

BIOL 1050 Lab

Fall 2014

Instructor: Dr. Katherine Schroeder

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Office Hours: N 252 MW 1:30-2:30

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

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 x 20 points)	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! The other 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.

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 have 75 seconds to 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. 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.

Week of	Lab Activity
August 25	Syllabus Student Survey "Fun Quiz"
September 1	Scientific Investigation Lab
September 8	Quiz 1 Scientific Investigation write up due Microscopes and Cells Lab
September 15	Quiz 2 Osmosis and Diffusion Lab (write up due next week) Set up seed germination lab (write up due in two weeks)
September 22	Quiz 3 Osmosis/Diffusion Lab Report due Collect and analyze data from seed germination (write up due next week) Enzyme lab
September 29	Quiz 4 Seed Germination Lab Report due Respiration/Fermentation (write up due next week)
October 6	Quiz 5 Respiration/Fermentation Lab Report due Photosynthesis (write up due next week)

October 13	Quiz 6 Photosynthesis Lab Report due Mitosis Lab Meiosis Lab
October 20	Quiz 7 Genetics (Activity 14.3,14.4, and 15.1 pg 129-138)
October 27	Quiz 8 Bioinformatics and Worm Biology
November 3	Quiz 9 DNA Extraction, Pipetting, PCR
November 10	Quiz 10 Evolution
November 17	Quiz 11 Gel electrophoresis, Population Genetics
December 1	Final Exam