

New York City College of Technology
Social Science Department

Prof. S. MacDonald
Econ 2505 Environmental Economics
Fall 2014, Room V-326; Wed. 11:30 – 2:00 PM
Office: Namm 624; Hours: Tues and Wed 2:30 – 3:30 and by appointment
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CATALOG DESCRIPTION: This interdisciplinary course examines current environmental issues from a macroeconomic perspective, focusing on both the long and short-term economic viability of various proposals to address current environmental challenges. Traditional goals of economic efficiency will be examined in the context of the need to expand renewable energy sources, green design, sustainable construction and resource allocation and other efforts to combat climate change on a global scale.

COURSE PREREQUISITE:
CUNY proficiency in reading and writing and either Econ 1101 or Econ 1401

RECOMMENDED TEXTBOOK and MATERIALS*

Required: A course pack of required readings for this course is available from the bookstore. This contains a selection of book chapters, journal articles and readings from other sources including newspapers and other periodicals.

WEEKLY SEQUENCE OF TOPICS

Week 1: 9/3

Overview of course; Discuss and define some of the fundamental economic concepts from Econ 1101 and/or 1401; what do these mean in the context of real world problems? exchange of ideas; Discussion of key theoretical perspectives/arguments; Discuss possible topics of interest for research project.

Reading: Robert D. Atkinson and Darrene Hackler. October 2010. "Economic Doctrines and Approaches to Climate Change Policy," The Information Technology and Innovation Foundation (pgs. 1 - 9) and discussion.

Comment on **posted discussion questions on Open Lab before Wed. Sept.10. Prepare for discussion of these questions on 9/10.**

By week 2: decide on two top choices for the research project; by week 4 - choose topic; Continue review of theories re: Environmental Economics and the current debates about climate change

Assigned reading for week 2: Robert D. Atkinson and Darrene Hackler. October 2010. "Economic Doctrines and Approaches to Climate Change Policy," The Information Technology and Innovation Foundation - entire article; discussion of how economic theory influences policy proposals.

Week 2: 9/10

- 1) **Finish discussion of Atkinson and Hackler article: How have economists traditionally viewed environmental/ecological crises and how to address them? A mainstream vs. a critical view**
- 2) **Reading and discussion of two short articles that pose different policies consistent with the neoclassical approach to addressing carbon emissions; 1) discuss what the two policies mean; 2) What neoclassical economic assumptions are implicit in each? 3) Are there differences in their claims?**
 - Henry M. Paulson, Jr. "The Coming Climate Crash." New York Times, June 22, 2014
 - International Emissions Trading Association. Why Emissions Trading is More Effective Than a Carbon Tax, 1999-2014. IETA
Summarize/discuss
- 3) **How can you incorporate an interdisciplinary perspective into your research? (i.e., the perspectives of disciplines other than Economics)? What questions might you ask of the topic you are considering?**
- 4) **Discuss top two choices for the research project**

Assigned readings for week 3: 1) William R. Emmons, "Don't Expect Consumer Spending to be the Engine of Economic Growth in Once Was," *The Regional Economist*, Jan. 2012, Federal Reserve Bank of St. Louis); 2) World Economic Forum "Consumers: Changing the Terms of Engagement" (pgs. 13 – 21) in *The Consumption Dilemma: Leveraging Points for Accelerating Sustainable Growth*, April 2011

****Decide on final choice for research project by week 3 (9/17)**

Week 3: 9/17

- 1) **Discuss/review final research topics; discuss plans for field research day for week 4;** review formulation of research topic; review research methodologies; questionnaire development; documentation formats: notes, photo documentation, etc.; submit a one paragraph summary describing your research proposal on course blog on Open Lab
- 2) **The challenges to promoting a sustainable economy and economic 'growth' and renewable resources in a consumer driven market/capitalist economy**
 - The consumer as central to the survival and thriving of market economies
 - Moving from the 'disposable' society to the concept of renewability
 - The problem with economic growth as conventionally viewed and measured

Film: "Consumed" <https://www.youtube.com/watch?v=bOKI04TWVsU>

Followed by discussion; comment on blog questions.

****NO CLASSES SCHEDULED ON WED. SEPTEMBER 24****

Assigned readings for week 4: (10/1): 1) Stuart L. Hart, *Beyond Greening: Strategies for a Sustainable World*, *Harvard Business Review*, Vestas, Jan – Feb 1997; 2) Bouton, Lindsay and Woutzel, *New Models for Sustainable Growth in Emerging-Market Cities*, McKinsey and Co., 2012; 3) Lyuba Zarsky,

Climate Resilient Industrial Development Paths: Design Principles and Alternative Models, Global Development and Environment Institute, Working Paper No. 10 -01, Feb. 2010; WEF, "Consumers: Changing the Terms of Engagement," from the *Consumption Dilemma*, World Economic Forum (pgs. 13-18)

Assignment for next class: 1) Comment on posted discussion questions on the readings on Open Lab

Week 4 Oct.1 Review guidelines for summaries of how your field research will help to inform your project: summaries should identify two or three key findings you observed as most interesting and significant.

Guest lecturer #1: Prof. Pa Her, Professor of Psychology, Department of Social Science; discussion of WEF article, "Consumers: Changing the Terms of Engagement," (pgs. 13 – 18)

Week 5 Assignment: Field and scholarly research; one to two-paragraph summaries of your external research due week 6 on Open Lab (10/15)

Choose one of the following for you site research, or propose your own based upon your interests and the topic you have chosen for your research project.

Week 5: 10/8: Tour of Sims Material Recycling Facility in Sunset Park on Wed. Oct. 1 (free); This will be a class tour; further information to follow.

Additional options to pursue on your own based on your research interests:

- 1) Urban Grange Farm – Queens (Saturdays- 11: - 3:00 free; make reservation in advance)
- 2) Urban Grange Farm – Brooklyn Navy Yard (Wednesdays @ 10:00 and 11:00 AM/book online
- 2) A local neighborhood/community – survey of the environmental characteristics of the community
- 4) Building 92 at Brooklyn Navy Yard: **Option 1:** Wed through Sun 12:00 to 6:00 – free/self-guided tour of the building's sustainable features and businesses; **Option 2:** Book a tour – join any public tour/book online with discount code (pending funding)
- 5) Visit a local restaurant involved in sustainable practices (sourcing locally produced foods; organic foods; other sustainable practices)
- 6) Other ???

Assignment for week 6:

1) Reading: Richard Welford & Bjarne Ytterhus (2004) Sustainable development and tourism destination management: A case study of the Lillehammer region, Norway, *International Journal of Sustainable Development & World Ecology*, 11:4, 410-422, DOI: 10.1080/13504500409469843; **Read and be prepared to discuss posted questions prior to next class.**

2) Post your summaries; photos, etc. of findings from field research on Research site on Open Lab;

3) brief summary that identifies three findings you found to be interesting or significant.

Week 6: 10/15

- 1) **Discuss research activities; exchange summaries and get feedback/suggestions; submit summaries.**

- 2) Review preparation of abstract of paper/research project and an annotated bibliography for paper; working on literature review (secondary source material)

Guest lecturer #2: Prof. Susan Phillip - Department of Hospitality Management, Promoting sustainable tourism; discussion of Welford and Ytterhus article and pre-lecture discussion questions.

Assigned reading for week 7: 1) Commission on Sustainable Agriculture and Climate Change. November 2011. "Achieving food security in the face of climate change." (See the following link for more reports and data: <http://ccaafs.cgiar.org/commission/reports>)

Week 7: (10/22) Sustainable Agriculture and Natural Resource Use

- 1) Discuss readings and responses to questions posted on Open Lab
- 2) **Film 2: "Brooklyn Grange Farm": sustainable resource use of urban space and its benefits**
<http://www.growingagreenerworld.com/episode322/>
 - a. Synthesizing research findings/presentations that briefly summarize your work to date.
 - b. Midterm review material posted on Open Lab

Assigned readings for week 8: 1) Warwick J. McKibbin and Peter J. Wilcoxon, *A Credible Foundation for Long Term International Cooperation on Climate Change*, in Joseph Aldy and Robert Stavins (eds), *Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World*, Cambridge University Press; 2) Donald D. Stull, *Activism, Poultry Production, and Environmental Justice in Western Kentucky*, *Sustain*, Spring/Summer 2004, #10

Week 8: 10/29

The ecology of local communities: recovering from resource loss; costs of pollution; renewal and rebuilding following environmental challenges of pollution and extreme weather events; developing urban green space; storm-water management

Guest lecturer #3: Christine Petro - Gowanus Canal Conservancy; discussion

Review for midterm exam

Week 9: 11/5: Midterm Exam

Assigned readings for week 10: 1) OECD Observer, Is GDP a satisfactory measure of growth? (2 pgs); 2) Jonathan Rowe & Judith Silverstein, *The GDP Myth: Why "growth" isn't always a good thing*, 2009; **see posted discussion questions on blog site

- 1) **Week 10: 11/12** How is economic progress and growth measured? Are considerations of well-being important to the measurement of economic progress?

Assigned readings for week 11: Read any two of the following for week 11:

1) The Paul H. Nitze School of Advanced International Studies. December 16, 2010. *Annual Energy Outlook 2010*; 2) Jeane Manning. *The Coming Energy Revolution: Selected Excerpts from Her Book*, Avery Press. http://www.zpower.com/sp/documents/Paper_TheComingEnergyRevolution.pdf 3) Renewable energy map, National Resources Defense Council, http://www.nrdc.org/energy/renewables/map_wind.asp#map; 4) U.S. Green Building Council, *Green Jobs Study*, Booz, Allen, Hamilton; 5) Union of Concerned Scientists, *Benefits of Renewable Energy Use, 1999*.

Week 11: 11/19: Where has investment in renewable energy and sustainable economic practices begun to generate measurable benefits in the U.S. economy? The Growth of Green Building Design and Construction in the U.S.

Assigned reading for week 12: 11/19: 1) Center for Integrative Environmental Research (CIER) at the University of Maryland. October 2007. "Executive Summary: The US Economic Impacts of Climate Change and the Costs of Inaction;" 2) James Atlas. *Is This The End?* November 25, 2012. New York Times, Opinion; 3) Daly, ch.10 *Free Trade and Globalization vs. Environment and Community* and ch. 11, *From Adjustment to Sustainable Development: The Obstacle of Free Trade*; 4) Robert D. Bullard, *Differential Vulnerabilities: Environmental and Economic Inequality and Government Response to Unnatural Disasters*, *Social Research*, 75, 2008: 753-784

Week 12: 11/26: The Global Economic Impacts of Climate Change.

Assigned readings for week 13: Reading(s) assigned by guest lecturer

Week 13: 12/3

Guest Lecturer #4: Prof. R. Blake, Dept. of Physics; discussion.

Week 13: Economic and Human Costs of Global Climate Change; the costs of farmland loss, droughts, extreme weather events.

Discuss assigned readings; Film and discussion

Week 14: 12/10: Final presentations; presentations focus on significance of findings; what was learned? Class feedback/discussion/questions.

Review for final exam

Week 15: Final Exam 12/17

COURSE INTENDED LEARNING OUTCOMES/ASSESSMENT METHODS: To develop an understanding of the fundamental concepts of environmental economics. Specifically, course objectives include the following:

LEARNING OUTCOMES¹	ASSESSMENT METHODS
1. Students in the course should be able to demonstrate an understanding of many dimensions of sustainability as they relate to the potential for renewed economic growth.	1. The midterm and final exams, which will include essay questions, will test students' understanding of sustainability issues as they relate to economic practices and policy

2. Demonstrate a knowledge of the importance of changing economic behavior – from consumers, to business practices to government – to build upon the move toward sustainable economic practices	2. Class discussions of assigned articles and other supplementary readings in class and on course blog site on Open Lab.
3. Identify a range of tools from environmental economics that can be applied to solving real world environmental challenges that impact the U.S. economy.	3. Both the exams and class discussions will serve as tools to encourage students to make the connections between environmental goals and addressing economy-wide and global economic issues.
4. Develop a breadth and depth of knowledge of how to begin to apply the concepts of sustainability to consumer, business and trade practices.	4. Through the written research project and/or case study and final presentations, students will focus on a problem/issue, the challenges posed by that issue and critically examine various solutions.

GENERAL EDUCATION LEARNING OUTCOMES/ASSESSMENT METHODS

<i>LEARNING OUTCOMES</i>	<i>ASSESSMENT METHODS</i>
1. KNOWLEDGE: To develop a understanding of the key concepts that relate to environmental economics, the central topics and theories of how to address environmental problems through economic policy.	1. Discussion of readings, material presented by guest lecturers and field visits that both test an understanding of basic concepts and that require students to express their understanding in writing (short essay quizzes)
2. SKILLS: Develop and apply the tools of environmental economics to be able to critically question, analyze, and discuss environmental economic problems and issues; Develop and strengthen the ability to discuss concepts and thoughts in writing.	2. Completion of essay questions on exams; class discussions of questions tied to topics covered in class and to supplemental short readings and articles on timely relevant issues; students analyze, evaluate and consider policy options
3. INTEGRATION: Apply the tools acquired in the course to be able to build upon an understanding of environmental issues and sustainability across disciplines, both in the social sciences and other disciplines.	3. Research project which requires students to select and define a topic, problem or issue and examine possible solutions drawing upon and employing the tools of related disciplines; Final in-class summaries of research; participation in Emerging Scholars poster session.
4. VALUES, ETHICS, AND RELATIONSHIPS: Develop an understanding of and ability to apply diverse perspectives to the understanding of sustainability/environmental economics; work creatively with others in group problem solving; develop a respect for diverse viewpoints and apply the skills and concepts covered in the course to the analysis of related issues and concepts across other disciplines	4. Weekly in-class group assignments; assignments encourage student discussion and sharing of ideas and perspectives; focused discussions that encourage students to question and think critically to develop their own perspectives on issues covered in the class .

From: Important General Education Learning Goals (6/1/11) DRAFT

SCOPE OF ASSIGNMENTS and other course requirements*

Students in this course will be required to complete a written research project resulting in a final paper of approximately 5 pages. This may consist of a topic chosen from topics covered in the course or a case study tied to a particular topic in the student’s major course of study. Students will also be expected to participate in the Fall 2014 Poster Presentation, presenting their research project, or preliminary work (either individually or in teams). There will also be a midterm and final exam, both of which will place an emphasis on a written understanding of key concepts covered in the course and readings; class discussions of assigned readings –

students will be expected to be prepared to discuss assigned questions based on the readings. The course will be writing intensive.

METHOD OF GRADING – elements and weight of factors determining the students' grade*

Midterm exam	20%
Research project/case study	20%
Final exam	25 %
Final presentation	15 %
Participation in discussions; entries on course blog on Open Lab; attendance	20%

GRADING POLICY: calculated according to the college grade scale:

Letter Grade	Meaning of Letter Grade	Number Grade
A	Exceptional	100-93
A-	Superior	92.9-90
B+	Very good	89.9-87
B	Good	86.9-83
B-	Above Average	82.9-80
C+	Slightly Above Average	79.9-77
C	Average	76.9-70
D	Poor	69.9-60
F	Failure	59.9-0

*Scope of Assignments and Method of Grading to be determined at discretion of the instructor.

ACADEMIC INTEGRITY POLICY STATEMENT

Students and all others who work with information, ideas, texts, images, music, inventions, and other intellectual property owe their audience and sources accuracy and honesty in using, crediting, and citing sources. As a community of intellectual and professional workers, the College recognizes its responsibility for providing instruction in information literacy and academic integrity, offering models of good practice, and responding vigilantly and appropriately to infractions of academic integrity. Accordingly, academic dishonesty is prohibited in The City University of New York and at New York City College of Technology and is punishable by penalties, including failing grades, suspension, and expulsion. The complete text of the College policy on Academic Integrity may be found in the catalog.

COLLEGE POLICY ON ABSENCE/LATENESS

A student may be absent without penalty for 10% of the number of scheduled class meetings during the semester as follows:

Class Meets	Allowable Absence**
1 time/week	2 classes
2 times/week	3 classes
3 times/week	4 classes

**Each department and program may specify in writing a different attendance policy for courses with laboratory, clinical or field work. If the department does not have a written attendance policy concerning courses with laboratory, clinical or field work, the College policy shall govern.

Policies:

****NO TEXTING OR OTHER USE OF CELL PHONES WHILE CLASS IS IN SESSION****

1. **Final exam:** There will be **no option to make up the final exam.**
2. **Assigned Posts on Open Lab must be completed in the Assigned time period to receive credit; Chapter readings must be completed prior to the next class.** In-class reviews are important to complete as part of the course. **These are 25% of final grade.**
3. **Class discussion and participation in group reviews/exercises make up 15 % of final grade**
4. **More than two absences will adversely affect your final grade.** If you must miss a class, please provide prior notification by email or in person. My email address and phone number are listed on the front of syllabus.
5. **Students must arrive on time for class and stay for the entire class; consistent lateness and leaving class early will negatively affect your final grade.**
6. **Texting, emailing and other use of cell phones is prohibited during class time; they must be turned off and put away while class is in session.**
7. **Phones may not be used during exams; calculators are permitted only.**
8. **There will be a 10 minute break halfway through each class.**

Bibliography:

Charles D. Kolstad. *Environmental Economics*, 2nd ed. Oxford University Press, 2010

William C. Whitesell . *Climate Policy Foundations: Science and Economics with Lessons from Monetary Regulation*, Cambridge University Press, September 2012

Charles S. Pearson. *Economics and the Challenge of Global Warming*, Cambridge University Press

David C. Victor. *Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet*, Cambridge University Press, 2011.

Karsten Neuhoff. *Climate Policy after Copenhagen: The Role of Carbon Pricing*, Cambridge University Press

Edward B. Barbier. *Capitalizing on Nature: Ecosystems as Natural Assets*, Cambridge University Press

Christian dePerthuis. *Economic Choices in a Warming World*, Cambridge University Press

Nicholas Stern. *The Economics of Climate Change*, Cambridge University Press

Herman E. Daly, *Beyond Growth: The Economics of Sustainable Development*. Beacon Press, 1997.

David Pearce, and Edward Barbier. *Blueprint for a Sustainable Economy*, Earthscan Publications, 2000

Michael Shellenberger, and Ted Nordhaus. *Break Through: From the Death of Environmentalism to the Politics of Possibility*, Houghton Mifflin, 2007

Jerry Mander, ed. *The Case Against the Global Economy*, Sierra Club Books, 1997

Joshua Karkiner. *The Corporate Planet: Ecology and Politics in the Age of Globalization*, Sierra Club Books, 1997

Brian Milani. *Designing the Green Economy*, Rowman & Littlefield Publishers, 2000

Lester Brown. *Building an Economy for the Earth*, W.W. Norton, 2001

Joshua Farley, and Herman E. Daly. *Ecological Economics: Principles and Applications*, Island Press, 2003

William E. Rees, and Mathis Wackernagel. *Our Ecological Footprint: Reducing Human Impact on the Earth*, New Society Publishers, 1995

Paul Hawken. *The Ecology of Commerce*, Collins, 1994

William K. Jaeger. *Environmental Economics for Tree Huggers and Other Skeptics*, Island Press, 2005

Suzanne Ludicello and Micahel L. Weber and Robert Wieland. *Fish, Markets, and Fishermen: The Economics of Overfishing*, Island Press, 1999

Ed Ayres. *God's Last Offer: Negotiating for a Sustainable Future*, Four Walls Eight Windows, 2000

Paul Hawken, Amory Lovins, and L. Hunter Lovins. *Natural Capitalism: Creating the Next Industrial Revolution*, Back Bay Books, 2000

Daniel Pauly, and Jay Maclean. *In a Perfect Ocean: The State of Fisheries and Ecosystems in the North Atlantic Ocean*, Island Press, 2003

Jim Merkel. *Radical Simplicity: Small Footprints on a Finite Earth*, New Society Publishers, 2003

Nicky Chambers, Craig Simmons, and Mathis Wackernagel. *Sharing Nature's Interest: Ecological Footprints as an Indicator of Sustainability*, Earthscan Publications, 2001

E.F. Schumacher. *Small is Beautiful, 25th Anniversary Edition: Economics As If People Mattered: 25 Years Later (With Commentaries)*, Hartley and Marks Publishers, 2000

Jonathan Harris, et. al., eds. *A Survey of Sustainable Development: Social and Economic Dimensions*, Island Press, 2001

Andres Edwards. *The Sustainability Revolution: Portrait of a Paradigm Shift*, New Society Publishers, 2005

Juliet Schor and Betsy Taylor, eds. *Sustainable Planet: Solutions for the Twenty-first Century*, Beacon Press, 2003

Tom Tietenberg, and Lynne Lewis. *Environmental Economics & Policy*, 6th ed., Prentice Hall, 2010

Cédric Afssa, Didier Blanchet, Vincent Marcus, Pierre-Alain Pionnier and Laurence Rioux (INSEE), and Marco Mira d'Ercole, Giulia Ranuzzi and Paul Schreyer (OECD). *SURVEY OF EXISTING APPROACHES TO MEASURING SOCIO-ECONOMIC PROGRESS*; Commission on the Measurement of Economic Performance and Social Progress.

Robert J. Bullard, ed. *The Quest for Environmental Justice: Human Rights and the Politics of Pollution*, Sierra Club Books, 2005.