AOS1 Climate Change: from Puzzles to Policy.

Tues/Thurs 9:30-10:45AM
Kinsey Pavilion 1220-B

INSTRUCTOR: Prof. Alex Hall (alexhall@atmos.ucla.edu)
Math Sciences 7955
Office Hours: Tuesday, 1-2PM, or by appointment
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TEACHING ASSISTANTS:

Frank Tou (zooplank@hotmail.com)
Office Hours
Wednesday, 10AM-11AM, Math Sciences 7228
Friday, 10AM-11AM, Math Sciences 7228
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Office Hours:
Monday, 10:30-11:30AM, Boelter Hall 9277
Thursday 1:30-2:30PM, Math Sciences 7101

OVERVIEW: This course is designed for students from all backgrounds. It has three aims: (1) to provide the scientific background necessary to understand climate-related issues. (2) to gain a scientific understanding of the human influence on climate over the past 100 years and the coming century. (3) to gain an appreciation for the role of science in shaping political debate on issues where accurate scientific information is critical. There will be a midterm and a final, as well as four homework problem sets.

COURSE WEB SITE: http://www.atmos.ucla.edu/web/ugrads/winter2006/1.php. Lecture slides will be posted on the course web site as a study aid.

REQUIRED TEXT: None, though readings will be required throughout the quarter, available through the department web site as downloadable pdf files. The material in the readings may appear on exams, so it's essential to keep up with the reading.

GRADING: Participation 5%, Homework 20%, Midterm 30%, Final 45%. Exams are based on lecture material and homework assignments. The four homework assignments are designed to highlight essential concepts.

SCHEDULE

Part I. Introduction to Climate Science

Course Overview and Lecture 1 (1-10-2006): Pressing Environmental Issues
Lecture 2 (1-12-2006): Radiation in the Atmosphere
Lecture 3 (1-17-2006): Radiation and Climate
Lecture 4 (1-19-2006): Atmospheric and Oceanic Circulation
Lecture 5 (1-24-2006): The Climate System
Lecture 6 (1-26-2006): The Biosphere
Lecture 7 (1-31-2006): The Carbon Cycle
Lecture 8 (2-2-2006): Paleoclimate and the Ice Ages
REVIEW (2-7-2006) and MIDTERM (2-9-2006)

Part II. Understanding and Addressing Climate Change

Lecture 9 (2-14-2006): The Holocene and Recent Climate Change
Lecture 10 (2-16-2006): El Niño and Internal Climate Variability
Lecture 11 (2-21-2006): Climate Simulations and Future Climate Projections
Lecture 12 (2-23-2006): Climate Change Impacts
Lecture 13 (2-28-2006): The Arctic
Lecture 14 (3-2-2006): California
Lecture 15 (3-7-2006): Policy Alternatives
Lecture 16 (3-9-2006): Climate Change Politics
Discussion (3-14-2006)
REVIEW (3-16-2006) and FINAL (3-21-2006, 11:30AM-2:30PM)

Homework and lab assignments will be given one week prior to their due date. They should be turned in by 5PM on the due date to your TA's mailbox (in Math Sciences 7139). Late homework will not be accepted.

HOMEWORK DUE DATES

Assignment #1: 1-23-2006
Assignment #2: 2-6-2006
Assignment #3: 2-20-2006
Assignment #4: 3-6-2006

LABORATORY DUE DATES For those of you taking the "L" or laboratory option for this course, the due dates for the lab assignments will be staggered with the homework assignment due dates as follows:

Assignment #1: 1-30-2006
Assignment #2: 2-13-2006
Assignment #3: 2-27-2006
Assignment #4: 3-13-2006