

BIOL 1020 - World of Biology laboratory
Section 001 – Mondays 2:30 - 5:38 p.m. in N223

Spring 2010

Instructor: Dr. Ann Kohlhaas

Office and hours: N275, Tues & Wed 1:30 - 3:00p, and by appt.

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Lab Manual: World of Biology: BIOL 1020 Laboratory Workbook (4th ed)

Schedule:

<u>Date</u>	<u>Topic</u>
Feb 22	Lab 1 - Nature of Scientific Inquiry
March 1	Lab 2 - Cells, Microscopes and Measurements
March 8	Lab 3 - Transport
March 15	Lab 4 - Metabolism
March 22	Lab 5 - Cell Cycle and Mitosis
March 29	Lab 6 - Genetics
April 5	SPRING BREAK
April 12	Lab 7 - Evolution *This lab will be mostly outside. Please come prepared for the weather. Also, bring a calculator.
April 19	Lab 8 – Plant Biology
April 26	Lab 9 - Animal Adaptation
May 3	Lab 10 – Population Parameters
May 10	Lab 11 – Ecological Methods and Central Valley Ecology
May 17	Final Exam at 2:30 p.m.
May 24	No lab – furlough day

Although no changes are expected, the above schedule is tentative and may be changed at the discretion of the instructor.

Purpose: The purpose of this course is to demonstrate by hands-on exercises and demonstrations some of the basic concepts and mechanisms in biology. The goal is better understanding of these concepts and mechanisms.

Grading:

Grades will be based on laboratory write-ups, quizzes, an optional final, and microscope care.

Laboratory write-ups (10 @ 10 pts. per lab.)	
100	
Quizzes (9 @ 10 points per quiz, lowest will be dropped)	<u>80</u>
Total	180

The Final Exam is optional and can be worth up to 10 points extra credit. The final will be comprehensive and stress concepts addressed in each lab.

We will be using microscopes for four laboratories. During these labs, up to 5 points per lab may be deducted if microscopes and slides are not handled or stored properly.

Grade Calculations

Grades will be based on the percentage of points earned.

A 90-100% B 80-89% C 70-79% D 60-69% F 0-59%

If you take the credit/no credit option: CR 70-100% NC 0-70%

Monday, March 15th is the last day you may change your grading option to credit/no credit. To do so you must have your instructor sign a yellow add/drop form. It is your responsibility to turn this form in to Admissions and Records. Consult with your advisor before making your decision. Grades will not be changed once they have been submitted. The last day to drop the course entirely is also March 15th. Please note that Biology 1020 and Biology 1010 are graded separately.

Laboratory Policies and Expectations:

World of Biology is a laboratory course and as such requires your presence. Students are expected to come prepared and fully participate in laboratory exercises. Your grade is based on laboratory write-ups, quizzes, and microscope care. You can only get points for lab write-ups and quizzes if you attend lab. Because the laboratory setups change from class to class, it is not possible to makeup missed laboratories. Unexcused absences will result in no points for lab write-ups and also in no points for the quiz given that day. You can drop your lowest quiz, but there is no way to make up for missed labs.

At the beginning of each class students should turn in their write-up from the previous week's lab. For example, turn in your Nature of Science lab write-up at the beginning of the lab on Cells, Microscopes, and Measurements. For most of the laboratories, you will work in groups of two or four students. However, each student should turn in his/her own write-up for each laboratory. Do not simply write the same answers as your lab partner. Instead, synthesize results and put your answers in your own words. Lab write ups are designed to show students' participation and understanding of the that week's laboratory. Write-ups will be graded based on completeness, accuracy, and legibility.

Quizzes will begin promptly at the beginning of lab. Quizzes will include questions that require understanding of the previous week's laboratory and preparation for the present week's laboratory. If you are late you will have less time to complete your quiz. If you arrive after a quiz has been collected you will not be able to take that quiz.

I have a no-tolerance policy for cheating. Students cheating on quizzes or exams, representing the work of others as their own, or turning in lab assignments for labs not attended will certainly receive a zero for that assignment and may receive an F in the class.

G.E. Learning Objectives

- 1.** Provide an overview of basic knowledge, principles, methodologies, theories, and perspectives in biology.
- 2.** Offer opportunities to work in groups with other students to practice effective communication about concepts and issues in biology.
- 3.** Provide a broad understanding and appreciation of biology and encourage continuous inquiry and lifelong learning.
- 4.** Provide the framework to critically evaluate and use information from various scientific sources to answer questions relevant to biology.
- 5.** Understand the relationships between the fields of biology, chemistry, physics, geology and other sciences.
- 6.** Appreciate the interdependence of humans, natural ecosystems, and the diversity of life on earth.
- 7.** Develop more informed and responsible citizens with respect to issues concerning the living world.