SUSTAINABILTY POLITICS AND POLICY (EPS 622–ONLINE)
PROGRAM IN ENVIRONMENTAL AND SUSTAINABILITY POLICY
DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
NEW JERSEY INSTITUTE OF TECHNOLOGY
COURSE SYLLABUS—FALL 2013

Organizational Details

Instructor: Dr. Maurie Cohen
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Course Website: http://njit2.mrooms.net (*Note: Be sure to access from this URL as we will be using an experimental version of Moodle for this course*)

Overview

Over the past two decades, the pursuit of sustainable development has become a prominent objective for many policy makers concerned with integration across social, economic, and environmental issues. The international community has created new institutions to foster sustainability and reoriented the focus of existing organizations. At the local level, numerous communities have begun to implement initiatives to facilitate more sustainable land-use practices and businesses have taken preliminary and tentative steps to reduce the adverse impacts of their operations. Despite this progress, sustainable development remains an ill-defined (perhaps even elusive) concept and evidence of unambiguous achievements—especially in the United States—can be difficult to ascertain. Moreover, developed and developing countries have formulated largely different (and potentially incompatible) agendas with which to engage with the notion of sustainability. Large countries with emergent economies, most notably China, India, and Brazil, pose especially vexing dilemmas. This course focuses particular attention on the challenges that sustainable development holds for economically advanced countries (the so-called G-20). We examine the intellectual roots of the concept and explore why it has become a central feature of international politics and policy planning in such a relatively short period of time. Of additional interest is how the sustainability agenda is likely to evolve over the next few decades given the onset of climate change and increasingly pervasive biophysical constraints on economic growth.

Required Readings

Dresner, Simon. 2008. *The Principles of Sustainability*, 2nd ed. London: Earthscan (available in paperback; ISBN 9781844074969) (Note: if you are able to locate an inexpensive second-hand copy of the first edition of this book that will be fine).

McDonough, William & Michael Braungart. 2002. *Cradle to Cradle: Remaking the Way We Making Things*. New York: North Point Press (available in paperback; ISBN 08655475873).

Jackson, Tim. 2009. *Prosperity Without Growth: Economics for a Finite Planet*. London: Earthscan [available in both hardback (ISBN 9781849713238) and paperback (ISBN 9781844078943)].

Other readings and multimedia presentations will be available via the course website (http://njit2.mrooms.net). Items are organized in weekly folders and can be viewed online or saved to your computer. You will need a UCID to access the website.

Evaluation
The evaluation of student performance is comprised of four components:

1. Weekly Writing Assignments (25%): On Thursday morning of each week, I will post to the course website a set of two questions designed to assess understanding of the weekly module of material. Students are required to write an essay in response to one question of your own choosing [maximum length (strictly enforced] = 750 words; please provide word count at the top of your document). Completed essays should be uploaded to the course website by 11:59pm on the following Monday (see schedule below). Each essay will be graded on a five-point scale (5 = excellent; 4 = good; 3 = satisfactory; 2 = needs improvement; 1 = unsatisfactory) and all students will receive supplementary feedback on a weekly basis. Each student will have one "exclusion" to be used at her or his discretion during the semester. No late submissions will be permitted and failure to complete a particular assignment will result in a zero.

2. Online Discussions (20%): Running throughout the course will be a series of online discussions. I will pose (generally on a weekly basis, but sometimes more frequently) a question related to the course material and invite responses. You should feel free to reply to my question or pick up on a thread raised by someone else. The aim is for these exchanges to be interactive and conversational. You should also feel free to post your own questions. Evaluation on this component will be predicated on consistent engagement in these discussion forums.

3. Midterm Exam (20%): The midterm is intended to be a "synthesizing experience" and I will provide an article for you to evaluate that integrates across the various themes that we will cover during the first half of the semester. Students will have several days to complete the midterm on an individual basis. While working on the exam it will be possible to consult all course materials including the downloadable lectures, required readings, and multimedia presentations. The midterm reading (and discussion question) will be distributed on the morning of Thursday, October 24 and completed responses will need to be uploaded to the course website by 11:59pm on Tuesday, October 28.

4. Final Exam (20%): The final exam will use the same format described above for the midterm though the scope of the assignment will span the full semester. The final exam reading (and discussion question) will be distributed on Wednesday, December 16 and completed responses will need to be uploaded to the course website by 11:59pm on Tuesday, December 20.

Aggregate Grading Scale for Essays (Maximum score is 50 points—10 essays/5 points each)

A = 45-50
B = 40–44
C = 35–39
D = 30–34
F = < 30

Detailed Schedule for Weekly Writing Assignments

Week No.	Essay No.	Topic	Questions Distributed	Completed Essays Due (by 11:59pm)
1		Conceptual and Scientific Foundations	--	--
2	**1**	International Politics of Sustainability	9/12	9/16
3	**2**	Measuring Sustainability	9/19	9/23
4	**3**	Theories of Post-Industrial Sustainability	9/26	10/30
5	**4**	Industrial Ecology/Symbiosis	10/3	10/7
6	**5**	Toward the Next Industrial Revolution?	10/10	10/14
7	**6**	Sustainability and the Limits of Technological Innovation	10/17	10/21
8		**Midterm Exam**	**10/24**	**10/28**
9	**7**	GDP and its Flaws	1/31	11/4
10	**8**	Is a Steady-State Economy Possible/ Inevitable?	11/7	11/11
11	**9**	Sustainable/Unsustainable Consumption	11/14	11/18
12	**10**	New Politics of Progress I	12/21	12/25
13		New Politics of Progress II (Thanksgiving)	No Essay Due	
14	**11**	Sustainability Transitions	12/5	12/9
15		**Final Exam**	**12/16**	**12/20**

Optional Face-to-Face Class Sessions
By fortunate coincidence, I am offering this semester an upper-level undergraduate course that covers much of the same ground as this course. This parallel course meets on Monday from 6 to 9pm on the NJIT campus (Kupfrian #209). Students are invited to attend these sessions on a regular or occasional basis.

Important Notices
Students enrolled in this course are forewarned that the consequences of plagiarism or academic misconduct of any kind are severe. Violations will be handled in accordance with the rules outlined in the NJIT Student Handbook (current edition). If you are unfamiliar with these procedures, you should consult the appropriate section of this governing manual at http://www.njit.edu/academics/honorcode.php.

Final grades are not subject to post-semester adjustment—with the exception of the change of a grading error. Under no circumstances will students be given the

opportunity to complete extra-credit papers or other assignments to bolster their final grades.

Course Schedule

I. Introduction

Week 1 (September 3–9): Conceptual and Scientific Foundations

Dresner, *Principles of Sustainability*, Introduction + Chapters 1–2.
Editorial. 2008. Earthstruck. *The New York Times*, 24 December (via Moodle).
Morton, Oliver. 2008. Not-so-lonely planet. *The New York Times*, 24 December (via Moodle).
Zimmer, Carl. 2009. Provocative new study warns of crossing planetary boundaries. *Yale Environment 360* (via Moodle).
Rockström, Johan. 2009. A safe operating space for humanity. *Nature* 461(24):472–475 (via Moodle).
McKibben, Bill. 2009. A timely reminder of the real limits to growth. *Yale Environment 360* (via Moodle).

Week 2 (September 10–16): International Politics of Sustainability

Dresner, *Principles of Sustainability*, Chapters 3–5.

Week 3 (September 17–23): Measuring Sustainability

Dresner, *Principles of Sustainability*, Chapters 6–8.

II. Sustainability and Post-Industrial Society

Week 4 (September 24–30): Key Concepts of Post-Industrial Sustainability

Mol, Arthur, David Sonnenfeld, & Gert Spaargaren, eds. 2009. *The Ecological Modernisation Reader: Environmental Reform in Theory and Practice.* New York: Routledge, pp. 3–27 (via Moodle).
Kolbert, Elizabeth. 2007. Mr. Green: environmentalism's most optimistic guru. *The New Yorker* 82(46) (via Moodle).
Lovins, Amory, L. Hunter Lovins, & Paul Hawken. 1999. A road map for natural capitalism. *Harvard Business Review*, May-June, pp. 145–158 (via Moodle).
Senge, Peter & Goran Carstedt. 2001. Innovating our way to the next industrial revolution. *MIT Sloan Management Review* 42(2):24–38 (via Moodle).

Week 5 (October 1–7): Industrial Ecology/Symbiosis

Huber, Joseph. 2000. Towards industrial ecology: sustainable development as a concept of ecological modernization. *Journal of Environmental Policy and Planning* 2(4):269–285 (via Moodle).

Frosch, Robert. 1995. Industrial ecology: adapting technology for a sustainable world. *Environment* 37(10):16–28+34 (via Moodle).

Ehrenfeld, John & Nicholas Gertler. 1997. Industrial ecology in practice: the evolution of interdependence at Kalundborg. *Journal of Industrial Ecology* 1(1):313–337 (via Moodle).

Geng, Yong & Brent Doberstein. 2008. Developing the circular economy in China: challenges and opportunities for achieving "leapfrog development." *International Journal of Sustainable Development and World Ecology* 15(3):231-239 (via Moodle).

Week 6 (October 8–14): Toward the Next Industrial Revolution?

McDonough, William & Michael Braungart, *Cradle to Cradle* (entire book).

Week 7 (October 15–21): Sustainability and the Limits of Technological Innovation

Huesemann, Michael. 2001. Can pollution problems be effectively solved by environmental science and technology? An analysis of critical limitations. *Ecological Economics* 37(2):271–287 (via Moodle).

Alcott, Blake. 2005. Jevons Paradox. *Ecological Economics* 54(1):9–21 (via Moodle).

York, Richard. 2006. Ecological paradoxes: William Stanley Jevons and the paperless office. *Human Ecology Review* 13(2):143–147 (via Moodle).

Herring, Horace. 2006. Energy efficiency: a critical view. *Energy* 31(1):10–20 (via Moodle).

Week 8 (October 22–28): Midterm Exam

III. New Political Economy of Sustainability

Week 9 (October 29–November 4): Gross Domestic Product and its Flaws

Clifford Cobb, Ted Halstead, & Jonathan Rowe. 1995. If the GDP is up, why is America down? *The Atlantic.* October (via Moodle).

Zencey, Eric. 2009. GDP RIP. *The New York Times*, 10 August (via Moodle).

Uchitelle, Louis. 2008. Hey big number, make room for the rest of us. *The New York Times*, 31 August (via Moodle).

Gertner, Jon. 2010. The rise and fall of the GDP. *The New York Times Magazine*, 13 May (via Moodle).

Week 10 (November 5–11): Is a Steady-State Economy Possible/ Inevitable?

Friedman, Thomas. 2009. The inflection is near? *The New York Times*, 8 March (via Moodle).

Barber, Benjamin. 2009. The economic crisis isn't all bad; it's a chance for us and Obama to reimagine how we live our lives. *The Nation*, 28 January (via Moodle).

Brown, James et al. 2011. Energetic limits to economic growth. *BioScience* 61(1): 19–26 (via Moodle).

Speth, James Gustave. 2008. Modern capitalism: out of control, pp. 46–66 in *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability*. New Haven: Yale University Press (via Moodle).

Week 11 (November 12–18): Sustainable/Unsustainable Consumption

Taylor, Betsy & Dave Tilford. 2000. Why consumption matters, pp. 463–487 in Juliet Schor and Douglas Holt, eds. *The Consumer Society Reader*. New York: New Press (via Moodle).

Schor, Juliet. 2005. Prices and quantities: unsustainable consumption and the global economy. *Ecological Economics* 55(3):309–320 (via Moodle).

Cohen, Maurie. 2010. The international political economy of unsustainable consumption and the global financial collapse. *Environmental Politics* 19(1):108–127 (via Moodle).

Maniates, Michael. 2002. Individualization: plant a tree, buy a bike, save the world? pp. 43–66 in Thomas Princen, Michael Maniates, & Ken Conca, eds. *Confronting Consumption*. Cambridge: MIT Press. (via Moodle).

Week 12 (November 19–25): New Politics of Progress I

Jackson, *Prosperity Without Growth*, pp. 1–102.

Week 13 (November 26–December 2): New Politics of Progress II

Jackson, *Prosperity Without Growth*, pp. 103–207.

Week 14 (December 3–10): Sustainability Transitions

Dresner, *Principles of Sustainability*, Chapter 9.

Raskin, Paul, Tariq Banuri, Gilberto Gallopín, Pablo Gutman, Al Hammond, Robert Kates, & Rob Swart. 2002. *Great Transition: The Promise and Lure of the Times Ahead*. Boston: Stockholm Environmental Institute and Tellus Institute (downloadable at http://www.tellus.org or via Moodle).

Week 15 (December 16–20): Final Exam