

## BIOL 1050 - 010 Lab

Spring 2016

**Instructor:** Dr. Sara Emerson

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**Office Hours:** (253 Naraghi Hall) Mon 1-2 pm, Tue 12-1 pm, Wed 10-11 am, or by appt.

Phone: (209) 664-6548 (Best to send an email rather than leaving a message)

**Text:** **Symbiosis** Lab Manual for BIOL 1050 available at the campus bookstore

### 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

Lab Reports (3 at 30 pts each) 90

Lab Review Questions (4 at 15 pts each) 60

Final Exam (Lab Practical) 50

**TOTAL POINTS 300**

### Quizzes

This lab includes 11 quizzes worth 10 points each. Questions range from background vocabulary and specific results of the previous 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 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).

\* It is important to re-read the previous labs carefully for examples of concepts. Look over all the trends in data. 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 until the quiz to realize that!

### Lab Write-ups

**Lab write-ups 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.** The questions you will answer in the lab write-up will be assigned as we are debriefing the results of the lab. 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 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 75 seconds to answer 1-2 questions. Once the 75 seconds 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.

### **Important Dates**

Census Date is February 25<sup>th</sup>. This is the last day to add/drop the course or change your grading option; it is your responsibility to submit the grade change form to the Admissions and Records Office by 5pm that day.

### **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 write-up. Do not wait until the next week during lab to begin this process. The opportunity to make up missed points will expire.

**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/emergency. If you were not present, no matter what the reason, you cannot earn credit for a write-up associated with that lab.**

### **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 (e.g. 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.
- No electronics** will be allowed during quizzes/final exam. Students caught with phones, etc. out during quizzes/exam will be considered as cheating and penalized accordingly.

<b>Week of</b>	<b>Tentative Lab Schedule</b>
February 1	Syllabus, Overview of labs
February 8	Scientific Investigation Lab <i>(Write-up: Questions TBA due next week)</i>
February 15	Quiz 1 <b>Sci. Investigation lab write-up/questions due</b> Microscopes and Cells Lab
February 22	Quiz 2 Osmosis and Diffusion Lab Seed Germination Lab <i>(Write-up: Lab Report due in 3 weeks)</i>
February 29	Quiz 3 Collect/analyze data from seed germination, design and set up follow-up experiment Enzyme Lab <i>(Write-up: Questions TBA due next week)</i>
March 7	Quiz 4 <b>Enzyme lab write-up/questions due</b> Collect/analyze data from seed germination follow-up <i>(Seed germination lab report due next week)</i> Photosynthesis
March 14	Quiz 5 <b>Seed Germination lab report due</b> Respiration/Fermentation <i>(Write-up: Lab Report due in 4 weeks)</i>
March 21	Quiz 6 Mitosis Exercise, Meiosis Exercise <i>(Write-up: Questions TBA due in 2 weeks)</i>
March 28	<b>SPRING BREAK</b>
April 4	Quiz 7 <b>Mitosis/Meiosis write-up/questions due</b> Genetics Activities
April 11	Quiz 8 <b>Respiration/Fermentation lab report due</b> Bioinformatics/Worm Biology <i>(Write-up: Questions TBA due next week)</i> Pipetting practice
April 18	Quiz 9 <b>Bioinformatics write-up/questions due</b> DNA Extraction, Pipetting, PCR
April 25	Quiz 10 Gel Electrophoresis Evolution <i>(Write-up: Lab Report due next week)</i>
May 2	Quiz 11 <b>Natural selection/Evolution lab report due</b> Population Genetics
May 9	Lab Practical Exam