

Anthropogenic Climate Change and Natural Resource Management
Course Summary
Department of Environmental Science, Policy, and Management (ESPM) 150
Rausser College of Natural Resources
University of California, Berkeley
July 4, 2020

Course information

Instructor: Patrick Gonzalez, Ph.D., <http://www.patrickgonzalez.net>
Students: 20 students; Upper division undergraduate students, graduate students, from any department
Course identifiers: Fall 2020, ESPM 150, Section 004, Class number 34244
<https://classes.berkeley.edu/content/2020-fall-espm-150-004-lec-004>
Units: 2
Schedule: Thursdays, 10:10 AM-12 PM Pacific Time
Classes August 27–December 3, 2020
Semester project due the week of December 14, 2020
Format: Lectures and interactive discussions, streamed live by video, unrecorded, participation required
Semester report, presentation, and social media communication for a specific national park or protected area
Prerequisite: Wanting to make a meaningful change in the world

Course Description

Emissions from vehicles, power plants, deforestation, and other human sources have increased carbon dioxide in the atmosphere, increasing global temperatures and altering ecosystems and human wellbeing. 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 plant and animal extinctions, invasive species, tree mortality, and other disruptions. Reducing carbon emissions from human activities targets the cause of climate change, helping to protect ecosystems and human wellbeing. 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 natural resource management and biodiversity conservation. 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 with a specific national park or protected area and produce a report, presentation, and social media 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.
