

University of Redlands Department of Economics
ECON-205: Ecological Economics
Spring 2019
Mondays & Wednesdays 11:00 AM – 12:20 PM: Duke 206

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Office Hours: Tuesdays, 1:30 – 4PM; Wednesdays, 2:30 – 4PM; or by appointment

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Course Description

Welcome to Ecological Economics! In this course, we will investigate the relationship between the economy and natural ecosystems at the local, regional, and global level. Humanity faces perhaps its greatest-ever collective challenge in the need to reduce greenhouse gas emissions to prevent catastrophic global climate change along with other aspects of ecological crisis such as species collapse and dwindling water resources. In our explorations of the broad ecological crisis, we will be asking many questions. How does the economy relate to and interact with natural environmental systems? How can and should we value environmental resources and services? How can we determine the impact of natural ecological limits on economic activity? How should the present generation value the impact of its actions on future generations? How should societies determine the proportion of resources to devote to mitigating climate change instead of adapting to its impacts? Who should reduce greenhouse gas emissions, and by how much? What are the political and institutional barriers to doing so? Which policies can best be used to regulate emissions? Why is renewable energy such a small portion of the energy portfolio in most economies? Exploring these questions will involve investigating economic theory and the political economy of climate change policy both in the United States and in other major economies, and we will consider how a low-emissions economy can be more equitable and improve well-being for most of its constituents.

Course Objectives

By the end of this class, you should be able to:

- Understand the primary causes of ecological crisis that stem from the economic system, especially scope of the economic challenge that climate change poses to humanity
- Coherently discuss environmental problems and potential solutions from the perspective of ecological economics
- Articulate, with the help of economic data, possible policy solutions that could help mitigate environmental damage from economic activity
- Analyze such solutions using economic concepts to produce a multi-draft research paper
- Realize the complexity of political interests that often hinder progress on these solutions

Texts for the Course

There is no required text for the course. We will be using selected chapters from two books throughout the semester. Instructions for accessing the Common and Stagl book will be given in class, and all other readings will be posted on Moodle.

Michael Common and Sigrid Stagl (2005), *Ecological Economics: An Introduction*. Cambridge University Press: Cambridge, UK. ISBN: 978-0-521-01670-4. (Referred to as C&S in the schedule below)

Jonathan M. Harris and Brian Roach (2018), *Environmental and Natural Resource Economics: A Contemporary Approach*, 4th edition. Routledge: New York. ISBN: 978-1-138-65947-6

Prerequisites

The official prerequisites for the course are ECON-100 or ECON-101, and in some of our discussions I will assume a basic knowledge of economic concepts and theories. If you are taking the course without these prerequisites (or even if you would just like to brush up on concepts), I strongly recommend the following text:

Chang, Ha-Joon. *Economics: The User's Guide*, Bloomsbury Press, New York: 2014. ISBN: 978-1-62040-812-4.

With a little extra work, you should be easily caught up and ready to participate!

Assignments

Readings: Please read all assignments before class and **come prepared to discuss the material**. The quality of our discussions will depend on you.

Exams: The two exams will consist of problems and short essay questions. The dates of the exams are provided below, and we will discuss the format and general content of each exam more thoroughly as it approaches. If you have an excused absence from an exam, you must schedule a time to take an alternative exam as soon as possible. Exams missed without a valid excuse cannot be made up. For more information, see p. 27 of the University Catalog.

Homework: Four written assignments will be collected throughout the semester. These will primarily take the form of problems and short essay responses. You are free to work together on these as long as you note with whom you collaborated. Every person must turn in their own writeup of the homework.

In-class work: Occasionally we will work on problems or short assignments in class, and I will collect what you produce.

Analytical paper: You will write a paper, roughly 6-8 pages in length, that will examine and analyze an environmental issue in more detail through the lens of ecological economics. In the paper, you will need to identify the issue, discuss why it is a problem, and talk about how it can be corrected, according to different economic perspectives. You will also need to address political economy aspects of the issue by noting how policy prescriptions may be difficult to implement given political constraints. More details will be forthcoming.

Grading

Assignment	Percent of Grade
Exams (each)	20%
Homework	25%
Analytical paper	20%
Participation & in-class work	15%

Letter Grade	0-4 Scale	Percentage
A	4	95-100
A-	3.7	90-94
B+	3.3	85-89
B	3	80-84
B-	2.7	75-79
C+	2.3	70-74
C	2	65-69
C-	1.7	60-64
D+	1.3	55-59
D	1	50-54
F	0	0-50

Tips for Success:

In my experience, students who come to class and turn in the work on time will almost certainly pass the class. If you find yourself struggling with the material, come see me in office hours, and do it sooner rather than later (that is, not just before an exam). While it can be tempting to avoid problems or things you may not understand in the course, this typically only makes things worse. Please come speak to me instead of disappearing or disengaging.

Class Schedule

Jan. 14	Introduction
Jan. 16 & 21	From Thermodynamics to Ethics: Concepts in Ecological Economics <ul style="list-style-type: none">• Harris & Roach, Chapter 9 (focus esp. on sections 9.3 and 9.5)• Common & Stagl, Chapter 1 (skip section 1.6)
Jan. 23	Introduction wrap-up & Excel tutorial (bring laptops/tablets to class)
Jan. 28	History of Human Impact on the Environment <ul style="list-style-type: none">• Common & Stagl, Chapter 3
Jan. 30 & Feb. 4	The Economy in the Environment <ul style="list-style-type: none">• Donella H. Meadows, <i>Thinking in Systems: A Primer</i>, Introduction & Chapter 1 (read this first)• Common & Stagl, Chapter 4 (Sections 4.1 – 4.7) HW 1 Due Feb. 4

Feb. 6	An Introduction to Research and Writing in Ecological Economics: Getting Started on Your Paper (bring laptops/tablets to class) <ul style="list-style-type: none"> • Prepare topic ideas for class
Feb. 11 & 13	Ecological Economics and Well-Being <ul style="list-style-type: none"> • Common & Stagl, Chapter 6 (Skip 6.3) (read this first) • Harris & Roach, Chapter 10 (also read Appendix for quick review of GDP concept if needed)
Feb. 18 & 20	Economic Growth and Environmental Boundaries (bring laptops/tablets to class Feb. 18) <ul style="list-style-type: none"> • Common & Stagl, Chapter 7 (Skip 7.2 & 7.3) • Garver and Goldberg (2015) "Boundaries and Indicators," in <i>Economics for the Anthropocene</i> HW 2 Due on Feb. 18 Review for midterm on Feb. 20
Feb. 25	Midterm Exam
Feb. 27	Mainstream Approaches to Environmental Damage <ul style="list-style-type: none"> • Harris & Roach, Chapter 3 (Sections 3.1 and 3.2); read Appendix 3.1 if you need a refresher on supply and demand
March 11 & 13	Cost-Benefit Analysis I: Introduction <ul style="list-style-type: none"> • Harris & Roach, Chapter 7 • David Roberts (2012) "Discount rates: A boring thing you should know about (with otters!)," Grist. Paper topics due March 11
March 18	Cost-Benefit Analysis II: Critiques <ul style="list-style-type: none"> • Robin Hahnel, <i>Green Economics</i>, Chapter 2
March 20	Ecological + Environmental Economics in Action: Fishery Management <ul style="list-style-type: none"> • Harris & Roach, Chapter 18 • Hahnel, selection from chapter 4
March 25 & 27	Environmental Political Economy: Managing the Commons <ul style="list-style-type: none"> • Elinor Ostrom (1990) <i>Governing the Commons</i>, Ch. 2 & 3 (read Ch. 2 for 3/25 and assigned sections of Ch. 3 for 3/27) HW 3 Due March 27
April 1 & April 3	Climate Change: Policy, Political Economy, and Inequality <ul style="list-style-type: none"> • Harris & Roach, Chapters 12 and 13 (Sections 13.1, 13.2, and 13.4) • Rachel Donadio and Robinson Meyer, "France's 'Yellow Vest' Protestors Aren't Against Climate Action," <i>The Atlantic</i>, Dec. 8, 2018. • Solomon Hsiang et al. (2017) "Estimating economic damage from climate change in the United States," <i>Science</i> 356.6345: 1362-1369. Peer review exercise with papers April 1 Paper drafts due to me April 3
April 8 & 10	Energy Systems <ul style="list-style-type: none"> • Harris & Roach, Chapter 11 (Skip Section 11.7) • David Roberts, "Colorado Could Save \$2.5 Billion by Rapidly Shutting Down Its Coal Power Plants," <i>Vox</i>, January 9, 2019. • David Roberts, "What Made Solar Panels So Cheap? Thank Government Policy," <i>Vox</i>, December 28, 2018.

April 15	Managing Emissions from Transportation <ul style="list-style-type: none"> • Union of Concerned Scientists, "A Brief History of U.S. Fuel Efficiency Standards," December 6, 2017 • Melanie Curry, "Report: California Efforts to Reduce Transportation Emissions Are Not Working," <i>StreetsBlog Cal</i>, Nov. 26, 2018. HW 4 Due
April 17	Ecology and Capitalism <ul style="list-style-type: none"> • Reading TBD • Review for final exam Final Papers Due
April 24	Final Exam (9AM)

Class Policies

Attendance: In order to get the most out of the course, it is imperative for you to attend every class. You may miss no more than two classes for any reason. If you miss a third class, you must schedule an appointment to discuss why you are missing class. In the absence of this meeting, I will file an Academic Status Report with the Dean's Office. Any further unexcused absences will result in automatic failure of the class. I will follow university guidelines as to what constitutes a documented excused absence. Additionally, frequently arriving late will have a negative impact on your grade.

Johnston Contracting: I am very open to contracting the course with Johnston students, and it was designed with this in mind. I ask that you schedule a meeting with me well in advance of the contracting deadline so that we can speak about this.

Academic Honesty: Unless explicitly specified, all work you turn in for this course should be yours alone. When using ideas other than your own in your work, I expect you to include proper citations. If you have any questions about expectations or policies in this area, you may both refer to the University Catalog (p. 17-24) and share any concerns you have regarding your own or anyone else's behavior. **If a violation of academic honesty is found to have occurred, it will result in failure of the course.** The University Catalog is available in its entirety here: <http://www.redlands.edu/study/registrar-office/course-catalogs/>

Laptops & Electronic Gadgets: You may not use laptops and tablets in the class to take notes and refer to the readings without prior approval from me. To receive that approval, simply arrange to meet with me in my office (please do not just ask after class) so that we can have a quick discussion of why you would like to take notes electronically. Please note that if I see that you are using them for another purpose (browsing Facebook, for example), I will ask you to put away your device and your participation grade will suffer. Additionally, you are not allowed to use smartphones at all during class. Rather than police this publicly, I will merely make a note that you are not really "in" class if you are using an electronic device and you will be counted as absent. There may be classes that require the use of a laptop or tablet, in which case I will allow their use while we complete the exercise.

Academic freedom: In this course, we will be discussing a number of politically charged issues, and it is inevitable that there will be a range of opinions, including my own. You will never be penalized in any way for disagreeing with me or challenging my views. Part of the learning process for all of us is having

our existing beliefs and assumptions challenged over the course of the year. Being able to do this in a respectful and constructive way can allow us to grow intellectually.

Disability support: If a you have a disability that qualifies for accommodations under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, you should contact Academic Success & Disability Services (ASDS). ASDS is located on the ground floor of the Armacost Library across from Human Resources and down the hall from the Jones Computer Center; their phone is 909-748-8069. The primary contact person is Amy Wilms, and the website is: <http://www.redlands.edu/student-life/academic-success-and-disability-services/disability-services/>

Discrimination and sexual assault: The University of Redlands is committed to providing a safe learning environment for all students that is free of all forms of discrimination, sexual misconduct, and sexual harassment, including sexual assault, domestic violence, dating violence, and stalking. If you (or someone you know) has experienced or experiences any of these incidents, know that you are not alone. The University of Redlands has staff members trained to support you in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, no contact orders, and more.

Please be aware all University of Redlands faculty members are “responsible employees,” which means that if you tell me about a situation involving sexual harassment, sexual assault, dating violence, domestic violence, or stalking, I must share that information with the Title IX Coordinator. Although I have to make that notification, you will control how your case will be handled, including whether or not you wish to pursue a formal complaint. Our goal is to make sure you are aware of the range of options available to you and have access to the resources you need.

To report an incident, you can:

- Report online at: www.redlands.edu/titleix --> Report
- Contact the Title IX Office at 909-748-8916
 - Title IX Coordinator, Pat Caudle, pat_caudle@redlands.edu or 909-748-8171
 - Deputy Title IX Coordinator, Erica Moorer, erica_moorer@redlands.edu or 909-748-8916

If you wish to speak to someone confidentially (meaning not filing with the Title IX Office), you can contact any of the following on-campus resources:

- Counseling Service (<http://www.redlands.edu/student-life/health-and-psychological-services/counseling-center/>, 909-748-8108)
- Crisis Line: 909-748-8960
- Chaplain’s Office (<http://www.redlands.edu/student-life/campus-diversity-and-inclusion/religious-diversity/>, 909-748-8368)

For more information, please visit www.redlands.edu/titleix