

## ESYS 10 INTRODUCTION TO ENVIRONMENTAL SYSTEMS

Winter 2025

MWF 3:00-3:50 pm – Peterson 103

**Instructor:** Lauren E. Shipp (she/her), Ph.D., Assistant Teaching Professor  
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858-822-3109 *calls only; texts are not received*  
Office Hours: MWF 4-5pm York 3030, or by appointment at SIO

**IA:** Kaiqiu (Peter) Zhang [kaz020@ucsd.edu](mailto:kaz020@ucsd.edu)  
Office Hours will be announced during discussion sections.

### DISCUSSION SECTIONS (required attendance; start on week 2)

M 11:00-11:50 am HSS 2154

M 12:00-12:50 pm HSS 2154

### FINAL EXAM

W 3/19/25 3:00-5:59 pm location TBA

### COURSE FORMAT & ORGANIZATION

This course will be taught in person (in Peterson 103). Discussion sections are also in person in HSS 2154. Lectures will be podcast (screen & audio only). There will be occasional board work that will not be recorded by the podcast, thus it is in your best interest to attend in person unless you are ill. Discussion Sections will *not* be podcast. Discussion sections will have a quiz on most weeks. Lecture podcast recordings, lecture slides, non-textbook materials (readings, podcasts, videos), and course communications will be posted on Canvas.

### COURSE DESCRIPTION

This course will introduce a systems-oriented perspective on environmental issues including climate change, biodiversity loss, food security, water resources, waste management, and pollution. We will consider the impact of human activity on these processes and evaluate sustainability goals and solutions.

### STUDENT LEARNING OUTCOMES

By the end of this course, students will be able to:

- Explain scientific consensus and the ways it is misunderstood by the general public.
- Understand the scientific principles governing environmental issues, including the cycling of matter, flow of energy, and evolution of biodiversity.
- Analyze the impact of human activities on environmental systems.
- Evaluate potential sustainability solutions.
- Create a plan for how their own activities will impact environmental systems.

## GRADING & ASSESSMENTS

Quizzes & Assignments:	40%
Midterm Exam (Week 5):	30%
Final Exam (Week 11):	30%
TOTAL	100%

Assignments will include a Primary Literature Assignment (due Feb 24) and a Sustainability Solutions Assignment (due Mar 10). Assignments must be submitted in person during your discussion section. There will be no quiz on the days assignments are turned in.

The use of Artificial Intelligence tools (e.g., ChatGPT) is allowed only as a supplement, not a substitute. You may choose to use AI to help organize your own independent thinking, reading, and writing. Do so with caution; AI can, and does, spit out misinformation in an exceedingly convincing presentation. Do not use AI as a substitute for your own learning. An assignment that was clearly created by AI will receive zero credit. If there is reasonable suspicion that an assignment was created with AI, an oral assessment will be given to replace the assignment.

The grading scheme is as follows:

Letter Grade	Range	
A+	100%	to 99%
A	< 99%	to 93%
A-	< 93%	to 90%
B+	< 90%	to 87%
B	< 87%	to 83%
B-	< 83%	to 80%
C+	< 80%	to 77%
C	< 77%	to 73%
C-	< 73%	to 70%
D+	< 70%	to 67%
D	< 67%	to 63%
D-	< 63%	to 60%
F	< 60%	to 0%

*Pass/No Pass: For a Pass, earn a grade of C- or better (undergrad) or B- or better (grad).*

## TEXTBOOK

Environmental Science, 17<sup>th</sup> Edition, G. Tyler Miller, Scott E. Spoolman, Danielle M. Andrews-Brown

The text is available in print or eBook format. A print version will be accessible through Course Reserves, in the Reserves Room in Geisel's 2<sup>nd</sup> floor.

Additional readings, videos, and podcasts will be posted on Canvas.

## **GREAT EXPECTATIONS**

**What to expect from us:** We will treat you all with respect and will value everyone's contributions to our learning community. We understand you have other classes and commitments and will not overburden you with unnecessary work. We will be happy to answer questions during office hours, and we will respond to emails in a timely manner (generally within 24 hours M-F). *Note that we are not "on call" at all hours with email.*

**What we expect from you:** In turn, we ask that you treat us and each other with respect. Please participate in discussions, and do not hesitate to come to us with your questions. Please do not cheat, copy, plagiarize, or do anything that fringes on these activities. You must adhere to the UCSD standards of Integrity of Scholarship (academic integrity). Should an instance of academic misconduct arise, we will proceed according to the official UCSD policies.

## **SUPPORT & RESOURCES**

### **Accommodations**

If you have Authorization for Accommodations, please email us as soon as possible and submit your letter from OSD.

### **Undocumented Student Services**

Undocumented Student Services (USS) provides support for undocumented students and those from mixed-status families at UC San Diego. For more information about the services, visit the [USS website](#) or connect through email ([undoc@ucsd.edu](mailto:undoc@ucsd.edu)).

### **Food Support for Students**

If you are skipping and stretching meals, or having difficulties affording or accessing food, you may be eligible for CalFresh, California's Supplemental Nutrition Assistance Program, that can provide up to \$292 a month in free money on a debit card to buy food. Students can apply at [benefitscal.com/r/ucsandiegocalfresh](https://benefitscal.com/r/ucsandiegocalfresh). The Hub Basic Needs Center empowers all students by connecting them to resources for food, stable housing and financial literacy. Visit their site at [basicneeds.ucsd.edu](https://basicneeds.ucsd.edu).

## SCHEDULE

*\*Exam dates will not change. Lecture topics & reading dates may shift slightly as needed.*

WEEK #	DATE	TOPIC	TEXTBOOK READING
1	M Jan 6	1. Introduction	
	W Jan 8	2. The Environment & Sustainability	Chapter 1
	F Jan 10	3. Science, Matter, Energy, Systems	Chapter 2
2	M Jan 13	4. Ecosystems	Chapter 3
	W Jan 15	5. Biodiversity & Evolution	Chapter 4
	F Jan 17	6. Species Interactions & Changes	Chapter 5
3	M Jan 20	No Class	
	W Jan 22	7. Human Population & Urbanization	Chapter 6
	F Jan 24	8. Climate & Ecosystem Biodiversity	Chapter 7
4	M Jan 27	9. Sustaining Biodiversity: Saving Species	Chapter 8
	W Jan 29	10. Cont'd	
	F Jan 31	11. Sustaining Biodiversity: Saving Ecosystems	Chapter 9
5	M Feb 3	12. Cont'd	
	W Feb 5	13. <b>Midterm Exam</b>	
	F Feb 7	14. Food Production & the Environment	Chapter 10
6	M Feb 10	15. Water Resources & Water Pollution	Chapter 11
	W Feb 12	16. Cont'd	
	F Feb 14	17. Environmental Hazards & Human Health	Chapter 14
7	M Feb 17	No Class	
	W Feb 19	18. Energy Resources	Chapter 13
	F Feb 21	19. Cont'd	
8	M Feb 24	20. Air Pollution, Climate Change, Ozone Depletion; <b>Primary Literature Assignment Due</b>	Chapter 15
	W Feb 26	21. Cont'd	
	F Feb 28	22. Cont'd	
9	M Mar 3	23. Solid & Hazardous Waste	Chapter 16

	W Mar 5	24. Cont'd	
	F Mar 7	25. Environmental & Political Solutions	Chapter 17
10	M Mar 10	26. Cont'd; <b>Sustainability Assignment Due</b>	
	W Mar 12	27. Sustainability Solutions & Discussions	
	F Mar 14	28. Sustainability Solutions & Discussions	
11	W Mar 19	<b>3:00 pm: Final Exam</b>	