

**BIOL 1010 “Principles of Biology”  
CSU Stanislaus  
Course Syllabus**



**Instructor:** Dr. Sara Emerson  
**Office:** 253 Naraghi Hall  
**Phone:** (209) 664-6548 (Better to send an email than to leave a message)  
**Email:** semerson1@csustan.edu  
**Office Hours:** Tues 2-3 pm, Fri 12-2 pm, or by appointment.

**Course Description:** This course satisfies the B2 (life science) lower division general education requirement. This is a survey course; we will explore many basic biological concepts as they relate to living organisms under the broad categories of (1) molecules and cells, (2) genetics, (3) evolution and (4) ecology. We do not cover physiology in this course; this would be more appropriate for pre-med or pre-health students. We do not go as deep into biology as the biology majors do, but we will cover a lot of material! Classes meet face-to-face, and you will access an online platform (through Blackboard) called InQuizitive frequently to reinforce concepts covered in class. I will ask you to think at high cognitive levels beyond basic memorization of facts, and how to apply what you learn in this class to choices you make in your life. **This course is fast paced and language intensive.** If you are currently in or still need to take ENGL 1000, ENGL 1001 or ENGL 1006 please consider taking BIOL 1010 another time.

**Lab:** There is no laboratory requirement for this course, but BIOL 1020 is highly compatible with this course.

**Text:** *Biology Now, 2nd Edition (without physiology)* by Houtman et al. The one you get at CSU Stan bookstore is a loose-leaf version that comes with the e-book and InQuizitive included. You can also go all digital and buy the e-book + InQuizitive. Or, you can look for a used copy of the textbook and buy InQuizitive alone for the cheapest price. No matter which way you do it, you will need some version of the text and InQuizitive (this is the required online homework program for our course). Getting the e-book and InQuizitive can only happen 1 way: through Blackboard! **Go to BB**, log in and go to our course, click on the **Course Materials** tab to the left, click INQUIZITIVE online homework (at the top of the list of materials). This takes you to something called an LTI...a link between BB and InQuizitive. From there, you can explore “purchase options”, and later this is where you will do homework.

**Course Goals:** As this is a B2 General Education course, the overarching goals of the course are to:

1. Develop the skills and competencies necessary to effectively participate in our society and the world (this includes demonstrating effective oral and written communication, thinking logically, creatively and critically, applying quantitative reason and skills to solve problems, and using technology effectively to gather and communicate information).

Outcome 1.4 of this goal will be assessed in the course:

*Apply quantitative reasoning concepts and skills to solve problems.* Methods of calculating mitotic cell divisions, genetic combinations of alleles, population growth rates, and species diversity will be assessed through assignments and exams.

2. Develop an understanding of the contribution to human knowledge and culture of the biological sciences (this includes applying the scientific method, demonstrating understanding of living

and non-living aspects of the world you live in, of human cultural and scientific endeavors, and the structures and institutions that frame human interactions).

Outcomes 2.1 and 2.2 of this goal will be assessed in the course:

*2.1 Explain and apply basic scientific methods*

Students' understanding of the methods of gathering data on the history of the Earth, medical research, genetics, evolution, biological populations, conservation and ecology will be assessed through assignments and exams.

*2.2 Demonstrate an understanding of the living and non-living physical world*

Students' understanding of the biotic and abiotic world will be assessed through assignments and exams at the levels of atoms, cells, organisms, populations, communities, and the biosphere. Concepts include how cells work, including metabolism, photosynthesis, and genetics. On a larger scale, we examine evolution of populations, community interactions, ecosystems, and the interactions between living things and global variables, such as meteor showers, acid rain, and climate change.

More specific to this class, after completing it you should be able to:

1. Demonstrate your ability to think like a biologist.
2. Speak & write coherently about biology with biologists & non-biologists alike.
3. **Apply biological knowledge to make informed decisions in your life.**

**Participation and Attendance:** Please arrive to class on time and ready to learn. **I expect all students to attend every class session.** Final grades are positively correlated with attendance, especially in this course. **You will be able to earn *classroom activity points*, but you cannot make them up if you are absent.** You will talk and work frequently in small groups, and sometimes present your ideas to the entire class. Most importantly, please do not disrupt the learning environment, rights, and property of others.

**Respectful Classroom Atmosphere:** Everyone deserves to study and work in a respectful, non-hostile environment. Moreover, all students, faculty and staff are responsible for preventing harassment, or reporting it if it occurs. Please keep in mind that a standard of polite, respectful behavior is expected, and I reserve the right to deduct points from a student's participation grade if disrespectful behavior is observed.

**iClickers:** You will need to purchase/rent/reuse an iClicker remote device, available at the CSU Stan bookstore or anywhere that you can find one. All versions of iClicker will work, but it must be the iclicker brand. Expect to click most days in class. Make sure you have fresh batteries in your remote.

**Assignments:** Assignments will come in the form of InQuizitive, in-class concept reviews, and clicker questions. **If you are absent from class, you cannot make up the clicker or concept review points: One of many reasons to attend class regularly!**

**InQuizitive (IQ):** If you buy the textbook new from the CSU Stan bookstore, it comes with access to the InQuizitive website. Access IQ through our class Blackboard website using the student code that comes with your text. If you get a used book from another source, you will have to purchase access to IQ through the book publisher's website. Either way, you must create an IQ account, as you will access it

regularly throughout the semester. I will track your access and use of IQ, and points earned on the IQ website will figure into your final grade. Please note: **YOU MUST ALWAYS ACCESS IQ THROUGH THE LINK IN BLACKBOARD**, OTHERWISE YOUR HOMEWORK SCORES WILL NOT TRANSMIT TO ME!

**Exams:** There are three midterms and one final exam. Midterm exams cover a single unit; the final is comprehensive (~35% old material, ~65% new material since midterm #3). Exams will consist mainly of multiple choice. You will need to *bring your own* Scantron forms (882-E) for all exams. Requests for early exams must be submitted *in writing* prior to the scheduled exam with evidence of your hardship. If you miss an exam and must make it up, you will also need to provide strong evidence of hardship. Electronics of any kind are *strictly forbidden* during exams. If you are seen with your phone on your desk, lap, etc., that constitutes cheating, and appropriate consequences will occur. **No makeup exams will be given after graded exams are returned to the class.**

**Special Accommodations and Recording Lectures:** This course is ADA accessible. Students with documented disabilities should seek special accommodations for all classes through the Disability Resource Services office on campus (MSR 210). If DRS notifies me that you require ADA accommodations, then you will receive them. Examples of ADA accommodations include extra time for exams, permission to record lectures, and note-taking assistance. NOTE: Student athletes who will miss class for games/matches should contact me directly for each missed class. Otherwise, your absences will not be recorded as excused.

**Grades:** There are 800 points possible in this course (plus 20 extra credit):

Activity/Assignment	Points	Grading Scale
Midterm Exams (x3)	300	A = 90 – 100%
Final Exam	140	B = 80 – 89%
Concept Reviews (x14)	70	C = 70 – 79%
InQuizitive (x20) (Skip ch. 15)	200	D = 60 – 69%
Clicker Questions	90	F = 59% or below
<b>TOTAL</b>	<b>800</b>	

\* Extra Credit Summaries (x4)      20 points possible

**Getting Help & Study Skills:** The following suggestions may help you succeed in this and other classes.

- 1) **Read the assigned pages** before class and bring your questions to class.
- 2) **Attend class** and participate actively.
- 3) **Complete all assignments** and turn them in on time.
- 4) **Take notes** in a way that is helpful to you, even if you have to use a lot of paper.
- 5) **Join a study group!** Students who study in groups tend to do better than those that study alone.
- 6) **Study** for the exams well before the morning of the exam.
- 7) **Learn how you learn** and then stick with a style or process that is successful for you. Deep learning takes time and is impossible to do in a single session before an exam. **Form a study group that meets regularly** so you can talk about new concepts and review terminology. When studying for exams, focus primarily on lecture notes, InQuizitive, and the assigned text readings.

There is help on campus for students struggling with biology!

1. The **Central Valley Math & Science Alliance**, located in 124 Naraghi Hall, is a free walk-in science and math tutoring center. With both student and faculty tutors available from 9am – 5pm daily, there should be someone available to answer your questions.
2. The **Biology Club** is a group of students who have gone through general biology courses and they are willing to offer advice and help, especially if you buy them coffee or bring them cookies.
3. **Tutoring Services** on the ground floor of the CSU Stan Library (L-112) has drop-in tutoring for biology; check their office or website for their schedule.
4. The **Advising Resource Center** (MSR 180).
5. **Student Support Services** (MSR 230).
6. **Program for Academic and Career Excellence (P.A.C.E.)** in MSR 245

Of course, I will work hard to help you in class and out. Come to office hours, send me an email, etc. It's my job to help you!

#### Other resources:

<https://www.csustan.edu/compliance/title-ix> (Preventing & reporting abuse; rights of pregnant students)

<https://www.csustan.edu/dreamers> (DACA updates and info on scholarships for application renewal)

#### Tentative Lecture Schedule (note, we are skipping chapter15):

WEEK	DATE	TOPIC(S)	Read:
1	Aug 22	Intros, syllabus	Syllabus, Ch. 1
2	Aug 27	Nature of science; Interpreting science	Ch. 1, 2
	Aug 29	Defining life	Ch. 2,3
3	Sep 3	Cellular basis of life	Ch.4
	Sep 5	How cells work	Ch. 5
4	Sep 10	Cells; Catch up/Review	Chapters 1-5
	Sep 12	<b>MIDTERM #1</b>	Chapters 1-5
5	Sep 17	Cell division & mitosis	Ch. 6
	Sep 19	Cell division & meiosis	Ch. 6, 7
6	Sep 24	Single gene inheritance	Ch. 7
	Sep 26	Complex inheritance	Ch. 8
7	Oct 1	DNA structure	Ch. 9
	Oct 3	DNA function	Ch. 10
8	Oct 8	<b>Random School Holiday – No Class!</b>	
	Oct 10	Catch up/Case study	
9	Oct 15	Review	Chapters 6-10
	Oct 17	<b>MIDTERM #2</b>	Chapters 6-10
10	Oct 22	Darwin's big idea & evidence for evolution	Ch. 11
	Oct 24	How populations evolve	Ch. 12
11	Oct 29	Darwin meets genetics, species	Ch. 13
	Oct 31	Evolution of biological diversity	Ch. 14
12	Nov 5	Evolution of biological diversity	Ch. 16 (skip Ch. 15)
	Nov 7	Human evolution	Ch. 17
13	Nov 12	Catch up/Review	Chapters 11-14, 16-17
	Nov 14	<b>MIDTERM #3</b>	Chapters 11-14, 16-17

14	Nov 19	Ecology/Climate Change	Chapter 18
	Nov 21	Ecology/Climate Change	Chapter 18
15	Nov 26	Population Biology	Ch. 19
	Nov 28	<b>Thanksgiving Holiday – No Class!</b>	
16	Dec 3	Community ecology	Ch. 20
	Dec 5	Ecosystems	Ch. 21
17	Dec 10	Catch up/Review	Chapters 16-19
	Dec 12 & 17	<b>FINAL EXAM: 11:00 class:</b> Dec. 12, 11:15am – 1:15 pm. <b>12:30 class:</b> Dec. 17, 11:15am – 1:15 pm.	35% cumulative, 65% Chapters 15-18

