

## **ERS 464 – Economics and Sustainability** **Fall 2015 Course Outline –University of Waterloo**

**Instructor:** Prof. Jennifer Clapp; **Office:** EV2 2016; **Email:** jclapp @ uwaterloo.ca  
**Office Hours:** Wednesdays 1:30-3:30pm

**Class Meeting Times:** Mondays 11:30am-2:30pm; Location: HH 227

**Calendar Description:** Introduction to a range of approaches to the relationship between the economy, the environment and sustainability.

**Objectives:** The objective of this course is to provide students with an introduction to various approaches to the intersection of the economics and sustainability. The course will provide students with the basic concepts and associated tools needed to enable them to analyze issues and problems at the interface of the economy and the environment from a range of viewpoints.

### **Detailed Course Description:**

Most of the problems we address in environmental studies are embedded in one way or another to the functioning of the economy. Yet we often take this basic structural feature of our society as a given, seeing it as a complex subject best left to economic ‘experts’ and their models.

This course aims to break through these barriers. It seeks to provide students with an advanced, yet highly accessible introduction to the various approaches to the relationship between economics and sustainability. It probes key questions that are vital for the work we do in environmental studies, but which often lack clear answers:

- Is economic growth good or bad for the environment?
- Do we need to put a price on nature in order to save it?
- Is it possible to design a truly sustainable economy?
- What is the appropriate role for market signals in environmental policies?

This course examines these questions, as well as the reasons why different economists typically provide conflicting answers to them. The aim of the course is not to provide a ‘right answer’ or train students in particular economic or mathematical ‘methods’. Instead it seeks to provide students with an understanding of the differing viewpoints and their associated methods, including their strengths, weaknesses and applicability in a policy context.

***Students are not expected to already have a background in economics.*** The course is designed for those students with an interest in learning about these issues and debates from a range of economic perspectives, whether or not they have a background in economics. Prereq: Level at least 4A (or permission of instructor).

**Key topics:** The course starts with an examination of the history and assumptions that underlie conventional (neoclassical) economic approaches to the environment, as compared with the assumptions that guide the relatively more recent and critical fields such as ecological economics

and green economics. We will then examine key economy-environment issues and policies to address them, such as economic growth, natural resource extraction, pollution and other market failures including climate change, and the financialization of nature. Measures of ‘progress’ and ‘prosperity’ will also be examined, comparing conventional measures (of wealth and growth) with those that incorporate environmental components, and we will discuss their usefulness – both conceptually as well as in a policy setting. The course will end up with two weeks of a student ‘conference’ that examines key books and concepts in the field.

**Requirements and evaluation:** The course mark will be determined on the basis of the following items:

- 1. Reaction Papers.** During weeks 2-9, you will be required to write four 1 page (single-spaced) “reaction papers”. This paper should outline some of your reactions to the readings assigned for that specific week and should NOT just be a summary. Please try to develop an argument regarding the topic we are studying that week, and try to incorporate the following in your reading response: 1) What information, ideas or content in the readings did you find helpful or useful to your thinking and in what way? (i.e. did the readings provide new information or concepts that made you think about these issues in a different way? Or did they reinforce your thinking on that topic?) 2) What information, ideas or content in the readings did you disagree with or take issue with, and why? Reaction papers should have a short introductory paragraph at the start that states your main point or argument, and the rest of the paper should provide your reasoning for your argument. You will be called upon to briefly present your editorial comments to the class. The schedule for reading responses will be determined in the first class. These papers are worth 10% each (40% together).
- 2. Book Review Essay.** An extended book review essay between 10-12 double-spaced pages in length is due in December (please email a PDF file to Prof. Clapp no later than Dec. 6). A list of suggested books is included at the end of this outline (you may choose a different book, but it must be approved by Prof. Clapp). The first section of the essay (which can be no more than one third of the total length of the essay) must describe the central argument of the book. The rest of the essay must evaluate the book’s arguments in the context of the readings and discussions of the course. You must make reference to the course readings in the essay. You may also find it helpful to consult some additional sources in writing the book review. This assignment is worth 30% of your mark. More information on expectations for this assignment will be given in class.
- 3. Presentation.** You will be asked to present your book review essay in a 15 minute presentation during the class conference at the end of term. This presentation is worth 10% of your mark.
- 4. Participation.** Good participation is not simply a matter of attendance and speaking out in class. It involves contributions that demonstrate your engagement and connection with the course materials. This might include showing that you are making connections between different parts of the course materials and also between course materials and current events and external readings, as well as demonstration that you have carefully weighed the concepts, arguments and viewpoints expressed in readings and in class and have incorporated them into your own analysis. Each week, you are expected to have read and thought about that week’s

readings, and come prepared to discuss your thoughts and ideas with your classmates in a constructive and respectful manner. Participation is worth 20% of your mark.

**Marks Breakdown:**

Reaction Papers	40% (10% each)
Essay	30%
Presentation	10%
Seminar Participation	20%

**Textbooks:**

The following two books should be available at the UW bookstore for purchase. A copy of each will also be placed on reserve in the library.

Molly Scott Cato, *Environment and Economy* (Routledge, 2011).

Tim Jackson, *Prosperity Without Growth: Economics for a Finite Planet* (Earthscan, 2009).

There are additional readings, drawn from articles freely available through the library or internet.

**Schedule of Topics and Readings:**

**September 14**

**1. Economics and Sustainability: Introduction and Historical Context**

**Film:** Small is Beautiful: Impressions of Fritz Schumacher (1978) (30 minutes)

**September 21**

**2. Neoclassical Approaches to Economy and Environment**

Cato, *Environment and Economy*, chapters 1-4 (pages 1-67)

UNEP, 2011. "Introduction: Setting the Stage for a Green Economy Transition", in *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, at [http://www.unep.org/greeneconomy/Portals/88/documents/ger/1.0\\_Introduction.pdf](http://www.unep.org/greeneconomy/Portals/88/documents/ger/1.0_Introduction.pdf)

*Economic concepts: supply and demand, markets, circular flow, GDP, market failures, externalities, environmental Kuznets curve, efficiency, market instruments, green economy*

**September 28**

**3. Alternative Approaches: Ecological, Green and Anti-capitalist Perspectives**

Cato, *Environment and Economy*, chapters 5-7 (pages 68-116)

Daly, Herman, "Economics in a Full World", *Scientific American*, September 2005, pp.100-107.

Haberl, Helmut, Marina Fischer-Kowalski, Fridolin Krausmann, Joan Martinez Alier and Verena Winiwarter. "A Socio-metabolic Transition Towards Sustainability? Challenges for Another Great Transformation" *Sustainable Development* 19 (1), pp.1-14.

*Economic concepts: throughput, entropy, laws of thermodynamics, capitalism, Marxism, social metabolism, degrowth, genuine progress indicator*

## **October 5**

### **4. Economic Policy for the Environment: Approaches to Addressing Market Failures**

Cato, *Environment and Economy* chapters 8-11 (pages 119-182)

*Economic concepts and policy tools: regulation (command and control), voluntary measures, corporate social responsibility, environmental taxes and subsidies*

## **October 19**

### **5. Economics of Climate Change**

Cato, *Environment and Economy* chapter 13, pp.198-214.

Meckling, Jonas, and Cameron Hepburn. "Economic instruments for climate change." *The handbook of global climate and environment policy*. Cheltenham: John Wiley & Sons Ltd (2013): 468-85.

Spash, Clive L. 2010. "The Brave New World of Carbon Trading." *New Political Economy* 15 (2): 169–95.

*Economic policy tools: tradable permit schemes, carbon taxes, carbon markets, clean development mechanism, REDD+, carbon offsets,*

## **October 26**

### **6. Do We Need to Price Nature to Save it? Payments for Ecological Services and Offsets**

Cato, *Environment and Economy*, chapter 14 (pages 215-228)

Costanza, Robert, Rudolf de Groot, Paul Sutton, Sander van der Ploeg, Sharolyn J. Anderson, Ida Kubiszewski, Stephen Farber, and R. Kerry Turner. 2014. "Changes in the Global Value of Ecosystem Services." *Global Environmental Change* 26 (May): 152–58.

Hein, Lars. 2013. "Payments for Ecosystem Services and the Financing of Global Biodiversity Conservation." *Current Opinion in Environmental Sustainability* 5 (1): 87–93.

Kallis, Giorgos, Erik Gómez-Baggethun, and Christos Zografos. 2013. "To Value or Not to Value? That Is Not the Question." *Ecological Economics* 94 (October): 97–105.

*Economic Policy concepts and tools: environmental valuation, natural capital, discounting, payment for ecosystem services, biodiversity offsetting*

**November 2**

### **7. Environmental Implications of Economic Globalization**

Cato, *Environment and Economy*, chapter 12 (pages 183-197)

Gallagher, Kevin, “Economic Globalization and the Environment”, *Annual Review of Environment and Resources*, 2009, pp. 279-304.

Roberts, J Timmons and Bradley Parks, “Ecologically Unequal Exchange, Ecological Debt and Climate Justice”, *International Journal of Comparative Sociology*, 50 (3-4), 2009, pp.385-409.

*Economic concepts and tools: comparative advantage, ecological debt/reparations, ecologically unequal exchange; border carbon tax*

**November 9**

### **8. Money Systems, Finance and Nature**

Daly and Farley. 2004. “Money”, pp.245-258.

Sullivan, Sian. 2013. “Banking Nature? The Spectacular Financialisation of Environmental Conservation.” *Antipode* 45(1): 198–217.

Bayliss, Kate. 2014. “The Financialization of Water.” *Review of Radical Political Economics* 46 (3): 292–307.

Bracking, Sarah. “How Do Investors Value Environmental Harm/Care? Private Equity Funds, Development Finance Institutions and the Partial Financialization of Nature-based Industries.” *Development and Change* 43(1): 271–93.

*Economic concepts: functions of money, fractional reserve system, money creation, credit, derivatives, financialization, socially responsible investment, debt*

**November 16**

### **Week 9- Reconsidering Prosperity - I**

Jackson, *Prosperity without Growth*, chapters 1-6

**November 21 (make up day for Thanksgiving – Note this is a Saturday)**

### **10. – Reconsidering Prosperity II**

Jackson, *Prosperity without Growth*, chapters 7-12

**Film:** The Economics of Happiness

**November 23**

**11. Book Review Presentations – Schedule TBD**

**\*\*\* Peter Dauvergne Talk in afternoon \*\*\* sponsored by Waterloo Political Economy Group**

Monday November 23, 4:45-6:00pm

Speaker: **Peter Dauvergne** (UBC)

Topic: **Is Environmentalism Failing the Earth? Confronting the Political Economy of Ever More**

Location: BSIA 1-23 (boardroom)

**November 30**

**12. Book Review Presentations – Schedule TBD**

**Possible Books for Review:**

Bill McKibben, *Deep Economy* (2008)

Donella Meadows et al, *Limits to Growth 30 year update* (2004)

Edward Barbier and Anil Markandya, *A New Blueprint for a Green Economy* (2012)

Gus Speth, *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* (2009)

Herman Daly and John Cobb, *For the Common Good* (1994)

Herman Daly, *Beyond Growth* (1997)

Herman Daly, *Steady-State Economics* (1991)

Jeffrey Sachs, *Common Wealth* (2009)

Joan Martinez-Alier, *Environmentalism of the Poor* (2002)

John Gowdy, *Coevolutionary Economics: The Economy, Society and the Environment* (1994)

John Greer, *The Wealth of Nature* (2011)

Joseph E. Stiglitz, Amartya Sen and Jean-Paul Fitoussim, *Mismeasuring Our Lives: Why GDP Doesn't Add Up* (2010)

Juliet Schor, *Plenitude: The New Economics of True Wealth* (2010)

Karen Litfin, *Ecovillages* (2014)

Michael Grubb, *Planetary Economics: Energy, Climate Change and the Three Domains of Sustainable Development* (2013)

Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (2014)

Paul Collier, *The Plundered Planet* (2010)

Paul Hawkin, Amory Lovins and Hunter Lovins, *Natural Capitalism* (2010 edn)

Paul Hawkin, *The Ecology of Commerce* (Revised Edn) (2010)

Peter Christoff and Robyn Eckersley, *Globalization and the Environment* (2013)

Peter Dauvergne and Jane Lister, *Eco-Business: A Big-Brand Takeover of Sustainability* (2012)

Peter Dauvergne, *The Shadows of Consumption* (2008)

Peter Newell and Matthew Paterson, *Climate Capitalism: Global Warming and the Transformation of the Global Economy* (2010)

Peter Newell, *Globalization and the Environment* (2012)

Peter Victor, *Managing without Growth* (2008)

Raj Patel, *The Value of Nothing* (2010)

Robert Nadeau, *The Environmental Endgame: Mainstream Economics, Ecological Disaster, and Human Survival* (2006)

Robin Broad and John Cavanagh, *Development Redefined: How the Market Met its Match* (2008)

Sasha Breger Bush, *Derivatives and Development* (2012)

Stephen Macekura, *Of Limits and Growth: The Rise of Global Sustainable Development in the Twentieth Century* (2015)

Thomas Princen, *The Logic of Sufficiency* (2005)

Thomas Princen, *Treading Softly: Paths to Ecological Order* (2010)

Wolfgang Sachs, *Planet Dialectics: Explorations in Environment and Development* (2015)

E.F. Schumacher, *Small is Beautiful* (1975)

### **Administrative Notes:**

Unclaimed assignments will be retained for (two months after term grades become official in quest). After that time, they will be destroyed in compliance with UW's [confidential shredding procedures](#).

- ◆ **Academic Integrity:** In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility.  
[www.uwaterloo.ca/academicintegrity/](http://www.uwaterloo.ca/academicintegrity/)
- ◆ Students who are unsure what constitutes an academic offence are requested to visit the on-line tutorial at <http://www.lib.uwaterloo.ca/ait/>
- ◆ **Note for students with disabilities:** The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.
- ◆ **Religious Observances:** Student needs to inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.
- ◆ **Grievance:** A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for

initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4, [www.adm.uwaterloo.ca/infosec/Policies/policy70.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm). When in doubt please contact your Undergraduate Advisor for details.

- ◆ **Discipline (*as noted above under 2a*):** A student is expected to know what constitutes academic integrity, to avoid committing academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offense, or who needs help in learning how to avoid offenses (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, [www.adm.uwaterloo.ca/infosec/Policies/policy71.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm). For typical penalties, check Guidelines for Assessment of Penalties, [www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm](http://www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm)
- ◆ **Appeals:** A decision made or penalty imposed under Policy 70 - Student Petitions and Grievances (other than a petition) or Policy 71 – (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) [www.adm.uwaterloo.ca/infosec/Policies/policy72.htm](http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm)