

ES 300 – Environmental Studies Seminar

Julie Fry & Chris Koski, Reed College

Office hours: Koski [Vollum 139]: T,Th 10:30-11:30; or by appointment

Fry [Chem 318]: M,T 15:00-16:30; or by appointment

Class meets T,Th 9:00-10:20, LIB 203

This course will familiarize you with climate change from multiple disciplinary perspectives, with emphasis on science and policy. We will read from a wide range of literatures, from secondary sources such as science texts to journal articles, technical reports and city Climate Action Plans. You will learn to use GIS spatial mapping and to interpret rudimentary climate models to inform policy recommendations. We'll study the physical science of climate change and focus our substantive policy discussions on local attempts to address it. A significant portion of the course will be devoted to a class project that will help to update to the existing Portland Climate Action Plan.

Class Time

Class periods will be occupied by a combination of presentations by Professors Doom & Gloom, discussions of readings, and hands-on activities. We hope you will participate actively as an ambassador for your disciplinary expertise!

Assignments, field work / field trip / visitors, and a few key due dates

- Problem sets / GIS / modeling activities [Individual]
 - Weekly(ish) short problem sets or GIS/modeling activities, due Tuesdays
- Digital Field Scholarship contributions [Individual], participation throughout
- Midterm paper [Individual] on an issue of your choosing related to climate change (10 pages max) – draft due Thurs., Mar. 28; final paper due Tues., Apr. 9
- FIELD TRIP: If possible, please reserve April 5-7 for a class-related “Carbon Field Trip”
- Visiting speakers: Apr. 9: Michael Armstrong, City of Portland Sustainability Office; Apr. 18: Bill Cronin, U Wisconsin Environmental Historian; others possible...
- Final project [Class] – we will spend much of the 2nd half of the semester on this
 - Paper
 - Presentation
 - THEME: What factors should the City of Portland consider if/when developing a weatherization program for their updated Climate Action Plan?

Readings

We have assigned one book for this course, which we will work through in its entirety, and weekly readings from journals / other sources will be posted to Moodle.

David Archer, Global Warming: Understanding the Forecast, Wiley 2006 or 2011 (updated, but essentially the same content)

Topics

We will progress through the following topics, then focus towards the end of the course on the class project and themes related to it.

1. Intro to climate change & the connection to building energy efficiency
2. Some tools of the trade: GIS and infrared thermography
3. The carbon cycle and systems thinking
4. Uncertainty
5. Projections
6. Deciphering the climate buzzwords: Attribution, adaptation, mitigation, resilience
7. Do something? Do nothing? The climate solutions debate
8. "GLOCAL": global meets local
9. Climate Action Plans
10. Skepticism & doubt