BIOL 1010 "Principles of Biology"
CSU Stanislaus
Course Syllabus

Instructor: Dr. Sara Emerson
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Office Hours: Mon 1-2 pm, Weds 12-2pm, or by appointment.
Lecture: MWF 3:00 – 3:50 pm, DBH 166

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 3x a week, 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.

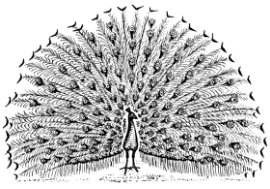
Text: *Biology Now, Core Edition* by Houtman et al. The one you get at CSU Stan bookstore is a loose-leaf version that comes with the e-book and InQuizitive included. You can also go all digital and buy the e-book + InQuizitive for $57. Or, you can look for a used copy of the textbook and buy InQuizitive alone for $20. 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 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).
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).

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 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. Alternatively, you can download the iclicker app at https://www.iclicker.com/students, and click from your phone. You'll need IOS 9.0 or up or Android 4.0 or up. Expect to click most days in class. Make sure you put fresh batteries in your remote or have your phone charged!

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 website InQuizitive. 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. We will have a representative from the publisher in class to help you log in to IQ and create an account. 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 have to 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 40 extra credit):

Activity/Assignment	Points	% of Total Points	Grading Scale
Midterm Exams (x3)	300	37%	A = 90 – 100%
Final Exam	150	19%	B = 80 – 89%
Concept Reviews (x14)	70	9%	C = 70 – 79%
InQuizitive (x19)	190	24%	D = 60 – 69%
Clicker Questions	90	11%	F = 59% or below
TOTAL	**800**	**100%**	
*** 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!

Tentative Lecture Schedule:

WEEK	*DATE*	*TOPIC(S)*	*Read:*
1	Aug 23	Intros, syllabus	Syllabus, sign on to IQ
	Aug 25	Nature of science	Ch. 1
2	Aug 28	Nature of science	Ch. 1, 19
	Aug 3	Nature of science (vaccine case study)	Ch. 19
	Sep 1	Defining life	Ch.2
3	Sep 4	**Labor Day – No Class!**	
	Sep 6	Cellular basis of life	Ch.2, 3
	Sep 8	Cellular basis of life	Ch. 3
4	Sep 11	How cells work	Ch. 3,4
	Sep 13	Cells	Ch. 4
	Sep 15	Review	Chapters 1-4, 19
5	Sep 18	**MIDTERM #1**	Chapters 1-4, 19
	Sep 20	Cell division & mitosis	Ch. 5
	Sep 22	Cell division & mitosis	Ch. 5
6	Sep 25	Cell division & mitosis	Ch. 5, 6
	Sep 27	Single gene inheritance & meiosis	Ch. 6
	Sep 29	Single gene inheritance & meiosis	Ch. 6, 7
7	Oct 2	Complex inheritance	Ch. 7
	Oct 4	Complex inheritance	Ch. 7, 8
	Oct 6	DNA structure & function; genetic mutations & cancer	Ch. 8
8	Oct 9	Genes to proteins	Ch. 8, 9
	Oct 11	**Random School Holiday – No Class!**	
	Oct 13	Genes to proteins	Ch. 9
9	Oct 16	Review	Chapters 5-9
	Oct 18	Review	Chapters 5-9
	Oct 20	**MIDTERM #2**	Chapters 5-9
10	Oct 23	Darwin's big idea & evidence for evolution	Ch. 10
	Oct 25	Evolution	Ch. 10, 11
	Oct 27	How populations evolve	Ch. 11
11	Oct 30	Darwin meets genetics, species	Ch. 11, 12
	Nov 1	Darwin meets genetics, species	Ch. 12
	Nov 3	Evolution of biological diversity	Ch. 13
12	Nov 6	Evolution of biological diversity	Ch. 13
	Nov 8	Human evolution	Ch. 14
	Nov 10	**Veterans Day' observed – No Class!**	
13	Nov 13	Human evolution	Ch. 14
	Nov 15	Review	Chapters 10-14
	Nov 17	**MIDTERM #3**	Chapters 10-14
14	Nov 20	Human impacts	Chapter 15
	Nov 22	Human impacts	Chapter 15
	Nov 24	**Thanksgiving Holiday – No Class!**	

15	Nov 27	Population Biology	Ch. 16
	Nov 29	Population Biology	Ch. 16
	Dec 1	Community ecology	Ch. 17
16	Dec 4	Community ecology	Ch. 17
	Dec 6	Ecosystems	Ch. 18
	Dec 8	Ecosystems	Ch. 18
17	Dec 11	Review	Chapters 15-18
	Dec 15	**FINAL EXAM 2-4 pm**	35% cumulative, 65% Chapters 15-18