

**Instructor:** Amaneet Sanghera

**Phone:** (209) 667-3480

**Office Hours:** Monday 10 – 10:50, Wednesday and Thursday 5 – 5:50, or by appointment

**Office:** 254 Naraghi Hall

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**Labs:** Tuesdays 11:00 – 1:50 PM, 223 Naraghi Hall

**Text:** *World of Biology 1020 Laboratory Workbook, 5th ed. by Stevens and Fleming. (2014).*

Always bring this text to lab each week. Note also that the lecture textbook (from BIO 1010) will also be useful for labs.

**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 Objectives:**

1. Provide you with a conceptual framework of biological thinking and methods;
2. Provide you with an overview of current research in biology from molecular to ecological scales;
3. Provide you ample opportunity to work collaboratively and communicate effectively about biological topics;
4. Help you develop effective study strategies that will enable you to succeed in all your courses and encourage continuous inquiry and learning;
5. Demonstrate the relevance of all sub-disciplines of biology to each other and to other fields such as chemistry, physics, geology, anthropology, art, economics, etc.;
6. Demonstrate the dependence of humans on biological resources and biodiversity;
7. Enable you to live, work and play as an informed and responsible citizen of this planet.

**Lab Policies:** At this level, you are expected to arrive to class on time and ready to learn. You should expect to talk frequently in class and work productively both in groups and alone. You must 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. After 2 warnings, the student will be dismissed from the lab, and any assignments pertaining to that lab will not be graded.

Safety is paramount! Please work safely in lab all semester. **Biology Lab Safety Quiz** on Blackboard. All students must complete this online safety quiz by the next lab session in order to secure their enrollment in lab. Students who do not pass this quiz are not allowed to be in the lab room at any time. You may take the quiz as many times as you need to.

Like any lab course, this one requires your active participation each week. As per university regulations, students with excessive tardies or absences will be dropped from the course. Note that, since the lab set-up changes each week, it will not be possible to make up missed labs or quizzes. Unexcused absences will result in no points for the week.

Quizzes will begin promptly at 11 AM. If you are late you will have less time (or none!) to complete the quiz, so please make every effort to be on time.

In most labs you will work in small groups of 2-4 people, but each student is required to hand in their own lab write-ups! These will be due at the beginning of the next lab meeting.

Food and drinks are not permitted in the lab at any time.

Closed-toed shoes are required. Anyone with open-toed shoes (sandals for example) will not be permitted in the lab.

We are not the only class that uses this lab; as a courtesy, please keep the lab as clean as possible.

Any student wishing to record the class in any fashion (video, audio, transcriptions, etc.) must register with Disability Resource Services; in such a case recording the class is an approved accommodation and the student will be required to sign a "Recording Agreement" disallowing them from sharing the recording with others unless said individuals are also approved for recording by DRS.

**Cheating and Plagiarism:** I have a zero-tolerance policy for such conduct. Your work should reflect your own effort and words. Any verified instances of cheating and/or plagiarism will result in an automatic F in the course and referral to the appropriate student disciplinary committee.

**Grading:** Please allow one week for all materials to be graded and returned to you. Grades will be based on quizzes, all lab write-ups, participation, and the optional final exam. No other points will be available. Eleven quizzes will be given throughout the term. Your lowest quiz score will be dropped. Write-ups will be graded based on completing all questions, data collection and careful presentation of graphs/diagrams. I will grade only six lab write-ups over the term; I will not tell you in advance which these will be, so your best bet is to turn them all in on time. We will go over all lab write-ups in class and you will have an opportunity to see a key or at least check your answers for correctness. Late work will not be accepted except in dire emergencies. All submitted work must be original; no photocopies will be accepted. The final exam for this class is optional! It will be comprehensive and will be structured similar to lab quizzes and lab write-ups. Grades are based on the percentage of points earned out of points possible on all lab write-ups, quizzes, participation, and the optional final exam.

Assignment	Points
11 quizzes x 10 pts. each (lowest score dropped)	100
6 graded write-ups x 15 pts. each	90
6 non-graded write-ups x 5 pts. each	30
Participation	10
Optional Final Exam	30
<b>Total</b>	<b>230 or 260</b>

Grading scale: A=90-100% B= 80-89% C= 70-79% D= 60-69% F<60% CR>69% NC<70%.

**Census Date:** Census Date is Sept. 18th. This is the last day to add/drop the course or change your grading option without my signature. Nov. 7th is the last day to change your grading option with my signature; it is your responsibility to submit this form to Admissions and Records by 5pm the next day. I will adhere to the final grading option indicated by Admissions and Records. Final grades will not be changed once they have been submitted.

**Tentative Lab Schedule:**

Week	Date (Tuesdays)	Lab Activity
1	26 Aug.	Attendance, Syllabus, Introduction
2	2 Sept.	Cells & Microscopes
3	9 Sept.	Scientific Method & Daphnia
4	16 Sept.	Transport
5	23 Sept.	Metabolism
6	30 Sept.	Cell Cycle & Mitosis
7	7 Oct.	Genetics & Meiosis
8	14 Oct.	Phylogenetic Trees
9	21 Oct.	Evolution
10	28 Oct.	Plant Adaptations
11	4 Nov.	Animal Adaptations
12	11 Nov.	No Lab
13	18 Nov.	CA Ecology
14	25 Nov.	Population Parameters
15	2 Dec.	Exam

**Please note:**

The above schedule and procedures in this course are subject to change in the event of extenuating circumstances.