



Syllabus for Environmental Science 12

Course Information

Semester & Year: Spring 2023

Course ID & Section #: ENVSC 12 (E4963), Course units: 3.0

Instructor's name: Lisa Pedicino

Day/Time/Location: TuTh 9:55-11:30AM, Hum 129

Instructor Contact Information

Office Hour: By Appt.

Email address: Lisa-pedicino@redwoods.edu

Textbook: (Suggested): Environmental Science and Sustainability, Montgomery, ISBN: 978-0393422108

Catalog Description

A planet-scale examination of the Earth's atmosphere and climate. This course will include an in-depth look at the factors controlling climate, its changes over time, and the timeline of global climatic changes. This course is an interdisciplinary introduction to the Earth's climatic systems and interactions

Course Student Learning Outcomes (*from course outline of record*)

1. Provide examples of positive and negative feedback mechanisms that relate to natural systems.
2. Critically analyze climate change on the Earth.
3. Present both the pros and cons of a particular climatic interpretation, reflecting the complexity of the application of the scientific method to natural systems.
4. Examine the human-induced variations on Earth's natural systems in the context of a well-organized and scientifically valid discussion of a climate-related issue.

Grading

67%- Summaries (11)-100 pts each, 18%- Paper, 300 pts, 6%-Current Events (2)-50 pts each, 8%- Participation, 150 pts

A (>93.3%), A- (90-93.3%), B+ (86.7-89.9%), B (83.3-86.6%), B- (80-83.2%), C+ (76.7-79.9%), C (70-76.6%), D (55-69.9%), F (<55%)

Accessibility

College of the Redwoods is committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or [Disability Services and Programs for Students](#) (DSPS). Students may make requests for alternative media by contacting DSPS based on their campus location:

- Eureka: 707-476-4280, student services building, 1st floor
- Del Norte: 707-465-2324, main building near library
- Klamath-Trinity: 530-625-4821 Ext 103

If you are taking online classes DSPS will email approved accommodations for distance education classes to your instructor. In the case of face-to-face instruction, please present your written accommodation request to your instructor at least one week before the needed accommodation so that necessary arrangements can be made. Last minute arrangements or post-test adjustments usually cannot be accommodated.

Schedule/Outline

Tuesday, January 31, Late start class begins

Thursday, March 9, **No class**

Monday-Friday, March 13-17, **No class**, Spring Break

Monday, April 17, **Research Paper Due**

Thursday, May 4, Last day of class

	<u>Unit</u>	<u>Topic</u>
Week 1	1	Syllabus, Geology and soil degradation
Week 2	1	Geology continued, Current Event Due
Week 3	2	Earth's atmosphere and air pollution
Week 4	3	Water and water pollution
Week 5	4	Life and extinction events
Week 6	5	Biogeochemical cycles
Week 7		Spring Break
Week 8	6	Human population and resource use
Week 9	7	Non-renewable and alternative energy sources
Week 10	8	Reconstructing past climates
Week 11	9	Orbital Parameters and glacial/interglacial cycles
Week 12	9	Research Papers Due, Orbital Parameters and glacial/interglacial cycles, continued
Week 13	10	Global Climate Change
Week 14	11	Global, national, and local solutions

Summary Requirements

For each unit covered in class, a summary is assigned. Each summary length is to be a minimum of 2 pages with 1.5 spacing. You will answer the assigned writing prompts for each unit and you can use information provided in class lectures, Power Point slides, and any additional resources you would like to use. It is important that the summaries are in your own words, **not copied and pasted** from class notes or other resources. The due dates for the summaries are listed under Assignments in Canvas and you will also submit your summaries on Canvas. If you do not submit your summaries on time, points will be taken off within the first week of when they are due. After one week late, you will receive a “0” on the assignment.

Current Event Requirements

You will be required to complete two current event assignments this semester. You will choose two current events, one that you will present in class and one that you will submit in a one-page summary format. The format for the current event presented in class is of your choosing. You will have 5 minutes to explain your current event to the class and allow for questions and discussion.

Research Paper Requirements

Topic: Of your choosing related to the class material. Please note: All topics should be related to climate change and do not need to be cleared with the instructor.

Length: 4-6 typed pages, excluding figures and list of references.

Sources: Minimum three (3) sources other than encyclopedias and textbook.

Required: Paper, References (in-text citations), Reference List (bibliography).

Due Date: Monday, April 10, 2023. (on Canvas)

Late Penalty: One grade lower every two days late.

Note: **Bibliography** should be a list of all sources you have consulted with full information given about each. Normally this includes title, author, publisher, page numbers, year, etc. Internet sites should be listed with their site address (i.e. <http://www.....>). To simplify, you might list each site as site 1, site 2, etc., and then reference them in that way in the text of your paper.

You should directly **reference** any idea, fact, or quotation that is not your own or common knowledge (i.e. ‘the Earth is round’ does not need a reference). You are free to use any reference style you would like (MLA, APA). The simplest style includes the author’s name or title and the page number or the website (site 1, site 2, etc) following the referenced fact, quote, or idea in parentheses.

An example: The meteoritic impact in the Yucatan peninsula is believed to have led to the extinction of the dinosaurs. (Kring, 1993) or (site 1)

Chapter readings

Week 1- Geology (Land)

Chapter 1: Intro, 1.1, 1.2, 1.3, 1.4

Chapter 9: Intro, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7

Week 2- Geology continued

Chapter 9: Intro, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7

Week 3- Earth's atmosphere

Chapter 8: Intro, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7

Week 4- Water

Chapter 7: Intro, 7.1, 7.2, 7.3, 7.6, 7.7, 7.8

Week 5- Life

Chapter 3: 3.4, 3.5

Chapter 4: Intro, 4.1, 4.7

Chapter 5: 5.6

Week 6- Biogeochemical cycles

Chapter 10: Intro, 10.3, 10.4, 10.5

Week 7- Spring Break

Week 8- Human population

Chapter 6: Intro, 6.1, 6.2, 6.4, 6.5, 6.6

Week 9- Non-renewable and alternative energy sources

Chapter 13: Intro, 13.1, 13.2, 13.4, 13.5

Chapter 14: Intro, 14.1, 14.2

Week 10- Reconstructing past climates

No chapter readings, refer to class lectures and notes

Week 11 and Week 12- Orbital Parameters, glacial and interglacial cycles

No chapter readings, refer to class lectures and notes

Week 13- Global climate change

Chapter 11: Intro, 11.1, 11.2, 11.3, 11.4, 11.5

Week 14- Global, national, and local solutions

Chapter 20: 20.7