

# Spring 2014 BIOL 1020 World of Biology Lab

**Instructor:** Erica Fleming

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**Office Hours:** Monday 10-10:50, or by appointment in Naraghi Rm 254

**Text:** *World of Biology 1020 Laboratory Workbook, 5th ed. by Stevens and Fleming. (2012).* Bring this each week.

**Course Description:** World of Biology is intended to provide students with laboratory experience in various biological contexts. We will explore topics covered in BIOL 1010 with the added luxury of actually performing some of the experiments discussed in lecture. Note that this class is graded separately from BIOL 1010.

## **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.
8. Use math as it applies to biology. This mostly includes making and interpreting graphs, and may also include calculating averages and variation around an average. I will help you and there will be chances to practice.

## **Lab Policies:**

1. **Arrive to class on time and ready to learn.** You should expect to work productively both in groups and alone. Please demonstrate proper care and use of lab materials and supplies. Most importantly, please do not disrupt the learning environment, rights, and property of others. **Of course, all cell phones/iPods/etc. should be turned off during class.**
2. **Unexcused absences will result in no points for the week.** Like any lab course, this one requires your active participation each week. It will be impossible to pass this course without regular, on-time attendance. As per university regulations, students with excessive tardies or absences will be dropped from the course. Since the lab set-up changes each week, it will not be possible to make up missed labs or quizzes. You may not turn in a lab write-up for a lab you did not attend. If an assignment is due during your unexcused absence, you may not turn it in.
3. **Quizzes will begin promptly at the start of lab.** If you are late you will have less time (or none!) to complete the quiz, so please make every effort to arrive on time. Out of the 11 quizzes for the semester, the lowest score will be dropped. Quizzes primarily cover the lab from the previous week, but expect 1-2 questions to come from the UPCOMING lab. Before you come to lab, you are expected to read the introduction to the lab we are about to complete. For example, if we are about to complete the enzyme lab, you should be able to define enzyme.
4. **Zero tolerance for cheating/plagiarism.** Anyone caught will receive an F for the course and be reported to the Dean of Students.
5. **Assignments are due at the beginning of class.** No credit for late work. If you are late, your work is late.
6. The final exam for this class is optional! It will be comprehensive and will be structured similar to lab quizzes.
7. In most labs you will work in small groups of 2-6 people, but **each student is required to hand in their own work!** These will be due at the beginning of the next lab meeting.
8. **Student athletes and DRS students need to notify me at the first lab meeting.**

**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 my lectures. Otherwise, you have to do it the old-fashioned way with pen and paper. If you record my lectures in any form (video, audio, still pictures, etc.) without accommodation from DRS, that constitutes intellectual property theft and will be a bad situation for all involved.

**Important Dates:** Census Date is Feb. 21<sup>st</sup>. This is the last day to add/drop the course or change your grading option without my signature; it is your responsibility to submit the grade change form to Admissions and Records by 5pm that day. February 17<sup>th</sup> office hour or lab on the 18<sup>th</sup> is the last chance to get my signature for grading option change. I strictly adhere to the grading option Academic Records has on file for you when I submit final grades.

**Grading:** All materials will be graded and returned to you the following lab period. Grades are based on the percentage of points earned out of points possible on lab write-ups, quizzes, participation, and the optional final exam. Categories are not weighed. Keep track of your progress on BlackBoard.

1. 11 quizzes @ 10 points each. Lowest score will be dropped. = 100 points
2. 13 lab write-ups / assignments @ 5-10 points each. Some are typed lab reports, others are answers to questions from the manual. Write-ups will be graded based on completing questions correctly, data collection and careful presentation of graphs/diagrams.
3. Optional comprehensive final exam. 30 points.

Grading scale: A=90-100% B= 80-89% C= 70-79% D= 60-69% F<60% No fractional grades awarded.

For those who change their grading option before census date: CR $\geq$ 70% NC $\leq$ 69%

No other points are available.

Late work will not be accepted except in dire emergencies where **you must provide documentation of hardship** (a note from a doctor, a tow truck receipt). All submitted work must be original; no photocopies will be accepted.

Date	Lab Activity
28 Jan	Attendance, Syllabus, Lab Safety, and Critical Thinking
4 Feb	Scientific Method (pp. 1-6) Daphnia Lab
11 Feb	Quiz 1 Cells & Microscopes (pp. 13-27)
18 Feb	Quiz 2 Transport (pp. 29-39)
25 Feb	Quiz 3 Metabolism (pp. 41-47)
4 Mar	Quiz 4 Cell Cycle & Mitosis (pp. 49-55)
11 Mar	Quiz 5 Genetics & Meiosis (pp. 57-72)
18 Mar	Quiz 6 Phylogenetic Trees (pp. 13-27)
25 Mar	Quiz 7 Evolution (pp. 73-81) (outside, bring calculator)
1 Apr	Quiz 8 Plant Adaptations(pp. 81-95 )
8 Apr	Quiz 9 Animal Adaptations (pp. 97-107)
15 Apr	Quiz 10 Population Parameters (pp. 109-122)
22 Apr	Spring Break
29 Apr	Quiz 11 Central CA Ecology (pp. 123-134)
6 May	OPTIONAL Final Exam