

San José State University
Environmental Studies
ENVS 10/Life on a Changing Planet, 26149, Section 6,
Spring 2009

Instructor:	Stephanie Coppeto
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Office Hours:	Tuesdays 12:30-1:30 pm and by appointment
Class Days/Time:	Tuesdays and Thursdays/1:30-2:45 pm
Classroom:	Clark 310
Prerequisites:	As required for Core GE courses in B2
GE/SJSU Studies Category:	Area B2: Science, Life Science

Course Web Page

Copies of the course materials such as the syllabus, case study readings, class lecture handouts, and paper assignment guidelines can be found on the course website by going to the following web address: <http://www.sjsu.edu/depts/EnvStudies/syllabi/index.htm> and clicking on “Web Site” for this class section. You are responsible for regularly checking the course website for updates and assignments.

Course Description

An introduction to basic knowledge and theory in the life sciences, focusing on the theme of environmental change. Examines challenging issues in biology and methods for evaluating conflicting data and claims. Develops students' analytical and writing skills.

Course Goals and Student Learning Objectives

GE/SJSU Studies Learning Outcomes (LO):

This is a Category B2 General Education course and, as such, students will develop and demonstrate the following objectives:

- 1) Gain a basic understanding of the structures and processes of living systems;

- 2) Learn about the scientific method and how the body of scientific knowledge advances;
- 3) Gain experience with the testable frameworks and the qualitative and quantitative methods scientists use to collect data;
- 4) Develop tools to critically analyze controversial scientific issues from a life scientist's perspective;
- 5) Acquire an understanding of the interrelationships between science, economics, ethics, and policy in environmental decision-making by society;
- 6) Develop an understanding of how and to what extent human activities are affecting the earth's living systems.

Course Content Learning Outcomes

Upon successful completion of this course, students will be able to:

- 1) Use the methods of science and knowledge derived from current scientific inquiry in life or physical science to question existing explanations.
- 2) Demonstrate ways in which science influences and is influenced by complex societies, including political and ethical issues.
- 3) Use the methods of science, in which quantitative, analytical reasoning techniques are used, as well as be able to express themselves in proper academic written English.

Required Texts/Readings

Textbook

Campbell, N. A., Reece, J. B., & Simon, E. J. (2007). *Essential biology: Third Edition*. San Francisco, CA: Pearson Education, Inc.

The book can be purchased from the SJSU Bookstore and will be available as of February 1, 2009. The textbook is also on reserve at the SJSU Library under instructor name: Coppeto and Course Number/Name: ENVS 10/Life on a Changing Planet.

Other Readings

Additional readings will include six case studies, including background readings that emphasize topics we cover in class. Case study readings are available on the course website. If you have trouble accessing the website, please see me in advance of the due date for the reading.

Library Liaison

Peggy Cabrera

Peggy.Cabrera@sjsu.edu

SJSU Librarian for Environmental Studies

408-808-2034

Classroom Protocol

Students are expected to attend class regularly to learn the required information for the course and maintain an awareness of class assignments and schedule. Students are expected to arrive at class on time and stay for the durations of class. Students are expected and encouraged to participate in class lectures and during case study discussions. All cell phones should be turned off before class begins.

Dropping and Adding

The student is responsible for understanding the drop/add policy and dates. Information on add/drops are available at <http://info.sjsu.edu/web-dbgen/narr/soc-fall/rec-298.html>. Late drop information is available at <http://www.sjsu.edu/sac/policies/latedrops>.

Adding the Class: To add a class, go to <http://mysjsu.edu>, navigate to Academics > Add a Class and choose the class you wish to add. Be sure to finish enrolling and verify the add. Please note: on the first class meeting, graduating seniors (defined as those who are scheduled to graduate at the close of the semester for which they are registering) who have met the prerequisites listed in the university catalog, shall have top priority for any available spaces. Students seeking to add the course should provide their Graduation Worksheet showing that they are graduating seniors as defined above.

Dropping the Class: To drop a class, go to <http://my.sjsu.edu>, navigate to “Self Service” > Students center > Drop a class. Instructors are permitted to drop students who fail to attend the first scheduled class meeting and who fail to inform the instructor prior to the second class meeting of the reason for any absence and their intention to continue in the class. Some instructors will drop students who do not meet the stated course prerequisites. However, they are not required to do so. It is the student’s responsibility to make sure classes are dropped.

Please be aware of the current deadlines and penalties for adding and dropping classes. The last day to drop the class without an entry on permanent record is February 3rd. The last day to add a course and register late is February 10th.

Assignments and Grading Policy

This course is graded on three examinations, one written homework assignment, three written paper assignments, and class participation.

Examinations: Three exams, including one final, will be given to test your understanding of the material presented in lectures, readings, and case studies and demonstrate that you are meeting student learning objectives. Each exam will include only the material covered since the previous exam. You must be present and on time for all exams. There will be no make-up exams for any reason. Each exam is worth 20 points. All exams will be held in the same classroom as lectures. Exams 1 and 2 will be administered during class time (1:30-2:45pm) on March 3rd and April 14th. The final exam will be administered from 12:15-2:30pm on May 19th.

Case Studies and Case Study Assignment: The course will consist of six case studies developed by University instructors throughout the US that emphasize concepts we will discuss in lectures. You will be expected to do all the required background reading assigned for each case study, come to class prepared to answer the case study questions, and participate fully in the case study discussion. One written homework assignment will be assigned for case study 2 (“GMO Assignment”) and is due in class on March 17th. The grade for this assignment will be determined based on the ability to follow assignment directions, level of completeness, and depth of thought in the answers. This assignment is worth 5 points.

Environmental Issue Analysis Paper: Students are expected to complete an environmental analysis paper that is divided into three assignments: one paper abstract (worth 5 points), one draft paper (worth 10 points), and one final paper (worth 15 points). The assignment will be based on one environmental issue chosen by the student and analyzed using the scientific literature. The paper assignment is designed to introduce students to current environmental topics and the scientific literature, and show students’ critical thinking and analytical skills. The papers must be analytical of the environmental topic and must be based on independent and original library research you have conducted. Students will be provided with an additional document outlining the paper guidelines, score sheets for how each assignment will be graded, and example papers to review on the course website for assistance in developing their papers. The three parts of the assignment are described below:

- 1) **Paper Abstract (due Feb. 19):** In one page, the student is expected to identify the specific environmental issue, summarize the main topics to be covered and the main themes of the paper. Include in-text citations and a references section listing the relevant articles used for the abstract.
- 2) **Draft Paper (due March. 19):** A three-page draft of the paper should be as complete as possible. The draft should include comments made on the topic outline if the student feels these will improve the paper. Include in-text citations and a references section listing the relevant articles used for the draft.
- 3) **Final Paper (due April. 23):** A three-page final paper that is checked and double-checked for errors. The final paper should incorporate the suggested revisions from the draft paper if the student feels these improve the paper. Students are expected to submit the reviewed paper abstract and draft paper with the final paper.

Format: All parts of the assignment should be formatted in 12 point Times New Roman font, double-spaced with 1-inch margins. Any papers exceeding the assigned page limit will be penalized 5% of the total possible grade.

Topics and Content: Choose one environmental topic to research in the library. Make the topic specific to a particular species, geographic area, and/or ecosystem, etc. Carefully analyze the topic using known scientific facts and ask the following questions: Why is the topic important? What are the main issues? How does the research shed light on the topic (use specific examples with citations)? Question the explanations – do they address the

problem, do their results seem plausible? What are some future directions for research in this area? How does society (morals, politics, policy, etc.) influence science in this area? How does science in this area influence society?

Literature and Citations: Students are required to use at least three references including a minimum of two independent research articles in scientific journals. The third reference may be another research article or may include a book chapter (including your textbook if appropriate), “gray literature” (government reports and environmental impact statements and reports), or one internet source. Students must use their own words when summarizing the information in the articles (or else students are plagiarizing). Students must cite the literature in the body of the paper (in-text citations) and in a “References” section at the end of the paper using Modern Language Association (MLA) formatting and style. Assistance with using MLA can be acquired by speaking with the instructor, working with the library liaison, reviewing the paper guidelines document for this assignment, and/or accessing this website: <http://owl.english.purdue.edu/owl/resource/557/01/>. Figures and tables may be used if they are properly cited and described. The References section and figures and tables are not included in the page limit.

Late Assignment Policy: The written homework assignment and three paper assignments are due during class on the deadline date. If any assignment is late (i.e. not turned in at class), please email the assignment to me at stephanie.coppeto@gmail.com. No late assignments will be accepted after 7 days of the deadline date. Ten percent (10%) of your total possible grade will automatically be deducted for late assignments.

Class Participation: This class will combine lectures with a number of participation-based case studies in which students will work in groups, as a class, or role-play to tackle environmental issues. Students are expected to participate fully and actively in both lectures and case studies. Participation grade is based on frequency of participation and thoughtfulness of questions and discussion points. Participation is 5% of your grade.

Grading: Grades for each exam are determined by the completeness and correctness of answers. Grades for each portion of the paper assignment are determined by level of effort, quality and thoroughness of work, ability to follow directions, proper writing structure, and proper citations. Grades for the Case Study 2 assignment is determined by level of effort and completeness of the assignment. Participation grade is determined by level of active participation during class lectures and discussions. The minimum passing grade for this course is a C.

Grading Overview

Assignment	Possible Points	% of Possible Grade
Exam 1	20	20%
Exam 2	20	20%
Final Exam	20	20%
Paper Abstract	5	5%
Paper Draft	10	10%
Final Paper	15	15%
GMO Assignment	5	5%
Class Participation	5	5%
Total	100	100%

Grading Percentage Breakdown

97-100%	A+
96-94%	A
93-90%	A-
89-87%	B+
86-84%	B
83-80%	B-
79-77%	C+
76-74%	C
73-70%	C-
69-67%	D+
66-64%	D
63-60%	D-
Below 60%	F

Extra Credit: There will be no curve for grading; instead, there will be opportunities for extra credit on each exam for a possible total of 10 points of extra credit. These extra credit questions will be offered equally to everyone in class on each exam. Do not ask for personal extra credit options.

University Policies

Academic Integrity

The University's Academic Integrity Policy is available at http://www.sa.sjsu.edu/download/judicial_affairs/Academic_Integrity_Policy_S07-2.pdf.

Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University's integrity policy, require you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The website for Student Conduct and Ethical Development is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this

class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU's Academic Policy F06-1 requires approval of instructors.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 requires that students with disabilities requesting accommodations must register with the DRC (Disability Resource Center) to establish a record of their disability.

SJSU Writing Center

The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at <http://www.sjsu.edu/writingcenter/about/staff>.

Peer Mentor Center

The Peer Mentor Center is located on the 1st floor of Clark Hall in the Academic Success Center. The Peer Mentor Center is staffed with Peer Mentors who excel in helping students manage university life, tackling problems that range from academic challenges to interpersonal struggles. On the road to graduation, Peer Mentors are navigators, offering "roadside assistance" to peers who feel a bit lost or simply need help mapping out the locations of campus resources. Peer Mentor services are free and available on a drop-in basis, no reservation required. Website of Peer Mentor Center is located at <http://www.sjsu.edu/muse/peermentor>.

ENVS 10 / Life on a Changing Planet, Spring 2009, Course Schedule

Below is the agenda for the semester including when and where the final exam will be held. The schedule is subject to change with a minimum of one-week notice. All exam dates are final. If you miss a class, please email me to receive any pertinent information regarding schedule changes or material covered.

Date	Topics	Reading (Chapters)	Additional Reading	Due in Class
22-Jan	Lecture 1: Biology: The Diversity and Unity of Life	Intro		
27-Jan	Lecture 2: The Scientific Method	Intro		
29-Jan	<i>Case Study 1: The Case of the Ivory-billed Woodpecker</i>		<i>The Case of the Ivory-billed Woodpecker</i>	
3-Feb	Video – National Geographic “Six Could Change the World”			
5-Feb	Lecture 3: Writing an Environmental Analysis Paper			
10-Feb	Library Information Session			
12-Feb	Lecture 4: Basic Chemistry	2		
17-Feb	Lecture 5: The Chemistry of Life	3		
19-Feb	Lecture 6: Origin of Life and Cell Structure	4, 15		Paper Abstract
24-Feb	Lecture 7: Cellular Respiration	5, 6		
26-Feb	Lecture 8: Photosynthesis	7		
3-Mar	Exam 1			
5-Mar	Lecture 9: Genetics 1	8, 9		
10-Mar	Lecture 10: Genetics 2	10, 12		
12-Mar	<i>Case Study 2: Frankenfoods? The Debate Over Genetically Modified Crops</i>		<i>Frankenfoods? The Debate Over Genetically Modified Crops</i> Case Study 2-Peruvian Climate Change.pdf	
17-Mar	Lecture 11: Evolution of Populations	13		GMO Assignment
19-Mar	<i>Case Study 3: White-Striped Clover: a Case of Natural Selection</i>		<i>White-Striped Clover: a Case of Natural Selection</i>	Draft Paper
24-Mar	Spring Recess – no class			
26-Mar	Spring Recess – no class			

Date	Topics	Reading (Chapters)	Additional Reading	Due in Class
31-Mar	Cesar Chavez Day – no class			
2-Apr	Lecture 12: Evolution of Biodiversity	14		
7-Apr	Lecture 13: Biodiversity and the Extinction Crisis	14, 20		
9-Apr	<i>Case Study 4: Threats to biodiversity: a case study of Hawaiian birds</i>		<i>Threats to biodiversity: a case study of Hawaiian birds</i>	
14-Apr	Exam 2			
16-Apr	Lecture 14: Population Ecology	18		
21-Apr	Lecture 15: Community Ecology	19		
23-Apr	Lecture 16: Ecosystem Dynamics	19		Final Paper
28-Apr	<i>Case Study 5: The Effects of Coyote Removal in Texas</i>		<i>The Effects of Coyote Removal in Texas</i>	
30-Apr	Lecture 17: Human Impact on the Environment and Conservation	20		
5-May	<i>Case Study 6: “But it’s just a bottle of water”</i>		<i>“But it’s just a bottle of water”</i>	
7-May	Lecture 18: Sustainability and Renewable Energy	20		
12-May	Review			
19-May	Exam 3 (12:15-2:30) Clark 310			