

Global Warming: Problems and Solutions

Geography 98 (lower division) CCN:

Geography 198 (upper division) CCN:

Fall 2007 Mondays 5-7pm 310 Hearst Mining 2units

Course Facilitators

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Class contact info

Class Email List:

Course Web Site:

Course description

Global warming has been an issue of concern for decades, but it is not widely brought to public attention until the recent couple of years. Especially in the past few months, the newly release of the IPCC (the Intergovernmental Panel on Climate Change) report is making news almost every day. This course is for people who are interested in the topic but may be not very familiar with the background science and the governmental policies.

There will be two hours of class meeting per week. The first hour will either be a lecture by the course facilitators / guest speakers or a movie screening. The second hour will include discussion in groups and as a class as well as doing hands-on experiments.

Course learning objectives

This course will be divided into three parts:

- 1) Physical science and ecological impact
- 2) Governmental mitigation
- 3) Individual action; green business, and environmental organizations

There are no prerequisites for this class. Students will learn to think critically about the scientific problem of global warming, to evaluate the political and economic compromise, and to make a difference from our own homes to the larger community to address this issue. Students are encouraged to actively participate in discussions; it is through debates and creativity that we find solutions to the many problems our planet faces today.

Require / Supplementary Reading

The reading for the course will be made available to students via the course website. Students are expected to have done the reading before each class section so that they come prepared for discussion. *This is a tentative list.*

Selected reading from Kolbert, Elizabeth. Field Notes from a Catastrophe: Man, Nature, and Climate Change.

Pacala, S. and Socolow, R. Stabilization Wedge: Solving the Climate Problem for the Next 50 Years with Current Technologies.

Time magazine article on 51 things you can do to help (TIME, April 2007)

IPCC Summary for Policy Makers

Current new articles

Evaluation procedures

DE-Cal classes are accredited on a Pass / Non-pass basis. Students are expected to satisfactorily meet the criteria of following categories:

Attendance will be taken at each class meeting. Enrolled students can have no more than two absences throughout the semester in order pass this class. See extra credit to make up a third absence.

Assignments are expected to be completed and turned in on time so that students stay active with current class material and with discussions. See below for a list of assignments

Participation is an important aspect of this class as a discussion session is followed after instruction. Each student will take the role of a reporter at least once over the semester.

Extra Credits include writing an additional discussion report or participating in tree planting events. Students may use extra credit to make up a third absence.

Assignments

Discussion Write-up: The small group discussion during the second half of each class meeting is targeted for students to develop their intuition either on the topic introduced in the first half of the class or the previous homework assignment. Students will be in groups of 5 or 6 and one of them will be a reporter for the group. The reporter will summarize the group discussion to the class as well as writing up a one-page report due the following week. The role of the reporter will rotate and in the end each student will be the reporter at least once.

Photo Journal: Students will take pictures that reflect the different aspects of global warming as we cover them in class. Each picture should also have short description (less than 100 words). Be creative!

Plant a Tree: On two weekends we will partner up with either Friends of the Urban Forest (SF) or Urban Relief (Oakland) to plant some trees in the city neighborhood. Participation is voluntary but strongly encouraged; this will be a fun-filled event as well as a great learning experience.

Others: There will be a few small assignments for students to better understand the observations and predictions of global warming. 1) There will be a survey at the beginning of the course to see what students and their friends know or don't know about the topics in global warming. 2) Students will look at a climate model to observe warming trend regionally and globally and will discuss what physical properties govern such trends. 3) Students are asked to conduct an energy audit for the apartment / dormitory they live in and calculate their carbon contribution.
