

# Life on a Changing Planet Section 81

## ENVS 10

Spring 2023 3 Unit(s) 01/25/2023 to 05/15/2023 Modified 01/25/2023

### Contact Information

#### Assistant Professor: Dr. Metha Klock

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Class Days/Time: Section 81: M/W 10:30AM - 11:45AM; Section 82: M/W 12:00PM - 1:15PM

Classroom: Online

#### Office Hours

Thursday, 10:00 AM to 12:00 PM, Online

Make sure to sign up beforehand at this link:

<https://calendar.app.google/YNDNiSqKduLAriaa8>

Or by appointment (email me for an appointment)

### Course Description and Requisites

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.  
GE Area: B2

Prerequisite: As required for Core GE courses in B2.

Letter Graded

### \* Classroom Protocols

#### Participation

This is a lecture course, however there is a participation component. Students are expected to participate in Canvas quizzes and discussions, attend class in-person via Zoom meetings, complete the assigned readings before class, take good notes, ask questions, turn assignments in on time, and participate in class debates, discussions, and activities. You will receive points for contributing to debates and discussions and participating in activities. 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.

#### Acceptable Classroom Behavior

Any behaviors that disrupt the classroom or show disrespect to the lecturer or other students will not be tolerated. **RESPECT STATEMENT:** A goal of this course is to create and maintain a learning environment that is respectful and open. All students are

expected to value and respect the views, beliefs, and opinions of their fellow class members and to contribute to creating a positive learning atmosphere that is open to inquiry and communication. Strongly held views should be expressed in assertive terms rather than with accusation, blame, or judgment. Students should also be mindful of using inclusive language to create a classroom in which people with different gender, racial, sexual, ethnic, ability, and age identities are treated with equal value and respect.

## Formatting of Assignments

- Double spaced with 1" margins
- Times New Roman, 12pt font
- Page numbers in lower right-hand corner of page
- Name, course code and section in the upper right-hand corner of page
- Microsoft Word document

## 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 of 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](#) 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](#) 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 on the assignment 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](#) at <http://www.sjsu.edu/gup/syllabusinfo/> for more info or come see me.

## Program Information

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Welcome to this General Education course.

SJSU's General Education Program establishes a strong foundation of versatile skills, fosters curiosity about the world, promotes ethical judgment, and prepares students to engage and contribute responsibly and cooperatively in a multicultural, information-rich society. General education classes integrate areas of study and encourage progressively more complex and creative analysis, expression, and problem solving.

The General Education Program has three goals:

**Goal 1:** To develop students' core competencies for academic, personal, creative, and professional pursuits.

**Goal 2:** To enact the university's commitment to diversity, inclusion, and justice by ensuring that students have the knowledge and skills to serve and contribute to the well-being of local and global communities and the environment.

**Goal 3:** To offer students integrated, multidisciplinary, and innovative study in which they pose challenging questions, address complex issues, and develop cooperative and creative responses.

More information about the General Education Program Learning Outcomes (PLOs) can be found on the [GE website](https://sjsu.edu/general-education/ge-requirements/overview/learning-outcomes.php) (<https://sjsu.edu/general-education/ge-requirements/overview/learning-outcomes.php>).

## Course Goals

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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 students gain both a basic understanding of living systems and the environmental issues that such systems currently face. This course should also provide students who will go on in the field of Environmental Studies the basic scientific tools to support their arguments and communicate within the scientific community.

## Course Format

This course has online via Canvas and in person via Zoom lectures, online assignments, quizzes, and exams. This course requires the daily use of a computer with Internet connectivity. Course materials such as the syllabus, assignment instructions, quizzes, and exams are on the [Canvas Learning Management System \(Canvas\)](http://sjsu.instructure.com) course website at <http://sjsu.instructure.com>. You are responsible for regularly checking Canvas for announcements and emails from your instructor.

## Course Learning Outcomes (CLOs)

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### GE Area B2: Life Science

In Area B2 courses students develop an understanding of scientific principles and the scientific method, as well as the potential limits of scientific endeavors and the value systems and ethics associated with scientific inquiry. Life science courses develop students' understanding of the scientific method as a continuous and adaptive process of discovery and communication about the physical universe and its life forms.

### GE Area B2 Learning Outcomes

Upon successful completion of an Area B2 course, students should be able to:

1. demonstrate knowledge of scientific theories, concepts, and data used in the life sciences;
2. apply scientific principles and communicate in ways appropriate to the discipline about the process and results of scientific discovery;
3. access, critically evaluate, and represent scientific information in various forms and draw appropriate conclusions;
4. use methods derived from current scientific inquiry to form evidence-based opinions about science-related matters of personal, public, and ethical concern.

**Writing Practice:** Students will write a minimum of 1500 words in a language and style appropriate to the discipline.

## Course Materials

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### Biology: The Core

**Author:** Eric J. Simon

**Publisher:** Pearson Publishing

**Edition:** 3rd Edition

**ISBN:** ISBN10: 0-134-8915-11

Availability: Campus Bookstore

## Additional Readings

Available on Canvas.

## Other Technology Requirements/Equipment/Materials

You will need access to a computer with Microsoft Word and the Internet.

## Library Liason

Peggy Cabrera ([peggy.cabrera@sjsu.edu](mailto: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 MLK Library Tuesdays 11 am-1pm, or by appointment.

## Course Requirements and Assignments

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I expect all students to be prepared and actively participate in ALL scheduled meeting times and Canvas course modules. Preparation for the lecture involves reading the assigned material before class. This will help you understand and remember the material that I go through during in person via Zoom and online Canvas classes, allow you to ask any questions over topics you are not clear on, be able to effectively participate in class activities, and do well on assignments and exams. It is extremely important for you to check Canvas regularly and your syllabus. You are responsible for all announcements, information, and material that you miss.

Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>

## Attendance

**YOU MUST ATTEND IN PERSON VIA ZOOM CLASS and COMPLETE CANVAS MODULES to get a good grade in the class. Exam questions will be based on information covered during lectures, and important information about tests and assignments will be given during lectures and in person via Zoom. If YOU MISS an in-person via Zoom assignment, such as a quiz, exam, or activity that is worth points toward your grade and do not have a University sanctioned excused absence, you will receive a 0 on that assignment.**

## Canvas Instructions

**For this class, all assignments are to be completed by the individual student unless otherwise specified.** All 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 at 11:59pm on the due date listed in the course calendar.**

## Lecture Materials

PowerPoint slides and other materials provided during lecture will not always be posted on Canvas. You are expected to work outside of class, attend class in person via Zoom and online via Canvas, and take notes.

## 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. Assignments are expected to be typed and submitted through Canvas (unless otherwise noted). Quizzes will be given based on lectures and readings and as part of your grade you are expected to participate in Canvas discussions. Cumulatively, the assignments will make up a major portion of your grade for this course.

You will also complete a team assignment that will require you to work together in small groups to examine a current environmental issue. More information about this assignment will be provided during class and on Canvas.

## Final Examination or Evaluation

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 (i.e., medical emergency, death in the family) with proper documentation.

More details can be found in University policy S17-1 (<http://www.sjsu.edu/senate/docs/S17-1.pdf>) (<http://www.sjsu.edu/senate/docs/S17-1.pdf>) which states that "Faculty members are required to have a culminating activity for their courses, which can include a final examination, a final research paper or project, a final creative work or performance, a final portfolio of work, or other appropriate assignment."

## ✓ Grading Information

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### Extra Credit

If appropriate, there may be an extra credit assignment for this course.

### Penalty for Late or Missed Work

Assignments are due on the date given as a due-date on Canvas. Assignments turned-in later than the due date/time will have 10% subtracted from the overall score for each day late (starting immediately after the time the assignment is due), and assignments that are three or more days late will not be accepted or graded. If four or more assignments are turned in late you will not pass this class. There are no late quiz or exam allowances or extensions unless you have a University sanctioned excused absence. If you are going to miss class due to an excused absence, please let the instructor know as soon as possible and ideally a week in advance of your absence.

### Criteria

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 unless otherwise indicated.

Type	Weight	Topic	Notes
Individual Assignment	4%	Scientific Paper Analysis	Points: 35 GELO: 1-3
Individual Assignment	2%	Darwin Questions	Points: 15 GELO: 1,3
Individual Assignment	4%	Biomes Activity	Points: 30 GELO: 1,3
Individual Assignment	5%	Sea Otter Case Study	Points: 40 GELO: 1-4
Individual Assignment	3%	Sustainability Activity	Points: 25 GELO: 1, 3, 4
Individual Assignment	2%	Ethics Response	Points: 20 GELO: 1-4
Individual Assignment	1%	Climate Change Reflection	Points: 10 GELO: 1-4

Type	Weight	Topic	Notes
Quizzes & Discussions	10%	Online Quizzes % Discussions	Points: 80 GELO: 1-4
Exams	12%	Midterm	Points: 100 GELO: 1-4
Exams	12%	Final Exam	Points: 100 GELO: 1-4
Team Project	3%	Team Contract	Points: 20
Team Project	3%	Individual Topic Idea	Points: 20 GELO: 1-4
Team Project	4%	Icebreaker Summary	Points: 30 GELO: 1-4
Team Project	7%	Individual Topic Research Paper	Points: 60 GELO: 1-4
Team Project	3%	Conversation Two Summary	Points: 20 GELO: 1-4
Team Project	6%	Individual Project Draft	Points: 50 GELO: 1-4
Team Project	4%	Peer Review of Project	Points: 30 GELO: 1-4
Team Project	12%	Final Project	Points: 100 GELO: 1-4
Team Project	3%	Team Evaluation	Points: 20

## Breakdown

Grade	Range	Notes
A+ (plus)	97% to 100%	Point Spread: 781-805
A	93% to 96%	Point Spread: 749-780
A- (minus)	90% to 92%	Point Spread: 725-748
B+ (plus)	87% to 89%	Point Spread: 700-724
B	83% to 86%	Point Spread: 668-699
B- (minus)	80% to 82%	Point Spread: 644-667
C+ (plus)	77% to 79%	Point Spread: 620-643

Grade	Range	Notes
C	73% to 76%	Point Spread: 588-619
C- (minus)	70% to 72%	Point Spread: 564-587
D+ (plus)	67% to 69%	Point Spread: 539-563
D	63% to 66%	Point Spread: 507-538
D- (minus)	60% to 62%	Point Spread: 483-506
F	≤59% ≤	Point Spread: 482 & Below

## University Policies

Per [University Policy S16-9](http://www.sjsu.edu/senate/docs/S16-9.pdf) (<http://www.sjsu.edu/senate/docs/S16-9.pdf>), relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on [Syllabus Information web page](https://www.sjsu.edu/curriculum/courses/syllabus-info.php) (<https://www.sjsu.edu/curriculum/courses/syllabus-info.php>). Make sure to visit this page to review and be aware of these university policies and resources.

## Course Schedule

This is a tentative schedule for the class and is subject to change. It is the student's responsibility to keep up to date with changes in the class schedule. Quizzes and Canvas discussions are not listed. Assignments are due to Canvas by 11:59pm on the assigned date unless otherwise posted. Additional readings will be assigned throughout the semester and posted on Canvas.

When	Topic	Notes
Week 1	Introduction to course, what is science? / Hypothesis testing, theories, evaluating evidence and sources	<b>Readings:</b> <ul style="list-style-type: none"> <li>Syllabus and other course materials</li> <li>Academic Integrity Policy S07-2</li> </ul>
Week 2	Team meeting / Scientific paper	<b>Readings:</b> <ul style="list-style-type: none"> <li><a href="https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf">"How to Read a Paper"</a> (<a href="https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf">https://web.stanford.edu/class/ee384m/Handouts/HowtoReadPaper.pdf</a>) by S. Keshav</li> </ul> <b>Assignments:</b> <ul style="list-style-type: none"> <li>GV Pre-Course Survey</li> <li>GV Team &amp; Class Contracts</li> </ul>
Week 3	The chemistry of life and cells / Energy and life	<b>Readings:</b> <ul style="list-style-type: none"> <li>Ch. 2-3</li> <li>Ch. 4, Ch. 12.7-12.8</li> </ul> <b>Assignments:</b> <ul style="list-style-type: none"> <li>GV Individual Topic Idea</li> <li>Scientific Paper Analysis</li> </ul>

When	Topic	Notes
Week 4	The diversity of life / Evolution and the tree of life	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 12.11</li> <li>• Ch. 7.1, 7.4-7.9</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• GV Icebreaker Summary</li> </ul>
Week 5	Team meeting / Natural selection	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 7.2-7.3</li> </ul>
Week 6	Species concepts / Darwin documentary	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 7.10-7.13</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• GV Individual Topic Paper</li> </ul>
Week 7	Genetics / Genetic Engineering	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 5</li> <li>• Ch. 6</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• Darwin Questions</li> </ul>
Week 8	Population growth / Biomes, biomes activity	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 12.1-12.6</li> <li>• Ch. 12.12-12.13</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• GV Conversation #2 Summary</li> </ul>
Week 9	Midterm	
Week 10	Biodiversity	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 8-9, Ch. 12.9</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• GV Project Draft</li> </ul>
Week 11	Team meeting / Conserving biodiversity	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 10, Ch. 12.10</li> </ul>
Week 12	Sea otter case study / Water and nutrient cycles	<p><b>Readings:</b></p> <ul style="list-style-type: none"> <li>• Ch. 12.14-12.16</li> </ul> <p><b>Assignments:</b></p> <ul style="list-style-type: none"> <li>• GV Project Peer Review</li> <li>• Sea Otter Case Study</li> </ul>

When	Topic	Notes
Week 13	Sustainability / Sustainability activity	<b>Readings:</b> <ul style="list-style-type: none"> <li>• Ch. 12.17-12.18</li> </ul> <b>Assignments:</b> <ul style="list-style-type: none"> <li>• Sustainability Activity</li> </ul>
Week 14	Global climate change	<b>Readings:</b> <ul style="list-style-type: none"> <li>• Ch. 12.19</li> </ul> <b>Assignments:</b> <ul style="list-style-type: none"> <li>• GV Final Project</li> </ul>
Week 15	Ethics activity / Environmental policy, ethics, & justice	<b>Assignments:</b> <ul style="list-style-type: none"> <li>• GV Team Evaluation</li> <li>• Climate Change Response</li> </ul>
Week 16	Team meeting / Wrap-up and course evaluations	<b>Assignments:</b> <ul style="list-style-type: none"> <li>• GV Post-Course Survey</li> <li>• Ethics Response</li> </ul>
Finals Day	Final Exam	<ul style="list-style-type: none"> <li>• Section 81: Monday, May 22, 9:45 AM-12:00 PM</li> <li>• Section 82: Wednesday, May 17, 9:45 AM-12:00 PM</li> </ul>