

SUSTAINABILITY POLICY AND PRACTICE (STS 364H)
SCIENCE, TECHNOLOGY & SOCIETY PROGRAM
NEW JERSEY INSTITUTE OF TECHNOLOGY
COURSE SYLLABUS
SPRING 2014

Organizational Details

Instructor: Dr. Maurie Cohen

Location: CKB 222

Time: Mondays 6-9pm

Office: Cullimore 427

Office Hours: Mondays 2-5pm & by appointment

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Overview

Earth systems scientists advise that we now live in a newly designated era referred to as the “anthropocene.” This term has been coined in recent years to distinguish the last 250 years of human activity on the planet from other periods of earth history. It has also become evident that efforts to date to modify human practices to conform to biospheric limits on the basis of public regulations and remedial technologies have not been successful and we have already crossed several “planetary boundaries.” Despite progress on some local and regional issues, most global-scale ecological problems have worsened due to growing demand for energy and other resources.

We are moreover coming to realize that a sustainable future depends on addressing more than just the environmental impacts of human activity. Also necessary is a more systemic understanding of the numerous interlinked challenges that we face including climate change, freshwater scarcity, population growth, biodiversity loss, food availability, energy security, income inequality, and financial instability.

This course critiques several popular conceptual strategies for reversing contemporary patterns of unsustainability and develops a systems perspective for exploring the drivers of our current condition from the standpoint of the “new economics.” We assess four prominent meta-level strategies for steering toward a more sustainable future: efficiency improvements, relocalization, green consumerism, and efforts to build a “green economy.” The course also considers several other approaches at the frontiers of new economics thinking that entail more transformational changes.

Required Readings

Boyle, D. & A. Simms. 2009. *The New Economics: A Bigger Picture*. London: Earthscan (ISBN 978-1844076758).

Meadows, D. 2008. *Thinking in Systems: A Primer*. White River Junction, VT: Chelsea Green (ISBN 978-603580557 (free copy downloadable from http://www.ess.inpe.br/courses/lib/exe/fetch.php?media=wiki:user:andre.zopelari:thinking_in_systems_a_primer.pdf)).

Schor, J. 2011. *True Wealth: How and Why Millions of Americans are Creating a Time-Rich, Ecologically Light, Small-Scale, High Satisfaction Economy*. New York: Penguin Press (ISBN

978-0143119425 [paperback]). (Note this book was previously issued by the publisher in 2010 in hardback under the title *Plentitude: The New Economics of True Wealth*).

Owen, D. 2011. *The Conundrum: How Scientific Innovation, Increased Efficiency, and Good Intentions Can Make Our Energy and Climate Problems Worse*. New York: Riverhead (ISBN 978-1594485619).

Other readings will be available via the course website (<http://njit2.mrooms.net>). Items are organized into weekly folders and can be viewed online or saved. A valid UCID is required to access the website.

Evaluation

1. ***Weekly Quizzes* (35%):** This is an upper-level course and all students are expected to make timely and consistent progress throughout the semester. As a practical matter, this means preparing adequately for each class session. To incentive preparation, we will start each weekly class session with a ten-question multiple-choice quiz that will give you the opportunity to demonstrate your familiarity with the assigned readings. No late quizzes will be permitted. There will be ten weekly quizzes during the semester; the lowest quiz score will be dropped.
2. ***Research Project* (35%):** The course requires completion of a substantial research project on a topic related to the general subject matter that we will cover. The project can be completed either individually or in two-student team. All students (and teams) should plan to submit a one-page (double-spaced) proposal on February 17. The proposal should also include a one-page working bibliography identifying approximately 10-12 sources deemed to be useful. This proposal will then serve as the basis for a face-to-face meeting to identify points for clarification and refinement. (Feel free to schedule a prior appointment to discuss prospective project ideas before you submit your proposal.) The research project will culminate with a 15-page (double-spaced) report and an in-class presentation. The written report will be due one week prior to the presentation so that all students in the course will have an opportunity to read it in advance.
3. ***Class Attendance* (10%):** Students are expected to attend each class session. You will be required to sign a weekly attendance sheet and late arrival (more than twenty minutes) will be treated as an absence. Each student will be granted one “free absence” during the semester; every subsequent absence will mean a full letter-grade reduction in the attendance portion of your final grade (i.e., three absences is a B, four absences is a C, and so forth).
4. ***Class Participation* (20%):** You are required to engage actively in class discussions by offering comments, posing questions, and demonstrating familiarity with the course material. To facilitate this process, four students will be preselected to serve as lead discussants in each class session. Students will receive preliminary class-participation grades midway through the semester. Consult the supplementary rubric posted to the course website for information on the assignment of grades for class participation.

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 University Code on Academic Integrity. If you are unfamiliar with this Code, you should consult <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 enhance their final grades.

Schedule

Week 1 (January 27): Introduction/What is the Anthropocene?

Zalasiewicz, J., M. Williams, W. Steffen, & P. Crutzen. 2010. The new world of the Anthropocene. *Environmental Science & Technology* 44(7):2228–2231.

Kolbert, E. 2010. The Anthropocene debate: marking humanity's impact. *Yale e360*, May 17.

Boyle, D. & A. Simms, *The New Economics*, Chapters 1, 2, & 3.

Week 2 (February 3): What Is System Change and How Do We Achieve It?

Meadows, *Thinking in Systems* (entire book).

Week 3 (February 10): Is the United States in Need of System Change?

Boyle & Simms, *The New Economics*, Chapters 4 & 10.

Brinkbäumer, K. 2010. A superpower in decline: is the American dream over? *Der Spiegel*, November 1.

Packer, G. 2011. The broken contract: inequality and American decline. *Foreign Affairs* 90(6): 20–31.

Wylie, M. 2010. Has the American dream become our nightmare? *Psychotherapy Networker*, July 10.

Week 4 (February 17): Why Energy and Materials Efficiency is a Problematic Strategy?

Boyle & Simms, *The New Economics*, Chapters 5 & 7.

Owen, *The Conundrum* (entire book).

Research Proposal Due

Week 5 (February 24): Does Relocalization Offer an Effective Answer to Our Sustainability Challenges?

Boyle & Simms, *The New Economics*, Chapters 8 & 9.

Berry, W. 2001. The idea of a local economy. *Orion Magazine*. Winter.

Halweil, B. 2003. The argument for local food. *World Watch* 16(3):20–27.

Born, B. & M. Purcell. 2006. Avoiding the local trap: scale and food systems in planning research. *Journal of Planning Education & Research* 26(2):195–207.

Cox, S. 2010. Does it really matter whether your food was produced locally? *Alternet*. 19 February.

Week 6 (March 3): What is the Point of Encouraging People to Buy “Green” Products?

Assadourian, E. 2010. The rise and fall of consumer cultures, pp. 3–20 in *State of the World 2010*. Washington, DC: Worldwatch Institute.

Reed, A. 2010. New emissions measurements show “green” consumerism failing. *World Changing* (<http://www.worldchanging.com/archives/011257.html>).

Hanns, M. 1998. The myth of green consumerism: consumption, community, and free markets. Unpublished paper.

Wilk, R. 2013. Green consumerism is no solution. *Huffington Post* (http://www.huffingtonpost.com/american-anthropological-association/green-consumerism-is-no-solution_b_3437457.html)

Week 7 (March 10): What is the Potential of a “Green” Economy?

Krugman, P. 2010. Building a green economy. *The New York Times Magazine*, April 11.

Kahn, M. 2009. The green economy. *Foreign Policy* 172:34–38.

Jackson, T. & P. Victor. 2013. *Green Economy at the Community Scale: Report Prepared for the Metcalf Foundation*, Toronto: Metcalf Foundation (<http://metcalffoundation.com/wp-content/uploads/2013/10/GreenEconomy.pdf>).

March 17 – Spring Break

Week 8 (March 24): Do We Need To Reduce Working Hours to Get on a More Sustainable Path?

Boyle & Simms, *The New Economics*, Chapter 6.

de Graaf, J. 2010. Reducing work time as a path to sustainability, pp. 173–184 in *State of the World 2010*. Washington, DC: Worldwatch Institute.

New Economics Foundation. 2010. *21 Hours: Why a Shorter Working Week Can Help Us All to Flourish in the 21st Century*. London: NEF.

Week 9 (March 31): Should We Redefine Our Understanding of Prosperity?

Victor, P. 2010. Questioning economic growth. *Nature* 468(7322):370–371.

Thompson, C. 2010. Nothing grows forever. *Mother Jones*, May/June.

Marglin, S. 2012. *Premises for a New Economy*. Boston: Tellus Institute.

Eisler, R. 2009. Roadmap to a new economics: beyond capitalism and socialism. *Tikkun Magazine*, November/December.

Costanza, R. et al. 2014. Time to leave GDP behind. *Nature* 505:283–285.

Week 10 (April 7): Is the Core Problem About Facilitating the Emergence of New Social Values and How Might We Do So?

Boyle & Simms, *The New Economics*, Chapter 11.

Crompton, T. 2010. *Common Cause: The Case for Working with Our Cultural Values*. London: WWF-UK.

Ingram, J. 2012. Belief is biased. *Alternatives Journal*. September.

Kahan, D. 2012. Why we are poles apart on climate change. *Nature*. 15 August.

Week 11 (April 14): What is “True Wealth”?

Schor, *True Wealth* (entire book).

Week 12 (April 21): Project Presentations

Week 13 (April 28): Project Presentations

Week 14 (May 5): Project Presentations