

## BIOL 1020: World of Biology Lab Fall 2019

Instructor: Dr. Jamila Newton  
Office Hours: N254 11-noon

### **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.

### **Materials:**

- *World of Biology 1020 Laboratory Workbook, 6th ed. by Stevens and Fleming. (2014). Photocopies are not allowed.*
- A traditional calculator
- Computer and internet access outside of class
- Materials posted on Blackboard site

### **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.

This course meets GE learning outcomes in area B2: Develop broad knowledge of biological and physical sciences, humanities and creative arts, and social sciences.

Students attaining the second learning goal will be able to:

| <b>GE Learning Outcome</b>  | <b>Assignments and Quizzes will be used to assess learning outcomes in the lab activities listed below</b>  |
|---|---|
| 2.1 Explain and apply basic scientific methods.                               | Daphnia<br>Transport<br>Metabolism  |
| 2.2 Demonstrate an understanding of the living and non-living physical world. | Microscope and Cells<br>Mitosis, Meiosis and Genetics<br>Evolution<br>Phylogenies<br>Animal Adaptations<br>Plant Biology<br>Population Parameters<br>Central Valley Ecology |

### **Contacting the instructor:**

- Please do not email me over non-urgent matters. For emails, please include "Bio 1020" in the subject line. Emails can be sent to [jnewton4@csustan.edu](mailto:jnewton4@csustan.edu). Not all emails will receive a response, particularly if the concern has already been, or will soon be addressed.

**Grades:** Grades are based on the percentage of points earned out of points possible on assignments, quizzes, participation, and the optional final exam. You may not use phones to take photos of quizzes. Categories are not weighed. As a habit, keep all passed back work and check your progress on Blackboard. If you notice a grade discrepancy or mistake on a quiz or assignment, you must report it to the instructor within a week of receiving the graded material back.

- 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≥70% NC≤69.9%
- No other points are available.

|              |             |               |                    |
|--------------|-------------|---------------|--------------------|
| Quizzes      | 10 pts each | Best 10 of 11 | 100 pts            |
| Check Out    | 5 pts each  | up to 50 pts  | 50 pts             |
| Assignments  | pts vary    | All           | 50 pts             |
| Lab Final    | 30 pts      | Optional      | 30 pts             |
| <b>TOTAL</b> |             |               | <b>200-230 pts</b> |

- **Quizzes:** These will be administered at the beginning of each lab section. The quiz will mainly cover the material, skills, and concepts from the previous week's lab. You will not be allowed to leave the room once the quiz has started. The lowest score will be dropped. *(All 11 quizzes count in the case of an excused absence where a make-up could not be scheduled and the missed assignment score gets dropped instead.)*
- **Check out:** Students are expected to complete all of that day's exercises and questions which are assigned in lab. Some of the lab tasks will be checked at the end of class. Successful completion of these tasks will earn the student full points for that week. No points will be given if the student does not have their own notebook.
- **Assignments:** Several assignments will be given throughout the semester. They will be based on the concepts the students have learning in the lab exercises. Students will be given a week or two to complete the assignments outside of class. Assignments are due at the beginning of class on the "due date" given. Late assignments will NOT be accepted except in dire emergencies where **you must provide documentation of hardship** (a note from a doctor, a tow truck receipt, etc). If you are late, your work is late. Late work will not be graded. All submitted work must be original; no photocopies will be accepted. You cannot photocopy any page of the lab manual at any time.
- **Optional comprehensive final exam:** Opting in is a commitment. Students who opt to take the final will receive a zero if they are not present at the final. Once you start the exam, you may not leave the room and return to complete it.

### **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/etc. should be turned off and stored during class. After 2 warnings, the student will be dismissed from the lab, and any assignments pertaining to that lab will not be graded.**
2. **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. There are no make ups on quizzes, except in the case of documented medical or traffic emergencies (doctor's note, tow truck receipt). Make-ups must be completed before the next lab meeting.
3. **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 absences or who are consistently late will be dropped from the course. Since the lab set-up changes each week, it will not be possible to make up missed labs. You may not turn in a lab write-up/assignment for a lab you did not attend. If an assignment is due during your unexcused absence, you may not turn it in, even if you were present to do the lab.
4. Absences are excused if they are documented medical or traffic emergencies. **Please contact the instructor to schedule a make-up time for your quiz, and to turn in any assignments that were due during your absence.** Make-up must be completed before the next lab meeting. If you are not able to make up the lab you have missed because you cannot attend another section that week, or you are in the last lab section of the week, unfortunately, there will be no other make up, and therefore, you will not be able to turn in any assignments that are related to the lab you are missing. Students who find themselves in this unfortunate situation can drop one assignment grade instead of dropping their lowest quiz grade. Bring your documentation with you during your quiz make up.

**5. Zero tolerance for cheating/plagiarism.**

- A person cheating receives a 0 for that assignment/test; their name and a description of the offense may sent to the Dean of Students. Cheating offenses are punished by disciplinary probation, suspension, or expulsion. These actions may be noted on your transcript.
- **Two instances of cheating will earn an F grade in the course.**
- Any of the following are considered cheating: Plagiarism, copying, using devices, resources, or other material that have not been explicitly allowed, consulting resources during an online test, altering answers to receive more points on a graded item, false representation of you as someone else, and forging or altering a grade.
- If you think a fellow student is cheating we urge you to discretely tell us about it. We will maintain your anonymity.

**6. Assignments are due at the beginning of class.** No credit for late work. If you are late, your work is late.

**7. The final exam for this class is optional!** It will be comprehensive, worth 30 points, and will be structured similar to lab quizzes. If you sign up (opt in) to take the final and don't show, you will receive a zero on it. The last day to sign up for the optional exam is during the last lab of the semester.

8. In most labs you will work in small groups of 2-4 people, but **each student is required to hand in their own work!**

**9. As a group, help each other with clean up.** Each instance of not cleaning up will result in a deduction of 5 points for the group.

**10. Student athletes and DRS students:** please to notify me at the first lab meeting, or during my office hour.

**11. 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 lectures. Otherwise, you have to do it the old-fashioned way with pen and paper. If you record lectures in any form (video, audio, still pictures, etc.) without accommodation from DRS, that constitutes intellectual property theft, will result in a zero in participation points, and preclude you from turning in any assignments related to the lab session.

**Weekly Lab Schedule**

| Week   | Lab   | Quiz #  | Quiz grade | Check out pts |
|--|---|---------|------------|---------------|
| 8/26-30  | Syllabus, Lab Safety; Science vs Pseudoscience  |         |            |               |
| 9/3-6  | No labs this week <i>(except Tuesday does Lab 5)</i>  |         |            |               |
| 9/9-13   | Lab 1: Scientific Method and Daphnia Lab  |         |            |               |
| 9/16-20  | Lab 2: Cells and Microscopes  | Quiz 1  |            |               |
| <i>Census Date is Sept 19. This is the last day to change your grading option through Enrollment Services.</i> |   |         |            |               |
| 9/23-27  | Lab 3: Transport  | Quiz 2  |            |               |
| 9/30-10/4  | Lab 4: Metabolism   | Quiz 3  |            |               |
| 10/7-11<br><i>No lab Tuesday</i>   | Lab 5: Cell Cycle & Mitosis.<br><i>Tuesday Oct 8<sup>th</sup> labs will be made up on Tuesday Sep 3<sup>rd</sup>.</i> | Quiz 4  |            |               |
| 10/14-18   | Lab 6: Genetics and Meiosis   | Quiz 5  |            |               |
| 10/21-25   | Lab 8: Evolution  | Quiz 6  |            |               |
| 10/28-11/1   | Lab 7: Phylogenetics  | Quiz 7  |            |               |
| 11/4-8   | Lab 9: Plant Biology  | Quiz 8  |            |               |
| 11/12-15<br><i>No lab Monday</i>   | Lab 10: Animal Adaptations<br><i>Monday Nov 11<sup>th</sup> labs will be made up on Monday Nov 25<sup>th</sup>.</i>   | Quiz 9  |            |               |
| 11/18-22   | Lab 11: Population Parameters, includes an assignment   | Quiz 10 |            |               |
| 11/25-27   | No labs – Thanksgiving week <i>(except Monday does Lab 10)</i>  |         |            |               |
| 12/2-6   | Lab 12: Central CA Ecology  | Quiz 11 |            |               |
| 12/12-18   | OPTIONAL Final Exam- scheduled with instructor  |         |            |               |