

SYLLABUS

**BIOLOGY 1010-002: PRINCIPLES OF BIOLOGY
CSU Stanislaus**

Lectures: Mondays and Wednesdays 6-7:15pm in 102 Bizzini Hall (aka C 102)
Instructor: Dr. Stacie Hooper
Email: shooper@csustan.edu
Office: 254 Naraghi Hall
Office Hours: MW 1-2pm and T 12-1pm, or by appt.

Welcome to Biology 1010! Principles of Biology will introduce you to the basic principles and processes of biology. We will be exploring life on Earth, beginning with the molecules that allow life to function, moving on to cells, genes and DNA, evolution, and finally to ecology, which is the study of interactions between species and their environment. Biology is one of the only sciences, if not the only science, that intersects all others: physics, chemistry, geology, hydrology, etc. This course satisfies the B2 (life science) lower division general education requirement.

We do not cover physiology in this course (more appropriate for pre-med or pre-health students), and we do not cover material as deeply as the biology majors do, but we will still cover a lot of material! I will ask you to think at high cognitive levels beyond basic memorization of facts, and 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 I highly recommend that you take BIOL 1020 this semester if possible! I am a firm believer in reinforcing concepts learned in lecture with activities in lab that illustrate these concepts. Students in BIOL 1010 tend to do better if they take BIOL 1020 in the same semester.

REQUIRED COURSE MATERIALS

Campbell Essential Biology 5th Edition (with Mastering Biology). Available in the Bookstore and from online sellers. If you did not purchase Mastering Biology with your textbook, or have a used copy of the 4th edition without it, you will need to purchase a site license:

<http://www.pearsonmylabandmastering.com/northamerica/masteringbiology/>. Homework will be done through the Mastering Biology website, so make sure you have access by the end of the first week of class. You can log onto the Mastering Biology website for this course using the **course ID: MBHOOPER01305. While the 5th edition is listed as required, the 4th edition will work as well.**

I-clickers are required for this course. I-clickers will be used every day in class, and you are responsible for bringing your remote daily. Register your i-clicker online at www.iclicker.com/registration right away using your CSU Stanislaus student ID number and remote ID (series of numbers and letters found on the bottom or back of your i-clicker remote; be sure to include all the preceding zeroes of your ID number, e.g. 000456123). **You can purchase a used clicker and re-register it under your name; however, they now charge a \$7 fee to register a used clicker (I agree, it stinks, but it's still cheaper than a new one).** Keep a few spare batteries with you just in case.

Access to the Blackboard course website. Go to <http://my.csustan.edu> and click on the "Blackboard" link on the left side of the page. Log in and look for section 002 of Biology 1010 to find course content. I will post lecture slides, assignments and study tools on the Blackboard website; check it regularly for updates.

Important Dates: Census Date is Feb. 23rd. This is the last day to drop the course or change your grading option without my signature. Apr. 16th is the last day to change your grading option with my signature. I strictly adhere to the grading option Academic Records has on file for you when I submit final grades. **I will not change grades once final grades have been submitted.** Consult your advisor before making your decision.

Special Accommodations and Recording Lectures: Recording my class in any form (video, audio, still pictures, etc.) without my permission constitutes intellectual property theft and is not permitted. However, students with documented disabilities should seek special accommodations for all classes through the Disability Resource Services office (DRS) on campus in 210 MSR. Once DRS notifies me of the ADA accommodations you need you will receive them. NOTE: Student athletes who will miss class for games/matches should have their coach contact me, and I will do my best to accommodate your schedule.

GRADING AND POINTS

Midterm Exams (3 @ 100 pts each)	300 pts
Cumulative Final Exam	150 pts
Quizzes (10 @ 5 pts each)	50 pts
Homework	240 pts
<u>Clicker questions and activities</u>	<u>110 pts</u>
Course Total	850 pts

This course will be graded on a straight percentage, not a curve (A = at least 765 pts; B = between 680 and 764 pts and so on). Grading will include plus/minus.

COURSE COMPONENTS

- **Lecture:** The start of lecture is a good time to ask questions that came up during the reading or after thinking about the previous lecture's material. I will provide outlines of my lecture slides before class on the Blackboard website (these are outlines only, not the full lecture slides). I encourage you to print them and take notes directly on them or using your tablet or laptop. These slides are not a substitute for attending lecture! They are intended to help you organize your notes only. The day after each lecture I will post the full lecture slides so you can check for anything that you missed. **Because of this, I recommend writing down what you hear and what we are discussing, rather than try to copy every word from each slide.**

I will assume that you have completed the reading for each day's lecture (schedule provided below) and have come prepared to discuss the material and apply concepts. There is plenty of research that shows that students who regularly attend class get higher grades. You will be actively participating in lecture via clickers, question/answer, group discussion and activities, and may work individually or in groups. **In-class activities and clicker questions cannot be made up if they are missed (the lowest 4 clicker scores will be dropped).** Clickers make class more interactive, help me make my teaching (and your learning) more effective, and allow you to earn points for participation and activities. In-class assignments, quizzes and clicker questions represent a substantial portion of your final grade (see point breakdown above). Because of the weight given to these assignments, a student who gets an A on all of the tests but only comes to class on exam days could end up with a lower grade in the course, while a student averaging a C on tests could earn a higher grade if they come to class and participate on a regular basis.

Lecture will focus on the more difficult and complex parts of the material. Each lecture will come with 'learning objectives'. These are questions that you should be able to answer by the end of the lecture. These questions are also a good study guide when preparing for exams since they emphasize the most important aspects of each lecture topic. **I encourage you to ask questions during lecture; if you have questions, chances are other students do too.**

- **Exams:** The course is divided into 4 units. The first three are accompanied by midterms, the final will cover material from the whole course but will emphasize the last unit. Exams will consist of a mix of multiple-choice, true/false, matching and fill-in or short answer questions (no essays). Exam questions can come from the *reading* and the *lectures* for each unit. **You are responsible for bringing your own Scantron forms to exams (type 882E) and a #2 pencil.** Exam dates are on the schedule below.

Make-up exams will only be allowed in extreme circumstances (hospitalization, death of a family member for example). Oversleeping or traffic/car problems are not acceptable excuses for missing an exam. **You are responsible for notifying me via email as soon as possible, and documentation of the emergency is required before a make-up exam will be given.** Once I grade and hand back an exam, however, no make-ups will be allowed under any circumstances. Generally, this means that a make-up exam must be taken within a week of the original exam date. If this is not possible, you will have to accept a zero on that exam. Make-up exams will be different from the one given to the rest of the class.

The final exam is tentatively scheduled for 5-7pm on May 20th. Please let me know as soon as possible if you have a conflict with this date and time.

- **Homework:** This will be handled through the Mastering Biology website. Each lecture will have a 5 point homework and a 5 point adaptive follow-up assignment associated with it. These assignments are intended to help you understand the material, discover misconceptions or gaps in your understanding, and give you the opportunity to earn points outside of class. Assignments will be available at the beginning of each section, and will be due the day before the midterm (or the final for the last section), allowing you to work at your own pace. **Because of this however, late homework will not be accepted, or made up if it is missed, although the 4 lowest homework scores will be dropped.**
- **Quizzes:** There will be 12 graded quizzes during the semester (5 points each), one per week except for weeks with an exam. Quizzes will be based on the lecture content for that day's lecture. **Quizzes cannot be made up, but the two lowest quiz scores will be dropped.** Quiz questions may also show up on midterms or the final. Quizzes will be taken on a separate Scantron 882E form that we will re-use throughout the semester.

GENERAL POLICIES

- Unless told otherwise, you must complete and submit your own work for all assignments. You may work with other students on activities, but the end product of this work *must always* be your own, written in your own words created by your own brain. Anything else is cheating.
- Be on time. I know that sometimes arriving late is unavoidable, but please enter the classroom *quietly*. If you must leave early, again, exit *quietly* to minimize disturbing others as you leave.
- Eating and drinking are fine during lecture, but please use common sense. Keep the mess and noise to a minimum, and clean up after yourself. No eating is permitted during exams.

- **I encourage interaction and questions during lecture, but please don't talk while I am talking. Be respectful of me and your fellow students who are here to learn (and are paying to take this course). Likewise, cell phones should be silenced and put away during lecture. Laptops/notebooks are okay as long as the sound is off and you're not web-browsing. I may walk around the room as I'm lecturing or during activities, so be forewarned! I will not hesitate to dock points from folks who are chit-chatting while I'm lecturing (and don't have a question). The same goes for texting or web-surfing during lecture.**
- This class is a "judgment-free zone" at all times. This means that while you may disagree with somebody's opinion on a subject, you do not have the right to insult or criticize them on a personal level. Discussions are more interesting and lively if people do disagree on a subject, but we need to be critical of the position, not the person. I will not tolerate hostility in the classroom, and anyone participating in this behavior will be escorted out of the room and not allowed to return for the rest of the class period.

HOW TO SUCCEED IN THIS COURSE

This course covers a large amount of material, and keeping up with the material is critical to earning a good grade. In fact, catching up is very difficult, if not impossible, if you fall behind. It is simply not possible to cram. Biology has a language all its own (most of it Latin I'm afraid), and this will take time to master in addition to difficult concepts. Make the knowledge yours, don't try to memorize! Do not be overly concerned if you do not immediately grasp the material, if it were that easy we would not need lectures.

To maximize your success in this course, I recommend that you:

- Attend class regularly. Take good notes: write down what you hear, don't try to copy down every word on each slide. Pay particular attention to diagrams and boldface terms. Fully participate in group activities.
- Consistently read the assigned readings before lecture. Focus on boldface terms and try to answer the summary questions at the end of each chapter section. Take notes while you're reading, especially where you have questions.
- Set aside time for **daily, focused, uninterrupted studying**. Review and re-write your notes after each lecture, preferably the same evening but definitely within one day. I can't stress enough how useful this is.
- Once you realize you don't understand something, do something about it! **Don't wait until the day before an exam to address your knowledge gaps**. See me, consult the textbook or other sources, consult with your fellow students, do whatever it takes so that you understand what you need to understand. What you should NOT do is nothing.
- To most effectively learn it's important that you spend time with it in an **active** way: discuss it with your peers, making tables, charts, diagrams, flashcards or outlines and describe concepts in your own words.
- Study groups are very helpful! Get to know your neighbors; some or all of these students might be interested in meeting as a study group outside class a few times a week. Test each other with flashcards. Explain things to each other. There is no better way to learn something than to have to teach someone else, and no curve means no competition. And who knows, you may meet someone special (I did ☺).
- Tutoring services are available to assist you on campus: www.csustan.edu/tutoring, call 209-667-2642, or check out Library 112. The **Central Valley Math & Science Alliance**, located in 124 Naraghi Hall, is a free walk-in science and math tutoring center. Both student and faculty tutors are available from 9am – 5pm daily, there should be someone available to answer your questions. 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.

My policy is the same as that of your other instructors. Bottom line: just don't do it. The consequences are not worth the risk. Taking time to study offers a much bigger payoff than cheating. Anyone caught cheating or plagiarizing will automatically receive a zero on that assignment or exam, a referral to a disciplinary committee, and quite possibly an F in the course! Protect your academic integrity; it's one of your most valuable assets. Examples of cheating: passing off someone else's work as your own (not citing sources properly in papers or copying), using multiple clickers to click for someone else, using your cell phone during a quiz or exam, or looking at someone else's exam.

COURSE GOALS AND LEARNING OBJECTIVES

Students who successfully complete this course will gain:

1. An understanding of the important theories and concepts of biology, including the major environmental and natural resource problems facing California and the world.
2. An improved ability to form opinions and create understanding based on the interpretation of scientific information, including graphs and other forms of data.

The 7 Goals of Biology GE Courses:

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.

Make the most out of your educational opportunities here—I will do my best to help you succeed in any way possible, but ultimately it is up to you.

Week	Date	Topic	Reading
0	Jan. 28	Intro/Syllabus	
1	Feb. 2	Chemicals of Life, Water	Ch. 2, 3
1	Feb. 4	Cells, Membranes	Ch. 4
2	Feb. 9	Metabolism, Enzymes	Ch. 5
2	Feb. 11	Energy flow, Photosynthesis	Ch. 7
3	Feb. 16	Energy flow, Respiration	Ch. 6
3	Feb. 18	Mitosis, Meiosis	Ch. 8
4	Feb. 23	Midterm 1	
4	Feb. 25	Inheritance	Ch. 9
5	Mar. 2	DNA Structure and Function	Ch. 10
5	Mar. 4	Viruses	Ch. 10
6	Mar. 9	Gene Control, Cancer	Ch. 11
6	Mar. 11	DNA Technology	Ch. 12
7	Mar. 16	Forensics	Ch. 12
7	Mar. 18	Evidence for Evolution	Ch. 13
8	Mar. 23	Midterm 2	
8	Mar. 25	Natural and Sexual Selection	Ch. 13
9	Mar. 30	Speciation	Ch. 14
9	Apr. 1	Classification	Ch. 14
10	Apr. 6	Spring Break	
10	Apr. 8	Spring Break	
11	Apr. 13	Microbes	Ch. 15
11	Apr. 15	Plants, Fungi, Animals I	Ch. 16, 17
12	Apr. 20	Animals II, Humans	Ch. 17
12	Apr. 22	Animal Behavior	N/A
13	Apr. 27	Midterm 3	
13	Apr. 29	Ecology, Climate Change	Ch. 18
14	May 4	Human Impacts	Ch. 19
14	May 6	Population Ecology	Ch. 19
15	May 11	Biodiversity, Community Ecology	Ch. 20
15	May 13	Community Ecology, Conservation	Ch. 20
	May 20	Final Exam	5-7pm (tentative)