

# San Jose State University

## Environmental Studies Department

### 1. Course Information

Instructor: Shannon Bane

Course Title: Life on a Changing Planet

Course Code: ENVS 010

Class Hours & Locations:

- Section 01: Mon & Wed, 9AM – 10:15AM; DMH 164
- Section 02: Mon & Wed, 10:30AM – 11:45AM; DMH 164

Office: WSQ 115C

Phone: 831-566-7368

Office Hours: 8am – 9am Wednesdays and by appointment

E-mail: [sbane.sjsu@gmail.com](mailto:sbane.sjsu@gmail.com)

### 2. Course Description

#### a. Course Overview

The purpose of this course is to give you the 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 of basic biological concepts and use of the scientific method to evaluate and analyze data and viewpoints that are often conflicting or incomplete, as they can often be in real life.

Students will use life science information and concepts to analyze current environmental issues, research, and policy using a series of relevant case studies developed by university instructors throughout the United States. In class lectures, films, discussions, and role-playing assignments we will investigate, critique, and compare scientific findings with public policy and perceptions.

This course is, at its heart, a biology course. What makes it different is its emphasis on environmental issues. These two subject areas are closely linked, though rarely taught together. By presenting this information together it is my hope that when you encounter biological issues in the future you will not fail to see the ecological ramifications.

*Course topics include:*

- Human impact on ecosystems
- Global climate change
- Cellular biology
- Evolutionary biology
- Speciation and extinction
- Community and population biology
- Biodiversity and conservation biology
- Environmental resource management
- Habitat restoration and mitigation
- Sustainable agriculture and organic labeling

#### b. Required Texts

Campbell, N. A., Reece, J. B., & Simon, E. J. and Withgott, J. and Brennan. (2007 and 2009). *Life on a Changing Planet, Custom Edition for ENVS 10, San Jose State University*. Taken from *Essential biology, Third Edition* and *Essential Environment: The Science Behind the Stories, Third Edition*. Pearson Custom Publishing. San Francisco, CA: Pearson Education, Inc.

### c. Class Website

This class has a website. You can navigate to it through the SJSU Environmental Studies website:

<http://www.sjsu.edu/depts/EnvStudies/index.htm>

Click on the "Class Syllabi and Websites" tab on the left side of the page, and select ENV5 10 (Bane) for the Fall 2009 semester ONLY (all other versions are outdated). This website will be available and accurate AFTER August 28.

### d. General Education Content Objectives and Student Learning Objectives

Content Objectives: This class 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.

Student Learning Objectives:

- 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 moral issues.
- 3) Students should be able to use the methods of science, in which quantitative, analytical reasoning techniques are used.

### e. Office Visits

Office visits can help you understand the course material and improve your grades. Please *do not wait* for an insurmountable problem before considering an office visit. If you are concerned about your grade or would like to discuss an issue or an assignment see me after class or schedule an office visit by contacting me at [sbane.sjsu@gmail.com](mailto:sbane.sjsu@gmail.com) or 831.566.7638.

## 3. Course Requirements

The exams and assignments are designed to help you learn the course material and acquire the skills to analyze issues. The written assignments are designed as a mechanism for you to develop skills for evaluating, analyzing, and expressing solutions to environmental issues.

### a. Class Participation

This class combines a traditional lecture format with a number of participation-based Case Studies in which students will work in groups or as a class to discuss environmental issues. Students are expected to attend and participate **fully and actively** in each class (arriving on time), complete the assignments and readings **before** class, ask questions, turn assignments in on time, use the class website, and **participate in class discussions. YOUR GRADE DEPENDS ON IT.**

### b. Exams

Two exams (a midterm and a final exam) will be given to test your understanding of the material presented in the lectures, readings, movies, and assignments. Each exam will only include the material covered since the previous exam. Questions on the exams are directly from or related to the assignments. **\*\*Because this information is discussed during class time, when you have the ability to ask questions and ascertain the correct answers, the responsibility for understanding this information is fully yours. Exam grading will reflect this. Please do not miss an exam. Make-up exams will be considered only for legitimate/documented circumstances and must be arranged IN ADVANCE. NO MAKE-UP EXAMS WILL BE GIVEN AFTER THE ORIGINAL TEST HAS BEEN ADMINISTERED. EVER. DON'T EVEN ASK.**

### c. Assignments

Nine assignments will be tackled this semester. Each is different, and has different requirements. Some are related to movies or other in-class activities. Others require reading or work in advance, and many require research done outside of class time in the library or on the internet. You should complete as much of each assignment prior to the class in which we will discuss it (see syllabus) as possible. Any additional questions that cannot be answered you can work on during class time. Your assignments will be graded on your participation in class; organization of your answers; ability to follow instructions; ability to work with other students; the thoughtfulness, completeness, originality, and complexity of your answers; and on spelling, punctuation, sentence structure and clarity of the written portions of your work. **When at all possible, your work must be turned in typed. Assignments not typed in these cases will be penalized.**

**\*\*IMPORTANT: Case Study assignments can be found on-line at <http://ublib.buffalo.edu/libraries/projects/cases/ubcase.htm>**

### 4. Grading

**Remember, the quality of your work determines the grade that you earn.** Assignments receive points based upon the amount of the work completed, and the quality of a sample of that work. The value of each assignment varies from 25-100 points.

#### a. Assignment of Points

#### Points Received

2 Exams (150 points each)	300	
1 Paper	200	
8 Assignments (50-100 points each)	450	
<b>Total</b>	<b>950 points</b>	

#### b. Grading Percentage Breakdown

94% and above	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-
<b>below 60%</b>	<b>F</b>

#### c. Late Assignment Policy

All assignments are due on the deadline date. Late assignments will be assessed a 10% penalty for each late calendar day. For example, a paper turned in after class on the due date will be assessed a 10% penalty (10% of the highest possible score). Papers will be accepted for only five days after the due date. Papers later than that will not be accepted.

## 5. Reading Assignments/Course Schedule (*REVISED*)

A list of topics covered, exam and written assignment due dates, and text reading assignments are provided in the Syllabus below. The Syllabus is subject to change and any revisions to the Syllabus will be handed out in class.

### Syllabus (*REVISED*)

Date	Topics	Readings – Before Class <i>EB = Essential Biology</i> <i>EE = Essential Environment</i>	Assignments
M 8/24	Intro to Class; Lecture 1: Biology & Life	Ch. 1 EB	
W 8/26	Lecture 2: Scientific Method	Ch. 1 EB	Assignment 1
<b>M 8/31</b>	<b>Assignment 1: The Case of the Ivory-Billed Woodpecker</b>		
W 9/2	Lecture 3: How Chemistry Affects Life	Ch. 3 EB, Ch. 3 EE	<b>Assignment 1 Due (50 pts)</b>
<b>M 9/7</b>	<b>LABOR DAY – NO CLASS</b>		
W 9/9	Lecture 4: Photosynthesis & Cellular Respiration	Ch. 6 EB, Ch. 7 EB	
<b>M 9/14</b>	<b>Movie: An Inconvenient Truth</b>	Read Instructions for Paper	
<b>W 9/16</b>	<b>Movie: An Inconvenient Truth, Discuss Instructions for Paper</b>		
M 9/21	<b>Library: 9:15am in Rm 213 10:30am in Rm 219</b>	Bring Instructions for Paper	
<b>W 9/23</b>	Lecture 5: DNA & Genetics	Ch. 10 EB, Ch. 11 EE	
<b>M 9/28</b>	Lecture 6: Evolution & Natural Selection	Ch. 13 EE	<b>Assignment 2, Paper Research Topic and Outline Due (50 pts)</b>
W 9/30	<b>Assignment 2: I'm Looking Over a White-Striped Clover</b>		<b>Assignment 2 Due (50 pts)</b>
<b>M 10/5</b>	<b>FURLOUGH – NO CLASS</b>		
W 10/7	Lecture 7: Speciation & Biodiversity	Ch. 14 EB	
M 10/12	Lecture 8: Extinction, Peer Review Papers	Ch. 8 EE	<b>Assignment 3, Paper (1<sup>st</sup> Draft) Due (25 pts)</b>
<b>W 10/14</b>	<b>Assignment 3: Threats to Biodiversity: A Case Study of Hawaiian Birds</b>		<b>Assignment 3 Due (50 pts)</b>
<b>M 10/19</b>	<b>FURLOUGH – NO CLASS</b>		
<b>W 10/21</b>	Midterm Review		<b>Peer Review Due (25 pts)</b>
M 10/26	<b>MIDTERM</b>		
W 10/28	Lecture 9: Ecology & Ecosystem Organization	Ch. 4 EE	
<b>M 11/2</b>	Lecture 10: Population & Community Interactions	Ch. 5 EE	Assignment 4
<b>W 11/4</b>	<b>Assignment 4: Search for the Missing Sea Otters</b>		<b>Paper (Final Draft) Due (100 pts)</b>
M 11/9	<b>Assignment 4: Search for the Missing Sea Otters</b>		<b>Assignment 4 Due (100 pts)</b>
<b>W 11/11</b>	<b>VETERAN'S DAY – NO CLASS</b>		
<b>M 11/16</b>	Lecture 11: Sustainability and Video/Assignment 5: The Story of Stuff	Ch. 7 EE	<b>Assignment 5 Due (50 pts)</b>
<b>W 11/18</b>	<b>Movie/Assignment 6: Diet for a New America</b>		<b>Assignment 6 Due (50 pts)</b>
M 11/23	Lecture 13: Ecological Succession, Disturbance, and Restoration	p. 102 -106 EE (Ch. 5)	
<b>W 11/25</b>	<b>FURLOUGH – NO CLASS</b>		
<b>M 11/30</b>	<b>Movie/Assignment 7: Cane Toads: An Unnatural History</b>		Assignment 8
<b>W 12/2</b>	<b>Assignment 8: On a Wing and a Prayer</b>		<b>Assignment 7 Due (50 pts), Assignment 8 Due (50 pts)</b>
M 12/7	Final Exam Review		
	<b>FINAL EXAMS</b>	<b>Section 01 (9am): Mon, Dec 14, 7:15am – 9:30am</b>	<b>Section 02 (10:30am): Fri, Dec 11, 9:45am – 12:00pm</b>

## 6. University, College, or Department Policy Information

### a. Academic Integrity Statement (from Office of Judicial Affairs)

Your own commitment to learning, as evidenced by your enrollment at San José State University and the University's Academic Integrity Policy requires you to be honest in all your academic course work. Faculty are required to report all infractions to the Office of Judicial Affairs. The policy on academic integrity can be found at <http://www2.sjsu.edu/senate/S04-12.pdf>.

### Plagiarism

Plagiarism is the use of someone else's language, images, data, or ideas without proper attribution. It is a very serious offense in both academic and professional environments. In essence, plagiarism is both theft and lying: you have stolen someone else's ideas, and then lied by implying that they are your own.

Plagiarism will lead to grade penalties. It might also result in you failing the course and/or having the incident permanently noted in your SJSU student records. If you are unsure what constitutes plagiarism, it is your responsibility to educate yourself, or ask for clarification, before you hand in written work.

Learning when to cite a source, and when not to, is an art, not a science. However, here are some examples of plagiarism that you should be careful to avoid:

- a. If you use a sentence (or even a part of a sentence) that someone else wrote and do not reference the source, you have committed plagiarism.
- b. If you paraphrase somebody else's theory or idea and do not reference the source, you have committed plagiarism.
- c. If you use a picture or table from a web page or book and do not reference the source, you have committed plagiarism.
- d. If your paper incorporates data someone else has collected and you do not reference the source, you have committed plagiarism. The SJSU library has a tutorial that explains how to identify and avoid plagiarism, available at: <http://tutorials.sjlibrary.org/plagiarism/index.htm>.

### b. Policy on Compliance with the Americans with Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need 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 register with DRC to establish a record of their disability. For information on how to document disabilities, refer to the following website: [http://www.drc.sjsu.edu/student\\_services/document\\_disability.htm](http://www.drc.sjsu.edu/student_services/document_disability.htm)

### c. Cell Phones

Please turn off cell phones before class. If your phone rings during class **do not** answer it, quietly turn it off.