

**ECON 492: SENIOR CAPSTONE SEMINAR
THE ECONOMICS OF CLIMATE CHANGE
FALL 2017**

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COURSE DESCRIPTION

However you look at it, the prospect of human-caused climate change presents an enormous policy challenge that has been the subject of intense international debate for over 20 years. While uncertainty persists regarding many features of the problem, the possibility of dire consequences cannot be ruled out. Meanwhile, despite numerous efforts to reduce emissions of carbon dioxide and other heat-trapping greenhouse gases, global emissions continue to increase at a rate of several percent per year. The field of economics provides powerful conceptual and empirical tools for understanding the key policy obstacles and for devising a response that addresses these obstacles in a realistic way. In this class, students will work together in groups to survey and analyze various central considerations in the economics of climate change. The course will culminate in a poster-sharing session in which students share with each other the findings of their research.

COURSE OBJECTIVES

- To apply economic tools—models or statistical methods—to analyze policy challenges associated with human caused climate change
- To communicate results in oral and written forms
- To learn to work effectively in a group setting

TEXTBOOKS

- Required: *The Climate Casino: Risk, Uncertainty, and Economics for a Warming World*, by William Nordhaus (Yale University Press, 2013)
- Required: *The Carbon Crunch: Revised and Updated*, by Dieter Helm (Yale University Press 2015)
- Optional: *Climate Shock: The Economic Consequences of a Hotter Planet*, by Martin Weitzman (Princeton University Press, 2015)
- Optional: *Climate Economics: Economic Analysis of Climate, Climate Change, and Climate Policy*, by Richard Tol (Edward Elgar, 2014)
- Optional: *The Economics and Politics of Climate Change*, edited by Helm and Hepburn (Oxford University Press, 2011)

EVALUATION

Your grade will be determined by your point total. Points are earned as follows:

Midterm	150
Group presentation	200
Group paper	200
Group poster	350
Econ Department Assessment exam	<u>100</u>

Total: 1,000

The grading scale is

A ⁺	960 – 1000	C ⁺	750 – 779
A	920 – 969	C	690 – 749
A ⁻	890 – 919	D ⁺	650 – 689
B ⁺	860 – 889	D	590 – 649
B	810 – 859	F	Below 590
B ⁻	780 – 809		

The instructor reserves the right to lower the number of points required for any grade.

GROUP PROJECTS

Each group will be responsible for the following:

1. In-class presentation in early March
2. Group paper due early April
3. Poster and accompanying in-class presentation the last week of class

PRESENTATIONS

The presentation will lay out the motivation for your group project. This is your opportunity to introduce the class to the problem you are studying and to persuade people that it is important and interesting. I expect these to be well-organized, professional presentations that include visual aides (such as PowerPoint). I will post an evaluation rubric on Canvas that you should review when preparing your presentations.

GROUP PAPER

A concise, 5 to 7 page paper working out the most important details of the central economic analysis that your project builds on. I will post an evaluation rubric on Canvas.

POSTER

Develop a 2' x 3' poster to present your topic. Your poster should draw on economic tools, including at least some data analysis, to analyze the obstacle or problem that you have chosen. The poster should be self contained, so you should draw on some of the material from your in-class presentation to motivate the problem. Good posters will have a clear thesis, with clear arguments supporting the main point. I leave it open for you to decide what it is that you are trying to argue! A detailed evaluation rubric will be posted on Canvas.

ASSESSMENT EXAM

During the week of finals (or the end of the last week of class), each student must take the Assessment Examinations in microeconomics and macroeconomics. The exams will be available on Canvas. The exams consist of 20 multiple choice questions pertaining to microeconomics and 20 multiple choice questions pertaining to macroeconomics. Each correct answer is worth 3 points. Each exam must be completed within one hour.

MISSED ASSIGNMENTS

If you must unexpectedly miss an exam or assignment, you must present written evidence of a medical or family emergency in order to take the exam or submit the assignment at a later date. If you know in advance that you will be unable to take an exam or meet an assignment due date, contact the professor as soon as possible to make other arrangements. In general, with an acceptable reason, such as a university

sanctioned activity, you may be able to arrange to take an exam or submit an assignment early, but never late.

ACCOMODATION FOR STUDENTS WITH DISABILITIES

If you require special accommodation to complete the requirements of this course, please provide documentation and verification from the office of Resources for Disabled Students (see <http://rds.colostate.edu/>).

EXPECTED WEEKLY EFFORT

<u>Activity</u>	<u>Hours Per Week</u>
Attend class	3
Read assigned readings	2
Work on research project and/or presentation	4
TOTAL:	9

ACADEMIC INTEGRITY:

This course will adhere to the Academic Integrity Policy of the General Catalog and the Student Conduct Code. As stated in university policy, "Any student found responsible for having engaged in academic dishonesty will be subject to academic penalty and/or University disciplinary action." (General Catalog 2011-2012, 1.6, p.8). Any academic dishonesty in this course may result in a grade of "F" for the course and may be reported to the Office of Conflict Resolution and Student Conduct Services.

Please be aware that the General Catalog specifically identifies the following examples of academic dishonesty: cheating in the classroom, plagiarism, unauthorized possession or disposition of academic materials, falsification, and facilitation of cases of academic dishonesty. Plagiarism is defined as follows:

"Plagiarism includes the copying of language, structure, ideas, or thoughts of another, and representing them as one's own without proper acknowledgment. Examples include a submission of purchased research papers as one's own work; paraphrasing and/or quoting material without properly documenting the source." (General Catalog 2011-2012, 1.6, p. 8).

While you are not required to sign the honor pledge, I will ask each of you to write and sign the following statement on the chapter quizzes, the sections of your papers and the final version of the paper that you submit:

"I have not given, received, or used any unauthorized assistance."

SCHEDULE:

Week	Readings	Topics	Graded Assignments
1 8/22,24		Introduction; climate science	
2 8/29,31		Climate science; public perceptions	
3 9/5,7		Emissions; abatement	
4 9/12,14		Policy options	
5 9/19,21		Group topics	M: Midterm W: Deadline for final group formation
6 9/26,28		In-class work week	
7 10/3,5		In-class work week	
8 10/10,12			W/F: In-class presentations
9 10/17,19			M: Work remotely (prof accessible by email/Skype)
10 10/24,26		In-class work week	
11 10/31,11/2		In-class work week	
12 11/7,9		In-class work week	
13 11/14,16		In-class work week	F: Deadline for group paper
		FALL RECESS	
15 11/28,30			
16 12/5,7			W/F: Poster presentations

17 12/12,14			Assessment exams due by Tues 12/12
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