

EART 254: The Climate System

Course Website: available on eCommons

Meeting Time and Place:

Mon & Wed 10:00 – 11:45PM in EMS Room D258

Instructors:

Patrick Chuang, Professor in Earth and Planetary Sciences

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Course Elements and Structure:

Lectures in all topics.

~3-4 problem sets.

Reading from the scientific literature and class discussions.

Term paper, and presentation of term paper

Schedule of topics: ACR = Christina; PYC = Patrick

Date	Topic	assignments
Mon, 3/30/15	Ocean Circulation and Heat Fluxes (ACR)	
Wed, 4/1/15	Ocean Mixing (Guest speaker: Chris Edwards)	
Mon, 4/6/15	Discussion: Papers on ocean circulation-climate (ACR)	Discussion of paper due in class
Wed, 4/8/15*	Ocean Chemistry and Climate Change (ACR)	
Mon, 4/13/15 [#]	Aerosols (PYC)	Discussion of paper due in class
Wed, 4/15/15	Discussion: Papers on ocean chemistry-climate (ACR)	
Fri, 4/17/15		Problem set #1 due
Mon, 4/20/15	Discussion: Papers on aerosols-climate (PYC)	Discussion of paper due in class
Wed, 4/22/15	Clouds and precipitation (PYC)	
Mon, 4/27/15	Discussion: Papers on clouds-precip-climate (PYC)	Discussion of paper due in class
Wed, 4/29/15	Climate models (PYC)	
Mon, 5/4/15	Discussion: Papers on circulation-hydrologic cycle-climate (PYC)	Discussion of paper due in class
Wed, 5/6/15	Boundary layer meteorology and convection (PYC)	
Fri, 5/8/15		Problem set #2 due
Mon, 5/11/15 [#]	Discussion: Papers on convection-climate (PYC)	Discussion of paper due in class
Wed, 5/13/15 [#]	Atmospheric chemistry (PYC)	Draft of feedback loop due
Mon, 5/18/15	Biosphere-Climate Interactions/Biogeochem Cycles (ACR)	Discussion of paper due in class
Wed, 5/20/15	Discussion: Papers on biosphere-climate (ACR)	
Fri, 5/22/15		Problem set #3 due
Mon, 5/25/15	HOLIDAY	
Wed, 5/27/15 [#]	Discussion: Papers on atm chemistry-climate (PYC)	Discussion of paper due in class
Mon, 6/1/15	Discussion: Papers on N cycles (ACR)	Discussion of paper due in class
Wed, 6/3/15	Presentation of final projects (ACR/PYC)	In-class presentation of final projects
Wed, 6/10/15		Final project papers due

*PYC out of town [#]ACR out of town

EART 254: Article Discussion

To prepare for the article discussion, answer the following questions about the article. Please provide 1 – 2 paragraph answers to each question, but do not exceed 2-pages of text in total. [If two papers are assigned, please read both, but only answer questions for one of them.]

1. What is the big picture rationale for the study described in this paper? [Why should anyone care about this topic?]
2. What is/are the main question(s) that this study addresses?
3. What methods/approach was used to address the question?
4. What is/are the main finding(s) in this study?
5. Does this study adequately address the main question posed? If not, what further work needs to be done?
6. Please offer a critique of this study. Did you find it to be particularly interesting, dull, clever, innovative, etc? Please explain.

Please do some research on one aspect of this paper, and **pick one related journal article** that provides an expanded view, or special insight, beyond what is presented in the assigned paper. Provide the presentation leader with one .ppt slide that contains this information, which you will present in class during the discussion.