assignment will be due at the same time as everyone else's. No extended deadlines, even in the case of excused absences.

### Student Conduct

- Many labs will run the full three hours. Do not schedule appointments or accepts shifts at work that interfere with lab time.
- Read the lab carefully before class to avoid mistakes that will require you to start over.
- Always contribute to your lab group.
- Practice lab safety at all times (no beverages or open-toed shoes).
- As a group, help each other with clean up. Each instance of not cleaning up will result in a deduction of 5 points for the group.
- 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.**

## 1050 Lab Schedule

Week of	Tentative Lab Schedule
	The lab numbers refer to the table of contents in the lab manual
2/1	<ul style="list-style-type: none"> <li>• Syllabus</li> <li>• Lab Safety</li> <li>• Effective study habits and strategies</li> </ul>
2/8	<ul style="list-style-type: none"> <li>• Lab 1 Scientific Investigation: See the Scientific Investigation lab outline on blackboard for a better sense of what will be covered.</li> <li>• Lab: Daphnia on Drugs from Blackboard.</li> <li>• Assignment #1 Typed lab report format (IMRD), complete with a partner. Turn in one copy. Due next week</li> </ul>
2/15	<ul style="list-style-type: none"> <li>• Lab 2 Microscopes and Cells</li> <li>• Quiz 1</li> </ul>
2/22	<ul style="list-style-type: none"> <li>• Lab 3 Diffusion and Osmosis</li> <li>• Assignment #2 IMRD for Osmolarity experiment, complete with a partner. Due next week</li> <li>• Lab 4 Set up Seed Germination Lab</li> <li>• Quiz 2</li> </ul>
2/29	<ul style="list-style-type: none"> <li>• Lab 5 Enzymes</li> <li>• Assignment #3: Enzyme questions from online lab due next week. Complete individually.</li> <li>• Collect data and set up follow up experiment for seed germination lab</li> <li>• Quiz 3</li> </ul>
3/7	<ul style="list-style-type: none"> <li>• Lab 6 Photosynthesis</li> <li>• Analyze data from seed germination follow up experiment</li> <li>• Assignment #4 IMRD Seed Germination. <b>COMPLETE INDIVIDUALLY!</b> Due in two weeks</li> <li>• Quiz 4</li> </ul>
3/14	<ul style="list-style-type: none"> <li>• Lab 7 Respiration</li> <li>• Assignment #5 Respiration questions due next week.</li> <li>• Quiz 5</li> </ul>
3/21	<ul style="list-style-type: none"> <li>• Lab 9-11 Cell Cycle/Mitosis/Meiosis</li> <li>• Quiz 6</li> </ul>
3/28	NO LAB THIS WEEK
4/4	<ul style="list-style-type: none"> <li>• Lab 12-14 Genetics</li> <li>• Quiz 7</li> </ul>
4/11	<ul style="list-style-type: none"> <li>• Lab 15 Bioinformatics and Worm Biology</li> <li>• Parts of Lab 16 (pipetting practice)</li> <li>• Assignment #6 Bioinformatics questions due next week</li> <li>• Quiz 8</li> </ul>
4/18	<ul style="list-style-type: none"> <li>• Lab 16 DNA Extraction, Pipetting, PCR</li> <li>• Assignment #7 PCR questions due next week</li> <li>• Quiz 9</li> </ul>
4/25	<ul style="list-style-type: none"> <li>• Lab 19 Evolution</li> <li>• Lab 17 Gel Electrophoresis</li> <li>• Assignment #8 Evolution questions and graph due next week</li> <li>• Quiz 10</li> </ul>
5/2	<ul style="list-style-type: none"> <li>• Lab 18 Population Genetics</li> <li>• Quiz 11</li> </ul>
5/9	<ul style="list-style-type: none"> <li>• Lab Practical</li> </ul>

