

Bio 225 Lab – Section 2
Spring 2011

Wed. 2:30 pm – 6:30 pm
ST 325

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Office hours:
Mon. 1:30 pm – 4:15 pm
Tues. 2 pm – 3:30 pm
Wed. 11:15 am – 12 noon
Also by appointment

Lab Schedule – Read each assignment in your lab manual prior to lab!

<u>Date</u>	<u>Assignment</u>	<u>Date</u>	<u>Assignment</u>
Jan. 26	Basic lab techniques	Mar. 23	Photosynthesis
Feb. 2	Proteins, Week 1	Mar. 30	DISCUSSION – Photosynthesis
Feb. 9	Proteins, Week 2	Apr. 6	Bacterial Genetics, Week 1
Feb. 16	Osmosis	Apr. 13	Bacterial Genetics, Week 2
Feb. 23	DISCUSSION – Osmosis expt.	Apr. 20	No Lab – Easter Break
Mar. 2	Enzymes	Apr. 27	Bacterial Genetics, Week 3
Mar. 9	DISCUSSION – Enzymes	May 4	Lab Concepts & Skills Test
Mar. 16	No Lab – Spring Break		

Required Texts

Bio 225 Laboratory Manual

A Student Handbook for Writing in Biology, 3rd edition, by K. Knisely (Sinauer Associates, Inc., Sunderland, MA, 2005).

Attendance & Class Participation

Attendance is required for all laboratory sessions! If you know ahead of time you will miss a lab session for a valid reason (interview for graduate/medical school, competing in an intercollegiate athletic event), notify the instructor ahead of time. Some sort of arrangements may be able to be made. If you unexpectedly miss a lab for a valid reason (severe illness or family emergency), contact the instructor as soon as possible. You are expected to arrive on time and prepared for class, having read the day's assignment (see above). In class, you are expected to participate in all facets of the laboratory assignment. This includes participating in any class discussions, performing calculations, conducting the experiments, recording data, and cleaning up at the end of the lab period.

There will be two lab periods when we will discuss the previous week's experiments and how you will write up your results in the form of a formal laboratory report. On these days the class may be split into two groups to facilitate small group discussions. One group will report at 2:30 pm and the other at 4:30 pm. You are expected to arrive on time at your assigned time with all materials required for the discussion (e.g., all graphs and tables completed). You will be provided with this information in the lab prior to the discussion. Your lab participation score and lab report score will be negatively affected if you do not come to class prepared for the class discussion or if you do not participate in the discussion.

Lab Reports

Most of your grade in this laboratory course is based on the scores you earn on your lab reports. A guide to writing lab reports is included with this syllabus. Read it and refer to it often throughout the semester!

Lab reports are due in class on the dates specified below:

<u>Due Date</u>	<u>Report</u>	<u>Points</u>
Feb. 2	Basic lab techniques	20
Feb. 9	Proteins, Week 1	15
Feb. 16	Proteins, Week 2	30
Mar. 2	Osmosis	25
Mar. 23 or 30 (TBA)	Enzymes	30
Apr. 6	Photosynthesis	30
Apr. 16	Bacterial Genetics, Week 1	20
Apr. 27	Bacterial Genetics, Week 2	20
May 4	Bacterial Genetics, Week 3	20

Lab reports in this course will take two forms. The lab reports for Basic Lab Techniques, Proteins (1 & 2), and Bacterial Genetics (1 – 3) will consist of tables and graphs of your data and questions about your experimental results as well as concept questions concerning the principles behind the experiment you just performed. For the Osmosis, Enzymes, and Photosynthesis labs, you will be required to write up your results in a format similar to that used in the scientific literature (intro, methods, results & conclusions).

Any report that is turned in late will be penalized 10% for each day overdue. Students may work together to organize and analyze data and to discuss questions but are required to write their own lab reports. Each student must generate all of his or her own graphs and tables unless specifically told otherwise by the instructor. *Copying of any material will not be tolerated and will result in a zero for that lab report and possibly more serious repercussions as well.* Please see the section on academic integrity and plagiarism on the last page of the lab report guide that accompanies this syllabus.

Quizzes

Beginning Feb. 2nd, there will be a 5 point quiz at the beginning of lab every week in which experiments are performed (no quiz on discussion days). These quizzes are designed to assess how well you understood the previous lab and to determine if you are prepared for the lab of the day. *All* quizzes must be turned in when time is called. If you arrive late, you will not receive extra time to complete the quiz. There are no make-up quizzes.

Laboratory Concepts and Skills Exam

On the last day of class, you will be tested on principles and concepts covered during the lab course, your ability to analyze and interpret data, and your ability to use Microsoft Excel to calculate a mean, standard deviation, standard error and to construct graphs. This exam is worth 40 points.

Grades

There are a total of 310 points possible in this course. Lab reports account for 210 points, the lab concepts & skills test for 40 points, quizzes for 40 points, and lab performance, participation & citizenship for 20 points.

<u>Grading Scale</u>	90-100% A	70-79% C	<60% F
	80-89% B	60-69% D	

Use of WebCT

A WebCT page has been created for this course. In cases of experimental failure, data that you can analyze for your report will be posted here. The course syllabus, the lab report guide, instructions for the formal lab reports, and PDF files of any articles you are required to read during the semester will also be posted on WebCT. To access WebCT for this course, go to <http://popc.sandiego.edu>. You should check your browser to make sure it is set up properly for WebCT (click “check browser”) and then log in by typing in your MySanDiego (e-mail) user name and password (note: you must have a USD MySanDiego account to use WebCT). Click on the Bio 225L course and you should see the materials for the course.