

SIO25: Climate Change and Society, FA15

Dr. Jane L. Teranes * **updated November 9, 2015**

Lectures: MWF 10:00-10:50am, Center Hall 105

Final Exam: Friday December 11th, 2015, 8am–11am

Dr. Teranes' Office hours: Wednesdays 1pm-4pm **Office:** Galbraith Hall 367

I am also available by email and by appointment.

Telephone: 822-2099 **e-mail:** jteranes@ucsd.edu **Course website:** ted.ucsd.edu

Course Teaching Assistants:

Kerri Seger, Office hours: 1pm-4pm at Peet's Coffee and Tea, RIMAC Annex

email: kseger@ucsd.edu

Objectives:

This course will focus on scientific understanding of global climate change and examination of policy questions. By the end of this course, you should be able to (1) understand and describe the science of climate change; (2) identify and explain global symptoms of climate change and (3) be familiar with technological, economic and political solutions for reducing greenhouse gas emissions (4) be able to weigh the pros and cons of various solutions and (5) be able to accurately and effectively relate information on climate change to a general public audience.

Reading:

-Required Book: The Thinking Person's Guide to Climate Change, Robert Henson, American Meteorological Society, 2014.

-Additional articles will be required and will be distributed and/or available online or on the course website (i.e newspaper articles, National Geographic graphics, IPCC summary reports, federal agency reports, journal articles, etc.).

Grading:

10% i>clicker and participation points

20% Homework/writing assignments throughout the quarter

30% Two mid-term exams (15% each)

40% Final Exam (cumulative)

Extra credit: Campus seminars that will be announced **in class** throughout the quarter.

Course Format:

Class will consist of reading, in-class clicker questions, lectures, in-class discussion, homework/writing assignments, mid-terms and a final. The required reading assignments form a significant portion of the class material and in-class clicker assignments will assess your understanding of the reading. Lectures will build upon the information in the reading. Weekly homework/writing assignments that give you practice and experience with the material in the reading and the lectures. There are two mid-terms and a final that will assess your overall understanding of the course material.

Course Schedule*

Date	Topic	Reading
9/25	Top 10 Climate stories of 2015 (so far)	No reading Guest lecture: Kerri Seger
9/28	Understanding Climate	This syllabus and Henson Part 1, Chapter 1
9/30	Earth's Energy Budget	Henson Part 1, Ch. 2
10/2	Greenhouse Gases	Henson Part 1, Ch. 3
10/5	The Carbon Cycle	Nat Geo: The Carbon Bathtub http://ngm.nationalgeographic.com/big-idea/05/carbon-bath
10/7	The Symptoms – Extreme Heat	Henson Part 2, Ch. 4
10/9	The Symptoms – Floods and Droughts	Henson Part 2, Ch. 5
10/12	The Symptoms - Shrinking Snowpack, Melting Ice	Henson Part 2, Ch. 6
10/14	Changing Oceans: Sea Level Rise	Henson Part 2: Ch. 7 Nat Geo: Rising Seas http://ngm.nationalgeographic.com/2013/09/rising-seas/folger-text
10/16	Midterm #1	
10/19	Ocean Acidification: The Other CO ₂ problem	Henson Part 2: Ch. 7 Pacific Marine Environmental Laboratory, NOAA http://www.pmel.noaa.gov/co2/story/What+is+Ocean+Acidification%3F
10/21	The Symptoms – Climate Weirding	Henson Part 2 Ch. 8
10/23	The Symptoms – Ecosystems and Agriculture	Henson Part 2 Ch. 9
10/26	Historical Climate Records	Henson Part 3: Ch. 10
10/28	The Paleoclimate Record	Henson Part 3: Ch. 11 pp. 257-278
10/30	The Ice Ages to present	Henson Part 3: Ch. 11 pp. 278-296
11/2	Modeling the Climate System	Henson Part 3; Ch. 12
11/4	What the Future Holds (Part 1)	IPCC, 2013 SPM
11/6	What the Future Holds (Part 2)	IPCC, 2013 SPM
11/9	Climate Denialists	Henson Part 3: Ch 13
11/11	Veteran Day Holiday	
11/13	Midterm #2	
11/16	Global Energy Consumption	Henson Part 3: Ch 14
11/18	Stabilization Wedges	“A Plan to Keep Carbon in Check” Sacolow and Pacala

11/20	Energy Solutions	Henson Part 4, Ch.16
11/23	UC report – Bending the Curve	Bending the Curve- 10 scalable solutions for carbon neutrality and climate stability.
11/25	Pre-Thanksgiving Break: No class	
11/27	Thanksgiving Break: No class	
11/30	Action: International Policy Solutions	Henson Part 4, Ch. 15 pp. 367-386
12/2	Action: Economic Tools and Financial Incentives	Henson Part 4, Ch. 15 pp. 386-396
12/4	Personal Action	Henson Part 5

***Note:** The schedule of topics and assignments set forth in this syllabus is tentative and may be modified as needed throughout the quarter. In particular, additional required reading may be assigned. Notice of such changes will be by announcement in class or by written or email notice and any updates or changes to this syllabus will be posted on the course website at ted.ucsd.edu.

Course Policies:

Students are expected to attend class and remain in class for the duration of the session. Failure to attend class or arriving late may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not necessarily relieve a student of any course requirement. Late assignments will not be accepted. Regular class attendance is a student's obligation, as is a responsibility for all the work of class meetings, including tests and written assignments. I conduct this class in an atmosphere of mutual respect and I encourage your active participation in class discussions. Integrity, honesty and respect are expected of all participants in their relations with other participants and instructors. **Any conduct during class discussions that seriously disrupts the atmosphere of mutual respect will not be tolerated.**

i>clicker

I will be using the i>clicker student response system in class this quarter. i>clicker questions will be based on reading assignments in order to encourage you to complete the reading assignments before the class period. I use the i>clicker responses to better understand what you've learned from the reading so that I can review material in lecture as necessary. Participation with i>clicker is worth 10% of your grade. **You much register your i>clicker in TED.**

I consider bringing a fellow student's i>clicker to class to be cheating and a violation of the UCSD academic integrity code. If you are found to have a remote other than your own, or if you have registered points for classes that you did not attend, you will forfeit all your i>clicker points and may face additional disciplinary actions. See below for further statements on academic integrity.

Academic Integrity Statement:

Integrity of scholarship is essential for an academic community. This course will adhere strictly to the UCSD policy on academic integrity: "Students are expected to do their own work without unauthorized aids of any kind," as outlined in the UCSD Policy on Integrity of Scholarship. Academic misconduct will not be tolerated, and will result in disciplinary process. For details, see <https://students.ucsd.edu/academics/academic-integrity/ai-and-you.html>.