

San José State University
College of Social Science/Department of Environmental Studies
ENVS 10- 04 (27003) - Life on a Changing Planet
Spring 2019

Course and Contact Information

Instructor:	Cristina Siegel
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Office Hours:	T 12:00 – 1:00pm and by appointment
Class Days/Time:	T/Th 10:30 – 11:45am
Classroom:	Duncan Hall (DH) Rm 243
GE/SJSU Studies Category:	B2

Course Overview and Description

The purpose of this course is to give you the basic skills and knowledge necessary to critically examine biological and environmental issues. Living systems are in a constant state of change, both as a result of natural processes and human activities. The course materials emphasize the understanding and use of the scientific method and the analysis of conflicting data and viewpoints. Students will use life science information to analyze environmental issues and debates by considering scientific consensus and the weight of scientific evidence.

This course is, at its heart, a biology course. What makes it different is the application of the material to environmental issues. These two subject areas are closely linked, though rarely taught together. By presenting this information together, it is my hope that at the end of the course you will have gained both the basic understanding of living systems, and the environmental issues that such systems currently face. It is also my hope that those of you who will go on in the field of Environmental Studies will have gained the basic scientific tools to support your arguments.

Learning Outcomes

Program Learning Outcomes (Environmental Studies)

- 1) Students are able to write a logical analytical paper using good writing style and construction supported by appropriate research. Assignments will require students to understand and summarize materials in relevant scholarly/technical articles, and to identify basic solutions from an interdisciplinary standpoint.
- 2) Students are able to determine, apply, and interpret appropriate basic statistical or other quantitative analyses to environmental data. Students will be able to articulate and test

hypotheses, and read and understand graphs and basic statistics.

GE Learning Outcomes

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 Learning Outcomes

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

Information Literacy Learning Outcomes

- 1) An information literate student determines the nature and extent of the information needed. The information literate student defines and articulates the need for information, as well as identifies a variety of types and formats of potential sources for information.
- 2) An information literate student evaluates information and its sources critically and incorporates selected information into his/her knowledge base. Students summarize the main ideas to be extracted from the information gathered, articulates and applies criteria for evaluating both the information and its sources, and synthesizes main ideas to construct new concepts.
- 3) The information literate student understands the economic, legal, and social issues surrounding the use of information, and accesses and uses information ethically and legally.

Library Liaison

Peggy Cabrera (peggy.cabrera@sjsu.edu or 408-808-2034) is the Library Liaison for the Department of Environmental Studies. She is a great resource who is available at the Reference Desk in the MLK Library and is available on Tuesdays 11:00-1:00pm and by appt.

Required Texts/Readings

Textbook

Hassenzahl et al. Visualizing Environmental Science. 2017. Wiley Publishing. ISBN: 9781119389811 or 9781119279167.

Other readings will be available on Canvas.

Other Equipment / Materials

You will need access to a computer with Microsoft Word and the internet. Be sure to bring pencil and/or pens with blue or black ink and paper to every class even if you take notes on a laptop.

Classroom Protocol

The use of laptops during class time will be restricted to in-class activities and note taking. Students who use their computers for other activities or who abuse the equipment in any way, at a minimum, will be asked to leave the class and will lose participation points for the day. Cell phones, music players, and any other electronic devices must be turned off and stored in your backpack/purse. Any use of electronic devices during quizzes and exams is considered cheating, and will result in a failing grade.

Course Requirements and Assignments

Canvas Instructions

For this class, all assignments are to be completed by the individual student unless otherwise specified.

All written take home assignments are to be submitted in electronic form through Canvas unless otherwise noted. If you have trouble with this, please come see me before the due date and time. **All assignments are due before class start time (10:45am) on the due date listed in the course calendar.**

Exams

One midterm and one final exam will be given to test your understanding of the material presented in the lectures, readings, and in-class activities. The final will be cumulative and partially based on the midterm. The exams will constitute a large portion of your grade. Please do not miss an exam as you will not have the opportunity to make it up. Make-up exams may be considered for legitimate and documented circumstances (medical emergency, death in the family) with proper documentation.

Assignments

There will be varying types of assignments throughout the semester. These assignments are designed to aid in your understanding of the course material, as well as develop skills in evaluating, analyzing, and communicating information about environmental issues. In-class assignments are expected to be completed neatly and thoroughly, while at home assignments are expected to be typed and submitted through Canvas (unless otherwise noted). Cumulatively, the assignments will make up a major portion of your grade for this course.

Formatting

Please note that all assignments need to be formatted as follows: 12 point font, Times New Roman, 1 inch margins, doubled spaced, include a header with name and date, and uses Turabian/Chicago author-year citation style where applicable. A 10% deduction will occur for not following these guidelines.

Class Participation

This is a lecture course, however there is a participation component. Students are expected to attend each class on time, complete the assigned readings before class, take good notes, ask questions, turn assignments in on time, pick up class handouts, and participate in class debates, discussions, and activities. You will receive

participation points for contributing to debates and discussions and participating in activities. **You must be present and prepared to receive participation points; there are no make-up points for missed class.** A thoughtful solid question shows that you not only understand the material, but are thinking about it on a deeper level; as such, credit will be given for thoughtful questions.

Field Trip

You will be given a list of field trip locations, and are required to visit one. This will be done outside of class time, but you will have the entire semester to visit and learn about one of the field trip locations and complete a write-up. Details will be given in class.

Grading Policy

Your grade will be based on your exams, assignments, and class participation. All assignments are to be turned in through Canvas before the specified due date and time or at the beginning of the due date class unless otherwise indicated.

Grade Scale

97%-100% = A+	93% - 96% = A	90% - 92% = A-
87% - 89% = B+	83% - 86% = B	80% - 82% = B-
77% - 79% = C+	73% - 76% = C	70% - 72% = C-
60% - 69% = D	less than 60% = F	

Late Work

All assignments are **due before 1:00pm on the due date** listed in the course calendar. Late work is **NOT** accepted. This includes any homework or in-class activities that are due at the beginning of class; if you are late to class, assignments will not be accepted. Exceptions may be considered for legitimate and documented circumstances (ie. medical emergency, death in the family).

Extra Credit

Students are responsible for recording the details of any offered extra credit assignments.

Grading Overview and Assessment of Learning Objectives

<i>Assignment</i>	<i>Points</i>	<i>Learning Objectives</i>
Midterm	100	CLO #2, 3, PLO # 2
Final Exam	100	CLO #2, 3, PLO #2
Scientific Paper Analysis	50	CLO #3, PLO #1, 2, ILLO# 1, 2, 3
Sea Otter Case Study	50	CLO #1, 2, 3, PLO #2
Conservation Activity	25	CLO #1, 2, 3
Ethics Response	25	CLO #2
Sustainability Activities	25	CLO #2
Field Trip Write-Up	25	CLO #2, 3
Class Participation (Quizzes, in class activities, etc)	100	CLO #1, 2, 3 PLO #2
TOTAL	500	

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Consent for Recording of Class and Public Sharing of Instructor Material

Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. See [University Policy S12-7](http://www.sjsu.edu/senate/docs/S12-7.pdf), <http://www.sjsu.edu/senate/docs/S12-7.pdf>.

Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires 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 [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>. 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 both instructors.

Resources for Students

There are many resources on campus available to you. Some examples include: SJSU Peer Connections Center, the College of Social Science Access Center, SJSU Writing Center, SJSU Counseling and Psychological Service, SJSU Student Health Center, the Academic Success Center, and many places to use or get help with technology. See the [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/> for more info or come see me.

Course Schedule. *May be changed based on course progress*

Date	Class Topics/Activities	Readings	Due
Th Jan 24	Introduction/syllabus	C3	
Tu Jan 29	Scientific methods and scientific papers	SJSU Academic Integrity PDF; Reading: Text, C1 pgs 14-20, Appendix pgs 464-469	
Th Jan 31	Scientific methods & Papers cont:		
Tu Feb 5	Cells & Chemistry	Cells PDF	
Th Feb 7	Water and nutrient cycles	Reading: Text C5, p106-113; C10 pgs 242-251	
Tu Feb 12	Water and nutrient cycles cont:		
Th Feb 14	Ecology: energy flow and interactions	Reading: Text C5, from pg 98-105; 113-121	Scientific Paper Analysis
Tu Feb 19	Activity	Sea Otter PDF's	
Th Feb 21	Biomes and biomes activity	Reading: Text C6, pgs 128-141	Sea Otter Activity
Tu Feb 26	Biomes activity		
Th Feb 28	Ecology: population growth concepts	Text C7, pgs 164-172	
Tu Mar 5	Genetics & genetic engineering	Genetics PDF; Text C14, pgs356-358A	
Th Mar 7	Response to change: evolution 1	Text C6 pgs 147-150; Evolution 1 PDF	
Tu Mar 12	Response to change: evolution 2	Evolution 2 PDF	
Th Mar 14	Response to change: biodiversity & habitat loss	Text C15	
Tu Mar 19	Review		
Th Mar 21	Midterm		
Tu Mar 26	Response to change: biodiversity & habitat loss cont:	Text C15	
Th Mar 28	Response to change: Invasive species	Text C15	Conservation Activity
Tu Apr 2 & Th Apr 4	SPRING BREAK		
Tu Apr 9	Overconsumption and Pollution	Text C16	

Date	Class Topics/Activities	Readings	Due
Th Apr 11	Climate Change	Text C9	
Tu Apr 16	Climate Change and Energy 1	Text C9;C17	
Th Apr 18	Earth Week Activities		
Tu Apr 23	Earth week Activities		
Th Apr 25	Climate Change & Energy 2	Reading: Text C9; C18	
Tu Apr 30	Agriculture and Food	Reading: Text C14	Field Trip Write-up
Th May 2	Sustainability and activity	Reading: C2	
Tu May 7	Sustainability cont:		Sustainability Activities
Th May 9	Social Justice and Environmental ethics	Reading: C2	
Tu May 14	Wrap up and Review		
FINAL EXAM	Thursday, May 16 9:45-12:00		