

BIOL 1050 LAB FALL 2015

Instructor: Dr. Kamal Dulai

Email: kdulai@csustan.edu (include BIOL 1050 in subject line)

Office: N251

Office Hours: T and R @ 10:55am – 11:55 am

CHECK YOUR CSUSTAN EMAIL EVERY DAY.

Required Materials: 1. Symbiosis Lab Manual (at the campus bookstore; photocopies not allowed)
3. A traditional calculator

Blackboard: www.csustan.edu/blackboard BIOL 1050 lab section (automatic enrollment)

Lab Safety Quiz: on Blackboard, titled "BioLabSafety" (automatic enrollment) - Perfect score required by week 2, or you will be dropped from the entire course.

| Date | Topic |
|-------------------------|---|
| Week 1 Aug 24-28 | Attendance in week 1 is mandatory for a place in the class. Lab 1 Scientific Investigation |
| Week 2 Aug 31-Sept 4 | Lab 2 Microscopes and Cells Quiz 1 |
| Week 3 Sept 7-11 | YOUR LAB SECTION DOES NOT MEET THIS WEEK |
| Week 4 Sept 14-18 | Lab 3 Diffusion and Osmosis Set up seed germination lab Quiz 2 |
| Week 5 Sept 21-25 | Lab 4 Enzymatic Activity Collect and analyze data from seed germination Quiz 3 |
| Week 6 Sep 28-Oct 2 | Lab 5 Photosynthesis Quiz 4 |
| Week 7 Oct 5-9 | Lab 6 Respiration/Fermentation Quiz 5 |
| Week 8 Oct 12-16 | YOUR LAB SECTION DOES NOT MEET THIS WEEK |
| Week 9 Oct 19-23 | Lab 7 Mitosis and Meiosis Quiz 6 |
| Week 10 Oct 26-30 | Lab 8 Solving genetics problems Quiz 7 |
| Week 11 Nov 2-6 | Lab 9 Bioinformatics, introduction to nematode worm biology Practice pipetting Quiz 8 |
| Week 12 Nov 9-13 | Lab 10 DNA extraction, PCR Quiz 9 |
| Week 13 Nov 16-20 | Lab 11 Natural Selection Predator-Prey Gel electrophoresis Quiz 10 |
| Week 14 Nov 23-27 | YOUR LAB SECTION DOES NOT MEET THIS WEEK |
| Week 15 Nov 30-Dec 4 | Lab 12: Population Genetics and Evolution Quiz 11 |
| Week 16 Dec 7-11 | Comprehensive Lab Practical |
| Week 17 Dec 14-18 | ALL LAB SECTIONS DO NOT MEET THIS WEEK |

Grading

| Assignment | Points |
|---|---------------|
| Quizzes (10 x 10 points) | 100 |
| Diffusion, Osmosis and Seed Germination Lab Report (with partner) | 30 |
| Photosynthesis and Respiration Lab Report (with partner) | 30 |
| Enzymatic Activity Lab Report (with partner) | 30 |
| Bioinformatics Lab Report (with partner) | 30 |
| Natural Selection and Pop Genetics Lab Report (independent) | 30 |
| Lab Final Exam | 50 |
| TOTAL POINTS | 300 |

Lab Reports

Laboratory scientists keep lab notebooks, in which they carefully describe every experiment (hypotheses, methods, results, conclusions). Scientists must be confident that research results are replicable, by themselves or by other scientists as a part of the peer review process. Therefore, these notebooks are incredibly valuable, because they document the steps of the scientific method and stand as a record of research. There will be 5 laboratory exercises that we will be performing this semester that are appropriate for reporting in this style.

You will be performing these lab exercises with a partner, or occasionally as a group.

Four out of the five lab reports will be written jointly (as a single document) with your lab partner. To document that each person has contributed their share, you must perform all of your work in BlackBoard, using a link that will be provided by your instructor. This link will give you access to a space where you and your partner can work privately, using a “wiki” tool to write and edit your lab reports.

The **final lab report** will be written independently, but you will still use the BlackBoard wiki to document your work.

These reports will be submitted on the course BlackBoard site, using a TurnItIn link provided by your instructor. Lab reports are due at the beginning of lab section on those dates, and late submissions are penalized 5 points per day. TurnItIn is a software program that detects plagiarism, so it is critical that you and your partner produce a lab report that is written completely in your own words (even the methods section must be written in your own words, not copied from the lab manual). Plagiarism will earn a zero grade. Two instances of plagiarism will earn an F grade in the course.

The expectations regarding each lab report will be discussed in that class meeting, and explicit instructions will be provided through email.

Quizzes

There will be a quiz for every week, starting Week 2 (check your schedule). This quiz will cover material we covered in the previous meetings, and will test your basic understanding of the material we will cover that day (**so read the lab manual for that day’s lab exercise!**). Your lowest quiz grade will be dropped.

Absences

Attendance is required. Do not enroll in this class if you have conflicts or other commitments during your lab period. I will take attendance and mark any absences. Every absence will result in one or more zero grades. See below.

Excused absences:

1. illness documented by a physician
2. documented jury duty or military duty
3. CSU Stanislaus athletics games (documented by coach; doesn’t include team practice)

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, but in the case of excused absences a grade adjustment is possible so you are not penalized. Missed quizzes **can** be made up if the absence is excused but you must e-mail me that week regarding a make-up quiz. If I don't hear from you promptly, you get a zero grade.

Student Conduct

Most labs will run the full three hours. Develop a cordial working relationship with your partner, and always do your share of the work.

The laboratory is a place for work, not for play. Remain focused on your lab activity for the entire period. Practice lab safety at all times. Clean up after yourself.

During the first few minutes of each class period we will discuss the day's activities and take the quiz, so tardiness will hurt your grade.

Cell phone use as a timer or calculator is acceptable, but if I catch you texting or checking email I will dock you 10 points. Computers are only allowed in class as a tool for class exercises.