ISEN 230/PHIL 270

Climate Change and Sustainability: Ethical and Economic Dimensions
Spring Quarter, 2015

Course Description
Interdisciplinary analysis of the ethical, economic and political questions underlying climate change, including discussion of sustainability concepts, a review of the evidence for human-induced climate change, an exploration of the ethics of resource use, conservation practices, and environmentalism, and an economic analysis of impacts, uncertainty, and feasible responses.

Instructors
Lynne Kiesling, Office Hrs: TUES, THURS 1-2; Andersen 3228; 847 491 8250; lkiesling@northwestern.edu
Matt Kopec, Office Hrs: MO, TH 10-11; Crowe 2-144; 847 467 6041; matthew.kopec@northwestern.edu
Brad Sageman, Office Hrs: TUES 3-5, Tech F397; 847 467 2257; brad@earth.northwestern.edu

Lecture: MON, WED 3:30 - 4:50 pm, HARRIS 107

Reading
All material on Canvas: includes selections from...
- The Anthropocene, The Economist
- Selections from the writings of Mill, Locke, Hume, Smith, Solow, Nordhaus, Ostrom and others
- …and selected articles TBA

Evaluation
The course has three take home research/writing assignments of equal weight (33.3 percent). These assignments will integrate course content and your own research on three main topics – climate and energy science, philosophical and ethical implications, and economics analysis. Assignments will be posted on the last day of each section of the course and they will be due in class one week later.

Disclaimer
All students should review Northwestern University’s principles regarding Academic Integrity (http://www.northwestern.edu/uacc) and Weinberg College policies on Academic Integrity (http://www.wcas.northwestern.edu/advising/academic.html). Suspcion of possible violations of academic integrity will be pursued aggressively in consultation with the WCAS dean's office.

If you cannot participate in a scheduled assignment for this class you must contact the TA or professors BEFORE the absence occurs or receive a grade of "0" for the assignment. Only cases of documented medical or family emergency are exempt.
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>3/30</td>
<td>1) Introduction - Sustainability &amp; Climate</td>
<td>Brundtland excerpt; Anthropocene 1 &amp; 2, <em>Economist</em></td>
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<td>4/1</td>
<td>2) The Earth’s climate system</td>
<td>Kump et al. CH 1, 3; Mathez CH 1-3</td>
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<td>4/6</td>
<td>3) Evidence for global warming</td>
<td>Mathez CH 4-5; NRC Report 2012; IPCC 2013 SPM-Phys Sci</td>
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<td>4/8</td>
<td>4) Energy problems, energy solutions</td>
<td>Mathez CH 10; IPCC 2013 SPM-SRREN</td>
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<td>4/13</td>
<td>5) Political ideology and climate science &amp; policy</td>
<td>Klein (2014); Jacquet et al. (2014); TBA</td>
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<td>4/15*</td>
<td>6) Ethics of geoengineering and introduction to philosophical methodology</td>
<td>Gardiner (2010); TBA</td>
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<td>4/20</td>
<td>7) Ethics of animal agriculture</td>
<td>Singer (1977); Regan (1986); Carrington (2014) [Optional: Norcross (2004)]</td>
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<td>4/29</td>
<td>10) Collective action and collective responsibility</td>
<td>Hardin (1968); Gardiner (2011)</td>
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Part III: The Economics of Climate Change and Sustainability

5/4 11) Economics, sustainability, and property
Readings: Economic Way of Thinking, Chapter 1; Solow 1991; Hume 1738, Book III, selection

5/6* 12) Property rights, commons, political economy of collective decision-making
Readings: Ostrom et. al. 1999; Dietz, Ostrom, Stern 2003; Shugart “Public Choice”; Yandle

5/11 13) Discounting; benefits and costs of energy use and of GHG reduction policies

5/13 14) Economic analysis of climate policy instruments
Readings: Nordhaus QoB Chap. 1 to end; Greenstone & Looney 2012 to end; Aldy & Stavins 2012

5/18 15) In-class video presentation: Earth: The Operators Manual

5/20 16) Economics of new energy technologies
Readings: LCOE estimates; readings TBD

5/25 17) Memorial Day, no class

5/27 18) Guest lecture (Roger Gray, CEO)

6/1 19) Summary and conclusions
Readings: Burtraw Q&A (2014); Other TBD

6/8* Final assignment due

*due dates for take home assignments