

Ecological Economics Short Course Syllabus

Course times: Thursdays 12-1pm ET, Feb 18th to March 17th

Instructors: Dr. Erin Lennox, Kyle Gracey

This course is intended to provide a rapid overview of a very large and multidisciplinary field. We'll cover basic concepts, and focus on real-world implications rather than pure theory. Each class will be largely lecture, but with plenty of time for questions and discussion. Recordings of each class will be available online within 48 hours of the live session, with links provided in this document. In order to receive a certificate of completion, you must complete all assignments. Files can be uploaded or created in the same folder. If you want to have other discussions, we encourage you to use the ESW [forums here](#).

Class 1: Modern issues and the evolution of economics

Recording at <https://www.youtube.com/watch?v=ODX7OXUMyWs>

- An intro on some of the pressing issues we face today like income inequality, greenhouse gas emissions, biodiversity loss
- A Brief History of Economic Thinking: How we got to where we are today, and what alternatives have come up along the way – drawing out differences between branches
- How economic policy drives engineering and technology development

Pre-class assignment:

What is your experience with economics (courses or otherwise) and what do you think ecological economics is?

Class 2: Economics as if Humans Were Not Robots

- Behavioral findings on wellbeing
- How these findings can be used to promote better policy making on energy and environmentally related policies

Pre-class readings and videos:

Read:

Nudge, chapters 1-5 (available in Drive folder)

Watch:

Daniel Arieli Talks on Relativity, and Decisions:

https://www.youtube.com/watch?v=_ERQEVdlinc

<https://www.youtube.com/watch?v=9X68dm92HVI>

Class 3: Economics as if Physics Were Real

- Beyond Growth / Steady State Economy
- Material Limits / Entropy
- Planetary boundaries
- Valuation of Ecosystem Services
- Substituting natural capital for other forms, Problems with the concept of economic valuation (Costanza reading)

Pre-class Assignments:

Read:

Dismounting our Tiger of Perpetual Economic Growth by Edward Lee

Nature Article: Planetary Boundaries. A Safe operating space for Humanity

(both are available on google drive in PDF form)

Watch:

The Story of Stuff (<http://storyofstuff.org/movies/story-of-stuff/>)

TED Talk on Planetary Boundaries

(http://www.ted.com/talks/johan_rockstrom_let_the_environment_guide_our_development?language=en)

Class 4: Development

- how macroeconomic models expect development to occur, why differences occur
- Alternative indicators to GDP: HDI, happiness index, revised GDP formulations
- Development As Freedom
- Development and social justice
- The Sustainable Development Goals

Pre-class Assignments:

Read:

An article on the Genuine Progress Indicator (GPI)

<http://www.newrepublic.com/article/116461/gpi-better-gdp-measuring-united-states-progress>

Watch:

Ted Talk: The Happy Planet Index

http://www.ted.com/talks/nic_marks_the_happy_planet_index?language=en

Ancient Futures: Learning from Ladakh (this is an hour long, but very interesting if you have time!) <https://vimeo.com/63325892>

Class 5: The Economics of Global Issues (with a focus on Climate Change) & Implementing Ecological Economics

- Why economic concepts like discounting the future and uncertainty don't make sense in terms of climate change
- Strong vs. Weak sustainability
- Paris Agreement on Climate Change
- Implementing Ecological Economics in your work and life:
 - Community based management: Shared ownership and cooperatives
 - Basic Income
 - Local Currency & Local Economies
 - Corporate sustainability - new types of companies and models beyond pure growth
 - Flexible Employment / Job Sharing / The 20 Hour work week

Pre-class Assignments:

Read:

[What is Ecological Economics](#) - an interview with Robert Costanza

Costanza et al. The value of the world's ecosystem services and natural capital

http://www.esd.ornl.gov/benefits_conference/nature_paper.pdf

ICSU assessment of SDGS (before they had been implemented) -

<http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015/SDG-Report.pdf>

[Aim for a 20-Hour Work Week](#) - New Economics Foundation via the Guardian

Suggested Readings and Resources

In a short course like this we can't assign too many readings, though there are tons of great resources out there if you are interested in learning more! Here is our recommended reading list, sorted by topic.

General Books about Ecological and Alternative Economics

Small is Beautiful: Economics as if People Mattered by EF Schumacher

What Then Must We Do? by Gar Alperovitz

Ecological Economics for the Anthropocene, Peter G. Brown and Peter Timmerman, eds. 2015

Enough is Enough: Building a Sustainable Economy in a World of Finite Resources, by Rob Dietz, Dan O'Neill, Herman Daly

Governing the commons: the evolution of institutions for collective action, by Elinor Ostrom

An Introduction to Ecological Economics by Robert Costanza and John H. Cumberland, 2nd Edition 2014

Ecological Economics, Principles and Applications by Farley and Daly 2003

Ecological Economics: An Introduction by Common and Stagl, 2005

Behavioral Economics

Predictably Irrational by Dan Ariely

The Upside of Irrationality by Dan Ariely

Nudge: Improving Decisions about Health, Wealth and Happiness by R. Thaler and C. Sunstein

Bio-Physical Limitations

Beyond Growth: The Economics of Sustainable Development by Herman Daly

Collapse by Jared Diamond

Paradise for Sale: A Parable of Nature by Carl McDaniel and John Gowdy

Planetary Economics by Michael Grubb

Development

Development as Freedom by Amartya Sen

Poor Economics: By Esther Duflo and Abhijit Banerjee

Theories of Development: Contentions, Arguments, and Alternatives by Richard Peet and Elaine Hartwick

The Kochia Chronicles by Khanjan Mehta

Organizations to Follow

Institute for New Economic Thinking (INET): <http://ineteconomics.org/>

New Economics Foundation: <http://www.neweconomics.org/>

New Economy Coalition : <http://neweconomy.net/>

Schumacher Center for New Economics: <http://www.centerforneweconomics.org/>

Network of Early-Career Sustainable Scientists and Engineers (NESSE)

www.sustainablescientists.org/

Engineers for a Sustainable World (ESW) www.eswusa.org

Center for the Advancement of a Steady State Economy (CASSE): <http://steadystate.org/>

International Society for Ecological Economics <http://www.isecoeco.org/>

United States Society for Ecological Economics <http://www.ussee.org/>