

Winter 2007: PPPM 407/507 CRN 26012/26013
GLOBAL WARMING POLICY
4-6:50 pm Wednesdays; Room 12 Pacific Hall

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Office Hours: Wednesday and Friday 12 noon-2:00 PM *By Appointment Only*
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Course Overview and Objectives

Global warming is considered by many scientists the most important issue facing humanity today. This course will cover the science and policy aspects of global warming. Students will learn about the history and causes of climate change, current and likely future impacts, and policies and planning options for responding to the issue. Climate change is a systems problem. Students will therefore learn and apply the fundamentals of systems dynamics and systems thinking throughout the course.

The course will begin with an examination of the causes of climate change and what the scientific community believes the likely biophysical effects may be. We will then examine the likely socio-economic consequences of the biophysical changes and how those impacts can be assessed. Following this, we will investigate policies and planning tools that can reduce greenhouse gas emissions and help society prepare for and adapt to changes that are now inevitable due to climate change.

In addition to two short quizzes, students will individually analyze the likely effects of climate change on a community, state, region and, working in teams, devise a climate action plan for a community, state, or region as a final class project.

Background

Data from the International Panel on Climate Change (IPCC) and other scientific bodies suggests that global warming and abrupt climate change is far more serious and occurring at a much faster rate than previously thought. A consensus exists within the scientific community that a majority of the problem is related to human activities. Climate change is a cross cutting issue. Resolving it will therefore require action at all levels of society here and abroad. However, although public concern is growing, to date little has been done to meaningfully address the problem. Dr. James Hansen, one of the nation's leading climate scientists, believes the world has ten years at most to change the trajectory of greenhouse emissions before irreversible harm is done and the Earth becomes "a different place." Policies and planning will be at the core of making the needed adjustment. This course will explore the range of issues involved with these matters.

Learning Objectives

- Basic principles of systems dynamics and systems thinking as a basis for understanding feedback mechanisms that trigger and exacerbate global warming
- The history, causes and biophysical impacts of global warming and abrupt climate change.
- Methods for assessing the likely socio-economic consequences of climate change and examples how those processes have been used to assess impacts.
- Variety of mitigation and adaptation policy and planning responses to climate change and methods for assessing their efficiency and effectiveness.
- Application of mitigation and adaptation planning and policy concepts

Evaluation

There will be two quizzes, each worth 10% of your total grade for a total of 20%; an individual research and writing assignment will be worth 50% of your total grade, and your contribution to the group final report and class presentation will be worth 30% of your grade.

Grading will be based on the following scale: 90-100% = A; 80-90% = B; 70-79% = C; 60-69% = D; <60% = F

Course Outline and Calendar (Draft)

	Class Focus (Subject to Change)	Reading and Deliverables
Week 1 Jan 10	What's the Fuss About? Overview of global warming and climate change	<i>Global Warming: The Complete Briefing</i> : Chapters 1-3
Week 2 Jan 17	Understanding Natural and Human Systems: Systems Dynamics and Systems Thinking	<i>Global Warming: The Complete Briefing</i> " Chapters 4-6
Week 3 Jan 24	History and Science of Global Warming	<i>Global Warming: The Complete Briefing</i> " Chapters 7-9
Week 4 Jan 31	Socio-Economic Impacts Of Climate Change: International, National, Regional and Local Short Quiz	Finish <i>Global Warming: The Complete Briefing</i> " Chapters 10-12 Begin documents on website as assigned by instructor
Week 5 Feb 7	Mitigation Policy Goals, Principles and Evaluation Methods Form groups for team assignment	Documents on website as assigned by instructor <i>Due</i> : Individual analysis of climate change impacts.
Week 6 Feb 14	Adaptation Policy Goals, Principles and Evaluation Methods	Documents on website as assigned by instructor

Week 7 Feb 21	International and National Policy and Planning Responses	Documents on website as assigned by instructor
Week 8 Feb 28	Regional, State, Local Government Policy and Planning Responses Short Quiz	<i>Statehouse and Greenhouse</i> Documents on website as assigned by instructor
Week 9 March 7	Planning Under "Non-Analogue" Conditions (Rapid Unpredictable Change)	<i>Statehouse and Greenhouse</i> Documents on website as assigned by instructor
Week 10 March 14	Communicating about Climate Change; Social and Organizational Change Methods.	<i>Statehouse and Greenhouse</i> Documents on website as assigned by instructor
Week 11 (March 21 Exam Week)	Team Presentations To Class Of Proposed Climate Action Plans	Final group reports due 7 PM Wednesday March 21.

Required Reading

Houghton, J. *Global Warming: The Complete Briefing*. Cambridge University Press, 2004

Rabe, Barry. *Statehouse and Greenhouse: The Emerging Politics of American Climate Change Policy*, The Brookings Institute, 2004

Documents on website as assigned by instructor

- Center for Health and the Global Environment, *Climate Change Futures: Health, Ecological and Economic Dimensions*, Harvard Medical School 2005: at <http://climlead.uoregon.edu>
- Stern Review of the Economics of Climate Change, October 2006
- Economic impacts of climate change in Oregon: A Preliminary Assessment
- Impacts of climate change on Washington's Economy: A Preliminary Assessment of Risks and Opportunities, November 2006
- Others

Optional (but highly recommended)

Intergovernmental Panel on Climate Change (IPCC). *Climate Change 2001: Synthesis Report* http://www.grida.no/climate/ipcc_tar/vol4/english/index.htm (Note: this may change to the 2007 IPCC if it is released in time)