

ENVIRONMENTAL ANALYSIS & DESIGN

UPPP 8

Course Code 53005

Fall 2021

Tuesdays & Thursdays 3:30-4:50pm

Professor Nicola Ulibarri (ulibbarri@uci.edu)

Office Hours: XX

Teaching Assistants:

XXX

Course Description

How does the environment support our lives and livelihoods? In what ways do human activities toward nature affect our personal well-being? Are there ways we might better interact with the environment to avert harm to nature, as well as to other people? What can we do to ensure that future generations have a healthy environment that supports their needs and aspirations?

This course will examine the relationship between humans and the environment. We will discuss various ways we might think about the influence of the environment on human well-being and on ways humans affect the environment – both positive and negative. We will draw on diverse case studies and disciplinary perspectives to explore differing perspectives on the causes and consequences of the most critical environmental challenges facing us.

Expected Learning Outcomes

1. You will be able to describe the relationship between human activities and environment, including the ways that humans affect the environment and the ways that the environment shapes our wellbeing;
2. You will be able to describe the causes and consequences of environmental harm, and articulate how these consequences affect human health, welfare, and well-being;
3. You will be able to describe identify ways in which social, economic, and political institutions determine how we manage the natural environment and value natural resources;
4. You will be able to apply principles of environmental analysis to understanding your own personal impact on the environment and how you can help protect it.

Course Requirements and Assignments

Unless noted otherwise, all assignments are due at the start of class (3:30pm) on the due date.

1. In-Class Participation

This course centers on active discussion of readings and key concepts in environmental analysis. It is expected that you complete all assigned readings, attend class sessions regularly, and come prepared for class discussion.

Given the size of the class, we will use PollEverywhere to encourage discussion and award participation points in many lectures. To get full PollEverywhere participation points, you must answer the questions asked in 14 of the 19 lectures over the quarter. To register for PollEverywhere:

1. Open pollev.com
2. Select **Login** on the left side of the page

3. Enter your @uci.edu email address as it is listed in the campus directory (<https://directory.uci.edu/>) and select **Next**
4. Login with your UCI netID and password
5. Complete your account setup by adding your name.

If you do not have a device that can access a webpage or send a text, you can write your responses to poll questions on a piece of paper (with your name, Student ID number, and the date) and turn it in to Professor Ulibarri at the end of class.

My hope is that the flexibility around participation (attending 14 of 19 lectures during the quarter) will be sufficient to accommodate necessary absences. Lectures will be recorded for students who cannot attend. However, if you need to miss more classes (e.g., because of a COVID quarantine), please email the teaching team as soon as possible to discuss alternative participation arrangements.

Your grade for in class participation will be derived from the instructors' observation of your engagement in class, your PollEverywhere record, and a self-assessment of your engagement across the class sessions. **The self-assessment is due on the last day of class (December 2).**

2. Written Assignments

You will complete three short written assignments, selected from the following four possible prompts. Each essay should be between 300 and 500 words. Please note that each essay has a different due date.

- Environmental Biography (due week 3). Select two photos that describe your biographical background as it relates to the environment, and explain how the photos are representative of your relationship to the environment. How would you describe your relationship to the environment? How has nature shaped who you are today (e.g., your interests, your health, your worldview)?
- Faculty Profile (due week 5). For this assignment students will research a UCI faculty member who works on environmental issues. What types of research does the faculty member conduct? What classes do they teach and what kind of impact or focus do they have on environmental studies? Pertinent faculty can be found on the UCI Sustainability Initiative website (https://sustainability.uci.edu/wp-content/uploads/2021/08/UCI_Sustainability_Research_Inventory_2021_6yy1h7n.pdf)
- Analyze Your Footprint (due week 7). Calculate either your ecological footprint or water footprint using the links provided. Compare your Footprint with the Country Average Footprint for the USA, considering (i) total usage and (ii) usage by consumption category (i.e., carbon, food, housing, goods). Where do you perform well, and where are you less stellar? What is 1 concrete action you could take to lessen your footprint?
 - Ecological footprint: <https://www.footprintcalculator.org/>
 - Water footprint: <https://www.watercalculator.org/>
- Profile of a Local NGO (due week 9). Nonprofit organizations are on the front-line of environmental research, advocacy, and policy. Students will write a profile on a local Southern California based environmental NGO. How were they founded and by whom? Where do they receive funding? What are their goals and how do they go about achieving them? Where do they see themselves in twenty years?

3. Two Midterm Quizzes

In weeks 4 and 8, we will have two short (~30 minute) midterm quizzes based on basic

concepts, definitions, and ideas generated from readings & lectures.

4. Final Exam

The final exam on December 7 will cover broad concepts from the entire course.

Late work policy

If you need an extension on any assignment, please email Prof. Ulibarri at least 24 hours before the assignment is due. Without a pre-approved extension, grades will be deducted by 5% for each day the assignment is late.

Grading Breakdown (ABCD/F or P/NP)

| | |
|--------------------------------|-----|
| In-class Participation | 10% |
| Written assignments (13% each) | 39% |
| Midterm quizzes (15% each) | 30% |
| Final Exam | 21% |

Course Outline & Readings

The reading list may be updated during the quarter to reflect student interests. Please use Canvas for the most up-to-date version.

| Week | Date | Topic | Readings | Assignments |
|---|-------|--|---|-----------------------------|
| Part 1: How should humans interact with the environment? | | | | |
| 0 | 9/23 | Introduction, Socio-Ecological Systems | | |
| 1 | 9/28 | Environmental Ethics | Leopold (1949): "The land ethic" | |
| Part 2: How does the environment affect humans? | | | | |
| | 9/30 | Livelihoods | IUCN (2002): "Sustainable livelihoods and ecosystems management" | |
| 2 | 10/5 | Human health | Prüss-Ustün et al (2016): "Preventing Disease through Healthy Environments" (read Executive Summary) | |
| | 10/7 | Hazards & disasters | NOAA (2020): "Tropical Cyclones Are Intensifying More Quickly – Island nations bear brunt of powerful storms, scientists say" https://www.ncei.noaa.gov/news/tropical-cyclones-intensifying | |
| 3 | 10/12 | Ecosystem services I | Pearce (2020): "What are Ecosystem Services?" | Environmental Biography due |
| Part 3: How do humans affect the environment? | | | | |
| | 10/14 | Population growth | Tierney (1990) "Betting on the Planet" | |
| 4 | 10/19 | Ecological footprints | McBain (2017) "Logically, how is it possible to use more resources than Earth can replenish?" https://theconversation.com/logically-how-is-it-possible-to-use-more-resources-than-earth-can-replenish-79743 | Quiz 1 |
| | 10/21 | Resource extraction | WWF (2015) "Living Blue Planet Report" (focus on pp. 24-38) | |

| Week | Date | Topic | Readings | Assignments |
|--|-------|----------------------------|--|-----------------------------------|
| 5 | 10/26 | Air & water pollution | EPA's National Air Quality: Status and Trends of Key Air Pollutants https://gispub.epa.gov/air/trendsreport/2021/ ; EPA's Safe Drinking Water Information System https://ofmpub.epa.gov/apex/sfdw/f?p=108:200 | Faculty Profile due |
| | 10/28 | Urbanization I | Gumprecht (2005): "Who killed the Los Angeles River?" pp. 115-134, in <i>Land of Sunshine - an environmental history of metropolitan Los Angeles</i> , edited by William Deverell and Greg Hise, U. of Pittsburgh. | |
| 6 | 11/2 | Urbanization II | Fuller (2009): "Urbanization and the Environment." https://marroninstitute.nyu.edu/blog/urbanization-and-the-environment | |
| | 11/4 | Climate change | Polya (2021): "Summary of the Summary for Policymakers of the IPCC's 'Climate Change 2021'" | |
| 7 | 11/9 | The Anthropocene | Monastersky (2015): Anthropocene: the human age, https://www.nature.com/news/anthropocene-the-human-age-1.17085 | Analyze Your Footprint due |
| | 11/11 | Veteran's Day (no class) | | |
| Part 4: What are we doing about it? | | | | |
| 8 | 11/16 | US Environmental Movements | Britton-Purdy (2016): "Environmentalism was once a social-justice movement" | Quiz 2 |
| | 11/18 | Environmental Justice | Erickson (2018): "Flint water crisis is the most egregious example of environmental injustice, says researcher" https://phys.org/news/2018-10-flint-crisis-egregious-environmental-injustice.html | |
| 9 | 11/23 | Sustainable Development | Kates et al. (2005): "What is sustainable development?" https://doi.org/10.1080/00139157.2005.10524444 | NGO Profile due |
| | 11/25 | Thanksgiving (no class) | | |
| 10 | 11/30 | Global governance | Feldman (2012): The Future of Environmental Networks – Governance and Civil Society in a Global Context, http://dx.doi.org/10.1016/j.futures.2012.07.007 | |
| | 12/2 | Class wrap up | | Participation self assessment due |
| 11 | 12/7 | FINAL EXAM 4-6pm | | |

Course Policies

DROPS must be submitted by 5PM of week 2 using WebReg system.

ADDs must be submitted by 5PM of week 3 using WebReg system.

CHANGE must be submitted by 5PM of week 2 using WebReg system. From week 3 through 6, you must use the Student Access system to submit a request for a grade option change. No exceptions will be considered after week 6.

Students with Disabilities

If you anticipate needing any type of an academic accommodation in this course or have questions about physical access, please discuss this with me during the first week of class AND

please register with the Disability Services Center (<http://www.disability.uci.edu/>). In order to receive academic accommodation, I will need formal notification from the Disability Services Center during the first two weeks of the quarter of the type of academic accommodations to which your disability entitles you.

COVID-19 Policies

A complete statement of UCI's COVID-related policies can be found at <https://sites.uci.edu/learnanywhere/f21-guidelines/>.

Attending class meetings is important, however, **if you think that you might have a contagious illness (COVID-19 or anything else), please do not attend class.** Lectures videos will be posted after class to the Canvas website. Students can receive full participation credits by attending 14 of the 19 lectures during the quarter. If you need to miss more than five classes, or need to stay home on a day a quiz is being administered, please email the teaching team as soon as possible to discuss alternative participation arrangements.

When you come to class:

- You must have completed the daily symptom check
- You must comply with [UCI's Executive Directive on face coverings](#)

Please keep in mind that UCI leadership is actively monitoring campus and community COVID-19 case rates and is in regular consultation with local public health authorities. Should conditions worsen or if new state or local public health orders are issued, this course may switch from in-person to fully remote.