

Anthropogenic Climate Change and Natural Resource Management
Course Summary
Department of Environmental Science, Policy, and Management (ESPM) 150
College of Natural Resources
University of California, Berkeley
Fall 2020

Course information

Instructor: Patrick Gonzalez
Students: 20 students; upper division undergraduate students, graduate students, from any department
Course identifiers: ESPM 150, Section 004, Class number 34244
Special Topics in Environmental Science, Policy, and Management
<https://classes.berkeley.edu/content/2020-fall-espm-150-004-lec-004>
Units: 2, letter grade
Schedule: Thursdays, 10:10 AM-12 PM Pacific Time
Classes August 27–December 3, 2020
Semester project due on final exam day December 14-18, 2020
Format: Lectures and interactive discussions, streamed live by video, unrecorded, participation required
Semester report, presentation, and public communication for a specific national park or protected area
Prerequisite: Wanting to make a meaningful change in the world

Course Description

Cars, power plants, deforestation, and other human sources are emitting substantial amounts of carbon dioxide into the atmosphere, increasing global temperatures and damaging ecosystems and human well-being. Anthropogenic climate change has caused tree mortality, wildfire increases, biome shifts, animal extinctions, sea level rise, ocean acidification, and other impacts. Continued climate change increases future risks of extinctions, invasive species, wildfires, and other disruptions. Reducing carbon emissions from human activities targets the cause of climate change, helping to protect ecosystems and human well-being. In addition, adaptation of natural resource management can moderate some damage.

This new course aims to teach science critical to understanding anthropogenic climate change and applications to solutions for biodiversity conservation and natural resource management. The course will cover fundamental aspects of climate change science, including physical science, observed impacts, future risks, and ecosystem carbon, and applications to carbon solutions, adaptation, and policy. It fits into the Department and College preparation of students for careers in environmental science and natural resource management and policy.

We will have lectures and interactive discussions by live-streaming video. The course will draw directly from key scientific research, particularly the assessments of the Intergovernmental Panel on Climate Change. To help students learn by experience, students will work on a specific national park or protected area of their choice and produce a report, presentation, and public communication that help the park with information needed to implement effective conservation measures under climate change. Ideally, we would go on a field trip to a national park such as Muir Woods National Monument but the coronavirus prevents us from taking such a trip this semester. The course welcomes students interested in developing solutions to create meaningful change in the world.