Anthropogenic Climate Change and Natural Resource Management
Department of Environmental Science, Policy, and Management (ESPM) 150
University of California, Berkeley
Spring 2023
Course Summary
January 22, 2023

Course information

Instructor:	Patrick Gonzalez, Ph.D.
Students:	20 students; upper division undergraduate students, graduate students, from any department
Course identifiers:	ESPM 150, Section 001, Class number 27957 Special Topics in Environmental Science, Policy, and Management https://classes.berkeley.edu/content/2023-spring-espm-150-001-lec-001
Units:	2, letter grade or pass/fail
Schedule:	Mondays, 3:10 AM-5 PM Pacific Time Classes January 23–April 24, 2020 Semester project due at scheduled final exam time, May 10, 2020
Location	Hour 1: Social Sciences Building, Room 174; Hour 2: Outdoors
Format:	Lectures and class discussions, in person, participation required Semester report, presentation, and public communication for a specific national park or other protected area
Prerequisite:	Ambition to make a meaningful change in the world

Course Description

Cars, power plants, deforestation, and other human sources pump carbon dioxide, methane, and other gases into the atmosphere that intensify the greenhouse effect, causing anthropogenic climate change. The heat of anthropogenic climate change has killed people in heat waves, driven two animal species extinct, and caused tree mortality, wildfire increases, biome shifts, sea level rise, ocean acidification, and other impacts. Continued climate change increases future risks of extinctions, wildfires, and other damage to ecological integrity and human well-being. Adaptation of natural resource management and biodiversity conservation can moderate some damage. Yet, cutting carbon pollution from human activities comprises the fundamental solution to human-caused climate change.

Scientific research shows that, with concerted global action using existing technologies and behaviors, the world can cut emissions to net zero by 2050 and avoid the most drastic consequences of climate change. Energy conservation, energy efficiency, renewable energy, public transit, adoption of a plant-based diet, and halting deforestation offer effective solutions.

This course aims to teach: (1) the science of anthropogenic climate change, (2) applications to natural resource management, and (3) carbon solutions. The course will cover essential aspects of climate change science, including physical science, observed impacts, future risks, and ecosystem carbon, and applications to carbon solutions, adaptation, and policy. The course seeks to prepare students for careers to take action on climate change.

The course will draw directly from scientific research, particularly from the Intergovernmental Panel on Climate Change. To help learn by experience, students will work on a specific national park or other protected area of their choice and produce a report, presentation, and public communication that will help the park implement effective conservation measures under climate change and carbon solutions. The course welcomes students interested in developing solutions to advance meaningful change for nature and people.