



Biology 2650: Environmental Biology (Spring 2016)

Instructor: Dr. Laurissa Hamilton
Office: N257 (Naraghi Hall of Science)
Office Hours: MWF noon – 12:45pm, Mon 2 - 3pm, and by appointment
Contact Information: my office or after class (best) or lhamilton@csustan.edu (good) or (209) 667-3489 (worst)
Class Time/Place: MWF; 11:00 a.m. – 11:50 a.m. in P166
CRN & Section: 20161, Sec. 001

Course Introductory Material

Welcome to Biology 2650! Environmental Biology is intended to present non-biology majors with an overview of issues in biology, ecology, and environmental science. If you don't feel confident about your abilities in science, don't worry! Because the class is filled with students with diverse backgrounds and academic interests, everyone will have a unique perspective on the topics we cover, which should make for a very interesting semester! It is my hope that you will leave this course with a greater appreciation for the beauty and value of our natural resources, a greater understanding of science especially as it applies to the study of biology so that you can make more informed decisions about issues that affect you in your daily life.

Unlike Principles of Biology (BIOL 1010), which covers an overview of all aspects of biology, this course is specifically focused on environmental biology. Essentially, this course is an introductory environmental science course, with a strong focus on the field of ecology. Thus, there are many fields of biology that we will skip or just cover very briefly, such as genetics, cell biology, anatomy, physiology, metabolism, etc. If you want to get a more complete overview of the field of biology, BIOL 1010 is a better choice than this class. This course satisfies the B2 (life science) lower division general education requirement.

Required Course Materials:

Essential Environment 5th Edition by Withgott and Laposata (with Mastering Environmental Science). Should be available in the Bookstore and from online sellers. If you did not purchase Mastering Environmental Science with your textbook, or have a used copy without it, you will need to purchase a site license: <http://www.pearsonmylabandmastering.com/northamerica/masteringenvironmentalscience>. Homework will be done through the Mastering Environmental Science website, so make sure you have access by the end of the first week of class. You can log onto the Mastering Environmental Science website for this course using the course ID: **MESHAMILTON94784**

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 <http://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). 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 001 of Biology 2650 to find course content. Depending on need, I might post supplementary material and study tools on the Blackboard website; check it regularly for updates.

Teaching philosophy: You are in control of your learning experience. You must take responsibility for your coursework. Come to class EVERY time prepared to listen and think, do the readings, do the homework. I am here to guide you, to encourage you, and to assess your progress.

Components of the Grade

Overview — There will be four exams, approximately 100 points each, worth about 50% of your grade. Your presentation, worth 100 points, will be weighted to constitute ~20% of your grade. The remaining ~30% of your grade will be derived from homework assignments (15%) and in class exercises, such as 5 min essays, small group activities and your iclicker points (15%). The clickers will be used frequently and are a way for me to keep track of your attendance, and give you points for participation, and answering questions in class. Some questions will be essentially quiz points, some will be polling or opinion questions for which there is no incorrect answer.

Exams — these will consist of multiple choice, fill in the blank, true/false, matching (matching can include labeling diagrams) and possibly a few short answer questions. Exams 1-3 will be distributed at 11a.m. and you will have the entire regular class time. The final exam will be on Friday, May 20 from 11:15 a.m.-1:15 p.m. in P166. If you are late to an exam or quiz, then you will have less time to complete the exam so plan your schedule accordingly. Traffic and/or car problems are not acceptable excuses for being late. Always bring a #2 pencil and **Scantron form 882-E** to the exams. During exams, **cell phones must be turned off and hats must be removed.** If your cell phone rings during an exam or you arrive more than 15 minutes late without a proper written and verifiable excuse, five (5) points will be deducted from your score. Students who arrive after the first exam of the day has been turned in will not be allowed to take the exam. No food, drinks, or headphones are allowed during the exam period. You must not leave the room during an exam/quiz without the instructor's permission.

iclickers

You are required to purchase an iClicker remote for in-class participation. iClicker is a response system that allows you to respond to questions posed during class, and you will be graded on those questions. In order to receive this credit, **you need to register your iClicker remote online by Friday, February 12, 2016** at: <http://www.iclicker.com/registration>. You must have come to class at least once and responded to at least one question in order to complete this registration properly. Complete the fields with your first name, last name, student ID, and remote ID. **Enter your Blackboard username (e.g. this is the same as your email login, for example, in my case it would be "lhamilton") as the Student ID.** The remote ID is the series of numbers and letters found on the bottom of the back of your iClicker remote. The remote ID number can be hard to read after normal wear and tear, so it is recommended that you write it down AND place a piece of scotch tape over the ID to preserve it. The iClickers will be used during most class meetings, and **you are responsible for bringing your remote daily.** *****Beginning on Monday (2/8) you will not be eligible for potential points via the iclicker system on any occasions when you forget to bring your iclicker to class.*****

Generally, there will be 2 - 3 graded iClicker questions per class. **iClicker grading:** 1 pt. for participating in the entire day's session, 1 pt. for the correct answer, 1/4 for incorrect answer. **No makeup assignments will be given, but students can drop their 3 lowest iclicker session scores.**

Numerous studies have demonstrated that iClickers improve student learning. iClickers have been adopted within several departments on campus. So unless you are graduating you will probably use it again for several classes. But after the term ends you may sell your iClicker back to the bookstore or to another student. Using another student's iClicker or two remotes in class is considered cheating.

Mastering Biology Online Homework:

You will be assigned online homework regularly, generally every week. This is to help you understand the material, discover if there is a topic that you don't fully understand, and to improve your grade by giving an opportunity to accrue points outside of the exams. Any homework or extra credit assignment (if provided) must be turned in on the day and time it is due. *****Your end of the semester homework score will be weighted so your overall homework total will constitute 15% of your final overall course grade.*** No makeup assignments will be given, but students can drop their 2 lowest homework scores.**

Presentation

To foster your confidence in exploring, discussing and sharing scientific information, you will work with a partner to prepare one short 15-20 minute presentation followed by facilitation of a 10-15 minute class discussion. Your main objective is to provide an overview of a contemporary issue in environmental science (including possible solutions!), other than those presented in the regular lecture. You will need to meet with your partner outside of class to prepare your presentation. Groups will consist of 2 students and group formation will be facilitated by your instructor. A more complete set of presentation guidelines will be provided separately on the course site under the course documents. Non-presenting students will receive points for attendance on presentation days – thus, regular participation in class, even when you are not a presenter will be crucial.

Grade Calculations

The final course grade earned will be determined based on the total accumulated points earned as a percentage of the total possible points available for the course (from exams, homework, iclicker questions, the presentation and assignments), rounded to the nearest 0.1%. There will be no curve and grades will be assigned as follows:

		B+	87-89%	C	70-79%
A	93-100%	B	83-86%	D	60-69%
A-	90-92%	B-	80-82%	F	0-59%

If you take the credit/no credit option: CR 70-100%; NC 0-69%

Missed Exams or Assignments

The final exam must be taken during the scheduled time. Exams 1-3 should also be taken as scheduled, however, if a student has a valid, documented reason s/he cannot take an exam at the appointed time, the student may be able to take an exam early, however this exam will be different from the regular exam and may include essay and short answer questions. Requests for early exams must be submitted **in writing** to the instructor **at least one week prior to the scheduled exam**. No makeup exams will be given after an exam has been returned to the class; any unexcused missed exams without a proper written and verifiable excuse (e.g. a doctors note, signed on the date of absence) will be recorded as a zero. If you miss an exam for a legitimate emergency it is your responsibility to notify the instructor immediately. **If provided, makeup exams will be different from regular exams, may include essay and short answer questions, and only will be allowed for a valid documented emergency absence.** These must be completed as soon as possible and **no later** than within **one week** of the originally scheduled day of the exam. It is the responsibility of the student to contact the instructor and make arrangements to take the test within the allowed time. Oversleeping or traffic / car problems are not acceptable excuses for missing an exam.

The instructor reserves the right to give unannounced quizzes if it becomes apparent that students are not keeping up with the material and/or there are an unacceptable number of absences. If you happen to be absent that day or you fail to follow instructions, you will receive a grade of 0 for that quiz.

Credit/No Credit and Adding/Dropping

The last day to apply for the CR/NC option is Friday, May 13th. To do so you must contact me in person and have your form filled out and ready for me to sign. It is your responsibility to turn this form in to Enrollment Services. I will follow the grading option indicated on the final grade sheet supplied by Enrollment Services. **Consult with your advisor before making your decision.** Once you have selected the CR/NC option you cannot opt for a grade. **No grades will be changed once they have been submitted to the registrar. The last day to drop the class is Wednesday, February 24.**

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.
- Engage the material **deeply** and **critically**. Some of the ideas may cause you to question your assumptions or values. Try not to dismiss these feelings; instead, try to be open to new viewpoints and understandings. Treat your education as if it is helping prepare you to change the world (which hopefully it 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.
- 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.

CHEATING

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 or expulsion from the university! 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

The first major goal of the course is to help students improve their **ecoliteracy**: an understanding of how natural systems make life on earth possible. The second goal of the course is to help students explore, challenge, and articulate their assumptions and positions about environmental problems and effective management of natural resources.

Students who successfully complete this course will gain:

1. An understanding of the important theories and concepts of environmental science and ecology that are used to describe environmental systems, such as population growth, biomes, food webs, biogeochemical cycles, and biodiversity;
2. Familiarity with the major environmental and natural resource problems facing California and the world, in the present and in the future, including causes and potential solutions;
3. An improved ability to form opinions and create understanding based on the interpretation of scientific information, including graphs and other forms of data.

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.

Progress Reports – Those who require progress reports (e.g. for athletics, campus activities, etc) must notify the instructor **in writing** at least **one meeting in advance**, so I can bring the necessary information to class.

Components of the Grade

<u>Course Component</u>	<u>Possible Pts / Weighted Percentage</u>
Exam 1 (Feb. 19)	100 / 12.5%
Exam 2 (Mar. 18)	100 / 12.5%
Exam 3 (April 20)	100 / 12.5%
Exam 4 (May 20)	100 / 12.5%
Mastering ES Assignments	~150 / 15%
Participation (clickers / assignments)	~100-150 / 15%
Presentation	100 / 20%

Tentative Course Outline

(Subject to Change)

Lecture Schedule	
Chapter #	Essential Environment
1	Science and Sustainability
2	Environmental Systems: Matter, Energy, and Ecosystems
3	Evolution, Biodiversity, and Population Ecology
4	Species Interactions and Community Ecology
5	Economics, Policy, and Sustainable Development
6	Human Population
7	Soil, Agriculture, and the Future of Food
8	Biodiversity and Conservation Biology
9	Forests, Forest Management, and Protected Areas
10	Environmental Health and Toxicology
11	Geology, Minerals, and Mining
12	Fresh Water, Oceans, and Coasts
13	Atmospheric Science, Air Quality, and Pollution Control
14	Global Climate Change
15	Nonrenewable Energy Sources, Their Impacts, and Energy Conservation
16	Renewable Energy Alternatives
17	Managing Our Waste
18	The Urban Environment: Creating Sustainable Cities

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

HOLIDAYS (NO CLASS):

SPRING BREAK: MON, MARCH 28 – FRI. APRIL 1

WARRIOR DAY: FRIDAY, MAY 13

LAST REGULAR CLASS MEETING: WEDNESDAY, MAY 18, 2016