NEW YORK UNIVERSITY
DEPARTMENT OF ENVIRONMENTAL STUDIES
ENVIRONMENTAL ECONOMICS
(ENVST-UA 410)
Fall 2022

Raimundo Atal Chomali

Mo-We 8am-9.15am
19 West 4th, Room C-11 Loc: Washington Square

Instructor information

- email: raimundo.atal@nyu.edu
- phone: (212) 992-7950
- Office: 285 Mercer St., room 905
- Office hours: Mo-We: 2-3pm. Please send me an email if you are coming or cannot make it during those times.
- sites.google.com/view/raimundoatal

Description

In this course, we will understand environmental problems and policy through an economic perspective. We will focus on the interaction between our means of production and our economic “system” and the “environment”. This course introduces the students to key concepts in environmental economics and sustainability, conceptually and practically. The first part of the course builds the toolkit, i.e., the concepts from economics and how they apply to “general” environmental problems. The second part is instead organized around
topics: climate change, biodiversity loss, energy policy, urban policy, discounting, growth, etc.

Objectives

- Be able to understand environmental problems and policy from an economic perspective.
- Be able to understand economic arguments for and against choices of policy instruments regarding the environment and sustainable development.
- Have an understanding of the main topics in environmental policy today and the interactions between the economy, nature and policy.

Grading

25% - Posts
30% - Midterm
30% - Group paper
15% - Group presentation-debate

Posts/quizzes

During the semester, I’ll post short questions/quizzes/comments that will require students to provide short answers/comments. Questions will be posted Wednesday, and should be commented before class on Monday the following week (no later than Sunday 9pm).

Midterm

The midterm will cover the “Economic Theory” part of the course. The exam is designed so that you only need 2.5 hours to answer, equivalent to two lectures.

Group paper, presentation-debate

As your final project for this class, we will have a series of “debates”. Students will be asked to form groups (3 people max). I will suggest some topics and discussions and groups will be asked to represent one party of a “debate”. Another group will be required to represent the opposite view. There is also a written handout,
that will reflect the debate, your, and the other group’s point of view and your replies.

**Important Dates**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>October 17\textsuperscript{th}-19\textsuperscript{th}</td>
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<tr>
<td>Meetings to discuss debate</td>
<td>Week of Nov 14\textsuperscript{th}</td>
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<tr>
<td>Group presentation/debate</td>
<td>Dec 14\textsuperscript{th}-17\textsuperscript{th}</td>
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<tr>
<td>Paper due</td>
<td>Dec ~20 (TBD)</td>
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**Materials**

There is no required course textbook. We will take things from various sources. Basic content on economic theory can be found in any economic textbook (OPENSTAX and CORE are freely available online). In the course outline, readings marked with an * are “fundamental”, in the sense that the class draws heavily from them and it would be great if you read those before coming to class. All readings can be accessed through the library.

**Books we will often use**

Openstax, *Principles of Economics*, Rice University, 2017 (available [online](#)) *(OPENSTAX)*

CORE. The Economy. Economics for a Changing World (available [online](#)) *(CORE)*


Course website
https://brightspace.nyu.edu/d2l/home/226267

Course Outline (subject to change, review regularly)

Week 1 – Course presentation (1 class – Sept 7)

a. Overview of the course
b. Why this course?

CORE: Chapter 1.5
HEAL: Chapter 1.

David Attenborough: A life on our planet. Available on Netflix.
Week 2 - Economic theory I (Sep 12 - 14)

a. Definition of Economics
b. Demand, supply and equilibrium in competitive markets
c. Surplus
d. Pareto Efficiency
e. Welfare theorems

*OPENSTAX: Chapter 1, 2 & 3
*KEOHANE & OLMSTEAD: Chapter 4

Week 3 - Economic theory II (Sep 19 - 21)

a. Market failures
b. Externalities
c. Types of goods
d. The problem of the commons

*OPENSTAX: Chapter 12 & 13
*KEOHANE & OLMSTEAD: Chapter 5
*CORE: Chapter 12

Week 4 Economic theory III (Sep 26 - 28)

a. Taxes & subsidies
b. Property rights
c. Tradeable permits
d. Prices vs quantity regulation

*KEOHANE & OLMSTEAD: Chapter 8 & 10
Week 5 Cost-benefit analysis and discounting (Oct 3 - 5)

a. Cost benefit analysis
b. Methods of valuation
c. Discounting

*KEOHANE & OLMSTEAD Chapter 3

*OPENSTAX: Appendix C


Week 6 Environmental Economics, Growth and Sustainable Development (Oct 10 - 12)

a. Definition of sustainable development
b. Growth theory: Solow, endogenous growth, institutions
c. Planetary boundaries and limits to growth
d. Green accounting
e. Inequality

*KEOHANE & OLMSTAD: Chapter 11

*SACHS: Chapter 1, 3 & 6

*HEAL: Chapter 9

Week 7 MIDTERM (Oct 17–19)

Take home. You will have from Monday to Wednesday to work on it, but the midterm is designed to be answered in 2.5 hours. You can work on the midterm in groups, but each student has to submit their own responses. You HAVE to state who your worked with.

Week 8 Climate Change (Oct 24–26)

a. Drivers of climate change
b. Social cost of carbon
c. Adaptation and mitigation
d. Policy: markets, taxes, subsidies, etc
e. Inequality

*HEAL: Chapter 3


BBC Podcast: Climate Special. Your questions answered.
Week 9 Biodiversity, Land Use and Food Systems
(Oct 30 - Nov 2)

a. Ecosystem services
b. Valuation of ecosystem services
c. Land use, comparative advantage, specialization and diversity
d. Trade and biodiversity
e. Policy

*SACHS: Chapter 13

*Heal, G., The Economic Case of Protecting Biodiversity. Available at:
https://www.nber.org/system/files/working_papers/w27963/w27963.pdf


**Week 10 Energy (Nov 7-Nov 9)**

a. Basics of energy systems  
b. Electricity markets  
c. Economics of renewable energy  
d. Policy


**Week 11 Transportation and Urban Economics (Nov 14 - 16)**

a. Cities and sustainable development  
b. Waste management and recycling  
c. Pollution  
d. Urban environmental justice  
e. Policy

*SACHS: Chapter 11*


The suburbs are bleeding America Dry (Climate Town, Youtube)  
Dutch cities are better for the environment (Not Just Bikes, Youtube)
Week 12 (1 Class, Nov21 – most likely online)

TOPIC TBD

Week 13 - Political economy and the environment (Nov 28-30)

a. Introduction to Game Theory
b. Competition vs cooperation in managing the commons
c. Climate policy and game theory
d. Natural resource management and game theory


Game theory says the Paris agreement looks like a winner for the climate. Quartz Magazine, April 2022. Available here.

Week 14 Debate preparation (Week (Dec5-Dec7)

Debate preparation. During this week, students will work with their respective groups in class, in person, preparing for the debates. I will be available for questions in class.

Week 15 Student Presentations (Dec12-14)

Final paper due (~Dec20)
Course Policies

CAS Academic Policies can be found at https://cas.nyu.edu/academic-programs/bulletin/policies/academic-policies.html.

Attendance and Tardiness

Please see NYU policy on religious observance and CAS Academic Policies at https://cas.nyu.edu/academic-programs/bulletin/policies/academic-policies.html.

Late Assignments

Assignments should be delivered on time. No late assignments are allowed.

Academic Integrity/Plagiarism

Academic Integrity, Plagiarism, and Cheating (adapted from the website of the College of Arts and Science, https://cas.nyu.edu/content/nyu-as/cas/academic-integrity.html):

Academic integrity means that the work you submit is original. Obviously, bringing answers into an examination or copying all or part of a paper straight from a book, the Internet, or a fellow student is a violation of this principle. But there are other forms of cheating or plagiarizing which are just as serious — for example, presenting an oral report drawn without attribution from other sources (oral or written); writing a sentence or paragraph which, despite being in different words, expresses someone else’s idea(s) without a reference to the source of the idea(s); or submitting essentially the same paper in two different courses (unless both instructors have given their permission in advance). Receiving or giving help on a take-home paper, examination, or quiz is also cheating, unless expressly permitted by the instructor (as in collaborative projects).

Disability Disclosure Statement

New York University is committed to providing equal educational opportunity and participation for students of all abilities. We work with NYU students to determine appropriate and reasonable accommodations that support equal access to a world-class education.
Students requesting academic accommodations are advised to reach out to the Moses Center for Student Accessibility as early as possible in the semester for assistance.

Henry and Lucy Moses Center for Student Accessibility
Telephone: 212-998-4980
Website: http://www.nyu.edu/csd
Email: mosecsd@nyu.edu

Wellness Statement
In a large, complex community like New York University, it's vital to reach out to others, particularly those who are isolated or engaged in self-destructive activities. Student wellness (https://cas.nyu.edu/content/nyu-as/cas/academic-programs/student-wellness.html) is the responsibility of us all.

The NYU Wellness Exchange is the constellation of NYU’s programs and services designed to address the overall health and mental health needs of its students. Students can access this service 24 hours a day, seven days a week: wellness.exchange@nyu.edu; (212) 443-9999. Students may also call the Wellness Exchange hotline (212-443-9999) or the NYU Counseling Service (212-998-4780) to make an appointment for single session, short-term, or group counseling sessions.