



UNIVERSITY of
DENVER

COLLEGE OF ARTS, HUMANITIES
& SOCIAL SCIENCES
Economics

ECON 3970: ENVIRONMENTAL ECONOMICS
Department of ECONOMICS
Spring 2020 (4 Credits)
WF 2:00 PM – 3:50 PM

Instructor: Dr. Chiara Piovani
Office hours: by appointment
E-mail: chiara.piovani@du.edu

Course Content:

This course is designed to study the interplay between capitalism and the environment by examining alternative economic perspectives. The multiple dimensions of the current global environmental crisis will be discussed, with a special focus on the problems of economic growth, agriculture, energy, and climate change. The course will present and critically discuss both the mainstream framework and heterodox economic arguments. The analysis will include both theory and policy recommendations on how to achieve sustainable economic systems.

Course Objectives:

Upon completion of the course, students are expected to:

- ✓ Understand the nature of the relationship between the economy and the environment;
- ✓ List and analyze the current global environmental challenges;
- ✓ Critically discuss the theory and policies proposed by alternative schools of economic thought;
- ✓ Present and evaluate various economic perspectives on how to achieve sustainability.

Textbooks:

- Harris, Jonathan M and B. Roach. (2018). *Environmental and Natural Resource Economics - A Contemporary Approach*. Boston & New York: Houghton Mifflin Company
- Hahnel, Robin (2011). *Green Economics - Confronting the Ecological Crisis*. Armonk, New York & London, England: M.E. Sharpe.

The course material will be complemented with additional readings, which will be posted on the course website.

Prerequisites

This course is intended for both graduate students and undergraduate students at the University of Denver. It is expected that the students in the course are familiar with fundamental economic

concepts and intermediate microeconomic theory (ECON 2020). Students should be able to interpret economic relationships, graphs, diagrams, and have experience with college-level writing.

Course Website:

<https://canvas.du.edu/> Readings, instructions, announcements, grades, and other class materials will be posted on Canvas. Please make sure to consult Canvas *regularly*.

Grading:

Final grades are based on the following components:

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|---|------------|
| ▪ Class participation | 15% |
| ▪ Midterm exam – TAKE-HOME (due May 20) | 20% |
| ▪ In-class seminars (May 13 and June 5) | 20% |
| ▪ Term paper (due May 29) | 20% |
| Term paper proposal: due on April 24 | |
| ▪ Final exam – TAKE-HOME (June 8) | 25% |

Total

100%

✓ **Class participation**

Class participation is based on (1) your participation during class meetings, seminars, and class discussions; (2) your attendance throughout the course; (3) your use of office hours; (4) any obstructive behaviors that interrupt class meetings; and (5) respect of deadlines.

Attendance is very important! The course covers a lot of material quickly and some material will only be covered during class meetings. Class meetings will include traditional lectures, but also videos, references to current newspaper articles, and there will be substantial scope for questions and discussions.

Starting from Topic 3, each topic indicated in the syllabus will conclude with **class discussion** (for about 20-30 minutes). Discussion questions will be provided under “Discussions” on Canvas. You are expected to provide your thoughts on Canvas (bullet points or a few sentences). We will use your responses as the basis for class discussion.

Over the course of the quarter, there will be two ongoing discussions on Canvas, to which we are all invited to actively contribute: 1) Innovations/new technologies that aim to help reduce humanity’s ecological footprint; 2) Social/political movements & uprising that have either achieved some positive results or can provide an example of social organizing for people in other countries as well. We’ll discuss our findings in class.

✓ **Midterm Exam**

The midterm exam will be take-home, consisting of questions based on class lectures and reading assignments. The exam will be given out in class and posted on the course website on Canvas.

✓ **In-class seminars**

We will have two round-table seminars throughout the quarter. For each seminar, a separate set of reading assignment (4-5 articles and/or chapters) will be assigned one week in advance.

Students are asked to provide, at the minimum, 1) a half-page summary, 2) two well-thought-out comments, and 3) two well-thought-out questions for **each article** assigned. The writing assignment is **due on the day of the seminar**. On the seminar day, we analyze the reading materials, and consider your comments and questions in a round-table discussion (I may add additional questions too). Specific guidelines will be posted on Canvas.

✓ **Term Paper**

You will be required to write a term paper on one of the topics that will be covered in this course. The term paper should be about 10 pages for undergraduate students and 15 pages for graduate students (excluding the bibliography). Students should submit a proposal on **April 24** (up to 10 points). Papers will be due on **May 29** (up to 90 points). Detailed instructions and requirements for both the proposal and term papers will be posted on Canvas.

✓ **Final Exam**

The final exam will be take-home. A study guide with a list of possible questions will be posted on the course website approximately two weeks before the final exam.

Grading Scale:

93 – 100	A	73 – 76	C
90 – 92	A-	70 – 72	C-
87 – 89	B+	67 – 69	D+
83 – 86	B	63 – 66	D
80 – 82	B-	60 – 62	D-
77 – 79	C+	< 60	F

Course requirements:

You are expected to complete the assigned readings before coming to class. In class, you are expected to answer questions and actively participate to class discussions.

E-mail policy:

You can expect a fairly rapid reply to e-mails, certainly within 24 hours.

Late work

Late submissions are not accepted. Only if a serious emergency occurs (and appropriate evidence is submitted), your work may be considered.

Make-up policy:

Students must take exams on the scheduled dates. In cases of emergency or schedule conflict, appropriate documentation must be presented, and the make-up exam time must be arranged with the instructor.

Note

Please reach out if you have any questions or difficulties. It is important to me that your questions get answered.

COURSE OUTLINE

The class schedule is indicated below. Please note that the following schedule is only tentative. The final set of readings per each topic will be posted on the course website in advance of their discussion. The schedule may also be subject to changes, which would be announced in class and posted on the course website.

Please note that it is required to make the readings indicated below before each class.

TOPIC 1: Economics and the Environment: Alternative Approaches

April 1

Hahnel. R. Ch.1 (“Something Happened on the Way to the Twenty-First Century”).

Harris and Roach. Ch.1 (“Changing Perspectives on the Environment”).

Cohn, S. M. (2006). *Reintroducing Macroeconomics*. New York, NY: M.E. Sharpe. Ch. 2 (“Thinking Differently – Neoclassical Versus Heterodox Economics”).

TOPIC 2: The Development of Capitalism & The Multiple Dimensions of the Current Global Environmental Crisis

April 3

Bowles, S., R. Edwards and F. Roosevelt (2017). *Understanding Capitalism: Competition, Command, and Change*, Oxford University Press. Ch.1 (“Capitalism Shakes the World”).

Speth, J. G. (2008). *The Bridge at the Edge of the World*, Yale University Press. Ch. 1 (“Looking into the Abyss”).

April 8

Speth, J. G. (2008). *The Bridge at the Edge of the World*, Yale University Press. Ch. 2 (“Modern Capitalism: Out of Control”).

Magdoff and Foster. 2011. *What Every Environmentalist Needs to Know About the Economy*. Monthly Review Press. Ch.2 (“The Road to Planetary Destruction”).

- STUDIES TO BE AWARE OF (i.e. you don’t need to read them in details, but you need to be aware of their objective, approach, and main claims):

World Wildlife Fund. 2018. *Living Planet Report 2018 – Aiming higher*.

Rockström, J. 2009. “A Safe Operating Space for Humanity.” *Nature* Vol. 461|24 September 2009.

Steffen et al. 2015. “Planetary Boundaries: Guiding Human Development on a Changing Planet.” *Science*. Vol. 347, Issue 6223, 1259855.

Yale Center for Environmental Law & Policy & Center for International Earth Science Information Network, Columbia University (in collaboration with World Economic Forum, Geneva, Switzerland), *2018 Environmental Performance Index – Summary for Policymakers*.

IPBES. 2019. Global Assessment Report on Biodiversity and Ecosystem Services – Summary for Policymakers. IPBES secretariat, Bonn, Germany. Available at https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf

TOPIC 3: Neoclassical Economics and the Environment: Insights and Limitations of the Mainstream Approach to Theory and Policy

April 10

Harris and Roach. Ch. 3 (“The Theory of Environmental Externalities”).

Harris and Roach. Ch. 4 (“Common Property Resources and Public Goods”).

April 15

Hahnel. Ch. 6 (“Free-Market Environmentalism: Misinterpreting the Coase Theorem”).

Hardin, G. 1968. “The Tragedy of the Commons.” *Science*. 162(3859), 1243-1248.

Angus, I. 2008. “The Myth of the Tragedy of the Commons.” *Monthly Review*. August 25, 2008.

Ostrom, E. 2000. “Reformulating the Commons.” *Swiss Political Science Review* 6(1): 29-52.

April 17

Harris and Roach. Ch.5 (“Resource Allocation Over Time”).

Harris and Roach. Ch. 6 (“Valuing the Environment”).

April 22

Harris and Roach. Ch. 6 (“Valuing the Environment”) (cont’d).

Harris and Roach. Ch. 7 (“Cost-Benefit Analysis”).

Hahnel. Ch. 2 (“Cost-Benefit Analysis: Beware”).

April 24

TERM PAPER PROPOSAL DUE

Hahnel. Ch. 4 (“Useful Insights from Mainstream Economics”).

Hahnel. Ch.5 (“Where Mainstream Economics Dare Not Go”).

OPTIONAL:

Forrest, J.B. 2000. *Ecology Against Capitalism*. New York: Monthly Review Press. Ch. 2 (“The Ecological Tyranny of the Bottom Line: The Environmental and Social Consequences of Economic Reductionism”)

Heinzerling, L. and F. Ackerman. 2002. “Pricing the Priceless - Cost-Benefit Analysis of Environmental Protection,” Georgetown Environmental Law and Policy Institute.

Cushing, L. et al. (2015) 'The Haves, the Nave-Nots, and the Health of Everyone: The Relationship Between Social Inequality and Environmental Quality,' *Annual Review of Public Health*. 36: 193-209.

TOPIC 4: Economic Growth: GDP vs. Sustainable Human Development

April 29

Harris and Roach. Ch. 10.

Hahnel. Ch.3 (“What on Earth is Sustainable Development?”).

May 1

Solow. 1991. *Economics of the Environment*. Ch.26: “Sustainability: An Economist’s Perspective.” New York, NY: W.W. Norton & Company.

Victor, P.A. 2019. *Managing Without Growth – Slower by Design, Not Disaster*. Ch. 8: “Scale, Composition and Technology.” Edward Elgar Publishing, Inc.

Forrest, J.B. 2000. *Ecology Against Capitalism*. Monthly Review Press. Ch. 9 (“Capitalism’s Environmental Crisis – Is Technology the Answer?”).

May 6

Speth, J. G. 2008. *The Bridge at the Edge of the World*, Yale University Press. Ch. 5 (“Economic Growth: Moving to a Post-Growth Society”), Ch.6 (“Real Growth”), and Ch.8 (“The Corporation: Changing the Fundamental Dynamics”).

May 8

Center for the Advancement of the Steady State Economy. “What is a Steady State Economy?” Available at https://steadystate.org/wp-content/uploads/CASSE_Brief_SSE.pdf

Czech, B., and H. Daly. 2004. “In My Opinion: The Steady State Economy: What It Is, Entails, and Connotes.” *Wildlife Society Bulletin* 32(2): 598-605.

Magdoff and Foster. 2011. *What Every Environmentalist Needs to Know About the Economy*. Monthly Review Press. Ch.5 (“Can Capitalism Go Green?”).

OPTIONAL:

Daly, H. 2019. “Growthism: its ecological, economic, and ethical limits.” *Real World Economics Review* (87): 9-22.

Raworth, K. 2017. *Doughnut Economics*. Ch.1 (“Change the Goal: From GDP to the Doughnut”)

May 13

SEMINAR: The readings for the seminar will be posted on Canvas on May 6.

TOPIC 5: Population, Agriculture and the Environment

May 15

Harris and Roach. Ch. 15 (“Population and the Environment”) and Ch.16 (“Agriculture, Food, and the Environment”).

McMichael, P. 1998. “Global Food Politics,” in F. Magdoff, J., B. Foster, and F. H. Buttel (eds.), *Hungry for Profit: Agriculture, Food and Ecology*. New York: Monthly Review Press.

OPTIONAL:

Heinberg, R. 2011. *The End of Growth: Adapting to Our New Economic Reality*. New Society Publishers. Ch.3 “Earth’s Limits: Why Growth Won’t Return – Food.” Available at: <http://www.ecoliteracy.org/article/earth%E2%80%99s-limits-and-what-it-means-future-food>

May 20

TAKE-HOME MIDTERM EXAM – DUE DATE

Berry, W. 2002. “The Whole Horse – The Preservation of the Agrarian Mind,” in A. Kimbrell (ed.) *The Fatal Harvest Reader – The Tragedy of Industrial Agriculture*. Sausalito, CA: Foundation for Deep Ecology.

Altieri, M.A. 2009. “Agroecology, Small Farms, and Food Sovereignty.” *Monthly Review*. July-August 2009, 102-113.

- STUDIES TO BE AWARE OF (i.e. you don’t need to read them in detail, but you need to have a general understanding of their content):

UNEP (United Nations Environment Program). 2009. *Agriculture at a Crossroad – International Assessment of Agricultural Knowledge, Science and Technology for Development – Synthesis Report*.

UNCTAD (United Nations Conference on Trade and Development). 2013. *Trade and Environment Review 2013 – Wake Up Before It Is Too Late – Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate*.

TOPIC 6: The Economy and Energy Resources: Energy Trends and Alternative Energy Possibilities

May 22

Harris and Roach. Ch.17 (“Nonrenewable Resources: Scarcity and Abundance”).

Heinberg, R. 2003. *The Party's Over – Oil, War and the Fate of Industrial Societies*. New Society Publishers. Ch.5 (“A Banquet of Consequences”).

May 27

Harris and Roach. Ch.11 (“Energy: The Great Transition”).

Frindley, D. 2010. “Nine Challenges of Alternative Energy” in R. Heinberg and D. Lerch, eds., *The Post Carbon Reader – Managing the 21st Century's Sustainability Crises*, Watershed Media.

- A STUDY TO BE AWARE OF (i.e. you don't need to read them in detail, but you need to have a general understanding of their content):

REN21. 2019. *Renewables 2019 – Global Status Report*. Available at https://www.ren21.net/wp-content/uploads/2019/05/gsr_2019_full_report_en.pdf

TOPIC 7: The Economics of Global Climate Change

May 29

TERM PAPER - DUE DATE

Harris and Roach. Ch.12 (“Global Climate Change”).

- STUDIES TO BE AWARE OF (i.e. you don't need to read them in detail, but you need to have a general understanding of their content):

IPCC (Intergovernmental Panel on Climate Change). 2013. *Fifth Assessment Report - Summary for Policymakers*.

Stern Review. 2006. *The Economics of Climate Change – Executive Summary*.

June 3

Ackerman, F. 2009. *Can We Afford the Future?* Zed Books. Ch. 3 (“We Need to Buy Insurance for the Planet”) and Ch.9 (“What Is to Be Done?”).

Harris and Roach. Ch. 13 (“Global Climate Change: Policy Responses”).

June 5

SEMINAR: The readings for the seminar will be posted on Canvas on May 23.

Monday, June 8: FINAL EXAM

Commitment to an inclusive learning environment:

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: race, color, ethnicity, gender, age, disability,

religious beliefs, political preference, sexual orientation, gender identity, citizenship, or national origin among other personal characteristics.

I believe that the diversity of student experiences and perspectives is essential to the deepening of knowledge in a course. Any suggestions that you have about other ways to include the value of diversity in this course are welcome.

In order to create a classroom environment that supports respectful, critical inquiry through the free exchange of ideas, the following principles will guide our work:

- Treat every member of the class with respect, even if you disagree with their perspective;
- All viewpoints are welcome;
- No ideas are immune from scrutiny and debate;
- Disagreements can turn into opportunities for intellectual and personal enrichment;
- Both speaking up and respectful listening are valuable tools for inviting participation and thoughtful dialogue;
- You will not be graded on your opinions.

Other Policies & Rules

While I advocate collaborative learning and teamwork, I firmly believe that each individual should maintain the highest ethical standards in all of life's endeavors.

All students are expected to abide by the University of Denver Honor Code. These expectations include the application of academic integrity and honesty in your class participation and assignments. Violations of these policies include, but are not limited to:

- Plagiarism, including any representation of another's work or ideas as one's own in academic and educational submissions;
- Cheating, including any actual or attempted use of resources not authorized by the instructor(s) for academic submissions;
- Fabrication, including any falsification or creation of data, research or resources to support academic submissions.

For the consequences of violating the University of Denver Honor Code and for general information about conduct expectations, please refer to the University of Denver website on *Students Rights and Responsibilities*: <https://www.du.edu/studentlife/studentconduct/index.html>.

Student Athletes:

If you are a student-athlete, you should inform me of any class days to be missed due to DU sponsored varsity athletic events in which you are participating. Please provide me with an absence policy form by the end of the first week of class. You will need to make up any missed lectures, assignments, and/or exams.

Students with Disabilities:

Students who have disabilities (i.e., physical, medical, mental, emotional and learning) should feel free to contact me privately to discuss his/her specific needs.

Students with documented disabilities who want to request accommodations should contact the Disability Services Program (DSP) located in room 440 of Ruffatto Hall; 1999 E. Evans Ave. Phone: 303.871.3241. Information is also available online from the Disability Services website: <https://www.du.edu/studentlife/disability-services/index.html>.

Writing Center:

The Writing Center provides writing support for undergraduate and graduate students at all levels, on all kinds of projects, and at any stage of the process: from generating ideas to learning new editing strategies. Consultants take a collaborative approach, working with you to help you develop your writing in light of your specific goals and assignments. For additional information or to make an appointment for a free, 45-minute consultation, call 303-871-7456 or go to MyWeb > Student > Writing Center (www.du.edu/writing/writingcenter/)

Research Center

The University Libraries Research Center (<http://libraryhelp.du.edu>) answers research questions seven days a week by phone, email, in-person, chat/IM or text. One-on-one research consultations in the Anderson Academic Commons are also available on a drop-in basis or by appointment. Consultations help students at any stage of the research process, from refining a topic, to finding books and articles, to creating a bibliography. The Research Center can also assist students with finding images, audio recordings, and videos for course projects. Telephone and Zoom video consultations are also available by request for distance students. Ask a question or make an appointment by calling 303-871-2905 or visiting <http://libraryhelp.du.edu>.

Mental Health & Wellness:

DU provides resources to support students' safety, health, and well-being. Student may experience a range of issues that can cause barriers to learning (e.g. strained relationships, increased anxiety, alcohol/drug concerns, depression, difficulty concentrating and/or lack of motivation). These stressful moments can impact academic performance or reduce your ability to engage. If you or someone you know are suffering from any challenges, you should reach out for support. You can seek confidential mental health services available on campus in the Health & Counseling Center (HCC) and My Student Support System (My SSP). Another helpful campus office is Student Outreach & Support (SOS), where staff work with you to connect to all the appropriate campus resources, develop a plan of action, and guide you in navigating challenging situations. If you are concerned about yourself and/or one of your peers you can send a SOS referral.

More information about HCC, MY SSP, and SOS can be found at:

[Health & Counseling Services](#)

[My SSP 24/7 confidential services for students](#) (Links to an external site.)

[Student Outreach & Support \(SOS\) and SOS Referrals](#)

Religious Accommodation Policy:

As part of its commitment to diversity and Inclusive Excellence, the University provides reasonable accommodations for students' sincerely held religious beliefs or practices. Students are expected to examine the course syllabus for potential conflicts with religious beliefs or practices and submit the Religious Accommodation Request webform to seek accommodation. For full details, including request process, visit the Religious and Spiritual Life web page: <https://www.du.edu/studentlife/religiouslife/index.html>

Title IX:

The University of Denver is committed to providing an environment free of discrimination on the basis of sex (gender), including sexual misconduct, sexual assault, relationship violence, and stalking. The Center for Advocacy, Prevention and Empowerment (CAPE) provides programs and resources to help promote healthy relationships, teach non-violence and equality, and foster a respectful and safe environment for all members of the University of Denver community. All services are confidential and free of charge.

For assistance during business hours, call 303-871-3853 and ask to speak to the Director of CAPE. After hours, please call 303-871-2205.

Restriction of Audio and Video Student Classroom Recording

Students may not photograph or use audio or video devices to record classroom lectures or discussions or visual materials that accompany them. This restriction also includes visual materials that accompany the lecture/discussion, such as lecture slides, whiteboard notes/equations, etc.

Students with disabilities who need to record classroom lectures or discussions must contact the Disability Services Program to register, request and be approved for an accommodation. Such recordings are to be used solely for the purposes of individual or group study with other students enrolled in the class in that quarter. They may not be reproduced, shared in any way (including electronically or posting in any web environment) with those not in the class in that quarter.

Students who violate this policy will be reported to The Office of Student Rights & Responsibilities and may be subject to both legal sanctions for violations of copyright law and disciplinary action under *Student Rights & Responsibilities Policies*.