

Clark University
Department of Economics

ECON 152: Economics of Climate Change

Version: 2026/08/21

Lecture Information

Time: Mondays and Thursdays 2:50–4:05 pm
Location: TBD

Instructor Information

Professor	Kensuke Suzuki	Teaching Assistant	TBD
Email	KSuzuki@clarku.edu	Email	TBD
Office	JC221	Office hours	TBD
Office hours	TBD and by appointment		

Course Description

This course examines the economics of climate change and environmental policy. We begin with the core tools of microeconomics—supply and demand, efficiency, externalities, and public goods—and apply them to understand why markets fail to adequately address climate change. We then study the impacts of a changing climate and the methods economists use to measure the costs and benefits of environmental policy, including benefit-cost analysis and the Social Cost of Carbon. The second half of the course surveys the major policy instruments available to governments—carbon taxes, cap-and-trade systems, technology subsidies, and international agreements—and examines the role of international trade in shaping climate outcomes. Topics include the Pollution Haven Hypothesis, carbon leakage, the Carbon Border Adjustment Mechanism (CBAM), and climate clubs.

Prerequisites: None. No prior economics coursework is required, although students who have taken ECON 10 or ECON 11 will find much of the early material familiar.

Course Objectives

Students completing this course will be able to:

1. Apply supply, demand, and economic efficiency concepts to environmental problems.
2. Explain why climate change constitutes a market failure (externality and public good).
3. Assess the impacts of climate change and the economic logic of adaptation.
4. Conduct benefit-cost analysis and interpret the Social Cost of Carbon.

5. Evaluate climate policy instruments using economic theory, including their distributional consequences.
6. Analyze the relationship between international trade and climate policy.
7. Work with real economic and environmental data, and communicate the results in writing.

Course Readings and Class Materials

1. **Jaeger, W.K.** (2005). *Environmental Economics for Tree Huggers and Other Skeptics*. Island Press. [Main text]
2. **Tal, A.** (2024). *Making Climate Tech Work: Policies that Drive Innovation*. Island Press. [Climate policy and technology]

An e-book version of each required text is available through Goddard Library.

Chapters posted on Canvas (no purchase required): Field, B.C. and M.K. Field, *Environmental Economics: An Introduction* (cited as “Field” in the schedule); Rebonato, R. (2024), *How to Think About Climate Change*.

Supplementary (optional): Mankiw, N.G. *Principles of Economics* (any recent edition). Students who have taken ECON 10 or 11 at Clark already own this book. Chapters 4, 7, 10, and 11 are especially relevant.

All journal articles, agency reports, and news articles listed in the course schedule will be posted on Canvas. We will not read every item on the reading list; selections will be announced in class.

Software: Stata (Free for This Course)

Some of the homework assignments and data exercise requires students to work with real economic and environmental data. You may use the software of your choice, but the course will provide support for the widely-used software **Stata**. **You do not need to buy it.** StataCorp has provided this course with a free license for students enrolled in ECON 152, valid through **January 10, 2027**.

How to get it. The download credentials and your activation key will be posted on Canvas. Installation instructions are at <https://www.stata.com/install-guide>, and a short orientation to the software is at <https://www.stata.com/links/stata-basics>.

Assignments and Evaluation

Grades are based on the following components:

Problem Sets (20%)

There will be five problem sets, which include the course’s data exercises. You are encouraged to work in groups, but **each student must submit their own work. All submissions must be on paper**; digital submissions are not accepted. Copying a problem set is a dominated strategy—the exams will test the same material, and we are glad to help during office hours. Students found to have copied verbatim will receive zero credit for that problem set plus a penalty of one additional problem set.

Weekly Quizzes (10%)

Each Thursday, there will be a short in-class quiz (approximately 5–10 minutes) based on a news article selected by the instructor. The article will be posted on Canvas by the preceding Monday. The lowest quiz score will be dropped, so each student may miss one quiz without penalty. Quizzes cannot be made up.

Exams (40%)

- **Exam 1** (20%): Thursday, October 1 — covers Parts I–II
- **Exam 2** (20%): Thursday, December 3 — covers Parts III–VI

Both exams are held in class. Each exam is weighted toward material covered since the previous exam, but the course is cumulative: core concepts from earlier in the semester provide the foundation for later topics. There are no makeup exams and exam dates will not change. An unexcused absence results in a zero. With a valid, documented excuse communicated *before* the exam, the weight of the missed midterm will be redistributed to the other exam.

This course has no final examination.

Project Paper (25%)

Midterm Paper (10%): An individual policy analysis or empirical analysis of a specific climate-related topic. Length and format will be announced in class. Approximate due date: late October.

Term Report (15%): An individual policy proposal on a topic of your choice related to climate change economics. A structured format with required sections (problem statement, economic analysis, policy recommendation) will be provided. Because this report replaces a final examination, it is expected to demonstrate command of the material from the whole semester, including the trade and policy topics in Parts V and VI. Due during the finals period.

Attendance (5%)

Missing 0–2 classes will get full credit. Each additional absence will reduce the attendance score by 1%. This means missing 7 or more classes will result in a zero attendance score.

Submission and Late Work Policy

Unless otherwise specified, **all assignments must be submitted on paper**. With a valid excuse, digital submission by the deadline is accepted, but **credit will not be given unless the paper copy is turned in later**. Late assignments lose 50% of their value if submitted within 24 hours of the deadline and are not accepted thereafter.

Engaged Learning Hours

Each course at Clark is a one-unit, four-credit course, and students are expected to engage with course material, inside and outside the classroom, for at least 180 hours over the semester. For this course that time is expected to break down roughly as follows:

Activity	Hours
In-class lectures, exercises, and discussion (28 sessions $\times$ 1.25 hours)	35
Reading and class preparation (about 4 hours/week $\times$ 13 weeks)	50
Problem sets, including the data exercises (5 $\times$ 6 hours)	30
Midterm exam preparation (2 $\times$ 8 hours)	16
Midterm report	12
Final report	30
Office hours, Canvas, email, and other logistics	7
Total	180

Final Letter Grades

The final grade is computed as a weighted average of the components listed above.

Letter grades are assigned as follows:

A	95–100	A-	90–94.9		
B+	88–89.9	B	85–87.9	B-	80–84.9
C+	78–79.9	C	75–77.9	C-	70–74.9
D+	68–69.9	D	65–67.9	D-	60–64.9
F	<60				

A grade calculator will be posted on Canvas for your reference.

Participation and Attendance

Classes consist of lectures, interactive exercises, and discussion of the assigned readings. You are expected to complete each reading before the class for which it is listed and to participate in discussion. Attendance is not graded directly, but the weekly quizzes are given in class and cannot be made up, so absences carry a cost. If you must miss class, it is your responsibility to obtain notes from a classmate and to check Canvas for announcements.

Academic Integrity

All students are expected to adhere to Clark's standards of academic integrity; this means that all work must be entirely your own and entirely unique to this course. Plagiarism and other forms of cheating will not be tolerated or excused. For more information, please refer to the university's policy on this issue, available at <https://catalog.clarku.edu/content.php?catoid=32&navoid=2735#academic-integrity> or in the student handbook. If you have any questions about proper citation or other related issues, please don't hesitate to come see me.

AI Policy: You may use AI tools (ChatGPT, Claude, etc.) to help you *understand* material, generate ideas, and proofreading your work. You may **not** submit AI-generated text as your own work. Acceptable uses include asking AI to explain a concept or to give feedback on your draft. For all writing assignments, you must include an AI statement indicating whether you used AI tools and, if so, how you used them. Submitting AI-generated answers to problem

sets, exams, or reports is academic misconduct. If you are unsure whether a particular use is acceptable, ask before submitting.

Turnitin: Written assignments may be submitted to Turnitin for originality checking.

Student Accessibility Services

Clark University is committed to providing students with documented disabilities equal access to all university programs and facilities. Students are encouraged to register with Student Accessibility Services (SAS) to explore and access accommodations that may support their success in their coursework. SAS is located on the second floor of the Shaich Family Alumni and Student Engagement Center (ASEC). Please contact SAS at accessibilityservices@clarku.edu with questions or to initiate the registration process. For additional information, please visit the SAS website at <https://www.clarku.edu/offices/student-accessibility-services/>. If you have an accommodation letter, please bring it to me within the first two weeks of the semester so that we can make arrangements.

Title IX

Clark University and its faculty are committed to creating a safe and open learning environment for all students. Clark University encourages all members of the community to seek support and report incidents of sexual harassment to the Title IX office (titleix@clarku.edu). If you or someone you know has experienced any sexual harassment, including sexual assault, dating or domestic violence, or stalking, help and support is available.

Please be aware that all Clark University faculty and teaching assistants are considered responsible employees, which means that if you tell me about a situation involving the aforementioned offenses, I must share that information with the Title IX Coordinator, Brittany Brickman (titleix@clarku.edu). Although I have to make that notification, you will, for the most part, 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.

If you wish to speak to a confidential resource who does not have this reporting responsibility, you can contact Clark's Center for Counseling and Professional Growth (508-793-7678), Clark's Health Center (508-793-7467), or confidential resource providers on campus: Prof. Stewart (als.confidential@clarku.edu), Prof. Palm Reed (kpr.confidential@clarku.edu), and Prof. Cordova (jvc.confidential@clarku.edu).

FERPA

The link to Clark's policy regarding student privacy under the Family Education Rights and Privacy Act is available here: <https://web.clarku.edu/policies/detailpolicy.cfm?pid=25>

Student Work and Assessment

Clark University is committed to improving your learning experience. To help us do this, Clark University may use student work from this course to assess how well our programs support learning. This helps us strengthen courses and better support students. This process is also necessary for accreditation purposes. If your work is used, all personal

details (including students' names) are removed. We do not upload your work to AI tools like ChatGPT, and Digication does not share it with AI systems.

Classroom Culture and Mutual Respect

I am committed to creating a classroom that respects all identities. Everyone deserves to be addressed by their correct name and pronouns. I will provide an opportunity for you to share this information with the class or privately with me, and you can update your preferences anytime. Both instructors and students must respect others' identities. If you make a mistake, simply apologize, correct yourself, and continue. If you feel your identity isn't being respected, including by me, please let me know.

Classroom Etiquette

The use of phones or other communication devices during class is disruptive to your classmates and is therefore not permitted. Laptops and tablets may be used to take notes as long as they do not disrupt the class; if they are used for unrelated activities, the privilege will be revoked.

Class Cancellations

This is an in-person course; there is no remote option for regular class meetings. If a class is cancelled due to inclement weather, illness, or other unforeseen circumstances, an email will be sent to your Clark University email address with further instructions, and an attempt will be made to make up the lost class time using online tools (e.g., Zoom). Check the course Canvas site for alternate arrangements, materials, and assignments.

Incomplete Grades

This course is not eligible for an incomplete grade except in cases of extenuating circumstances.

Career Readiness Competencies

The skills you will develop through this course are important to future employers. While you may find opportunities during the semester to grow in all eight Career Competencies, the learning goals of this course most closely relate to **Critical Thinking** (building and evaluating economic arguments about policy), **Communication** (writing the midterm and final reports), and **Technology** (working with real economic and environmental data).

Students can learn more about the essential career readiness competencies at <https://www.clarku.edu/curriculum-and-careers/career-readiness-competencies/>. The Career Connections Center staff are available to meet with students for a variety of support, including resume and cover letter writing, internship and job searching, interview preparation, connecting with alumni, and major and career exploration. To set up an appointment, log in to Handshake or email the office at cservices@clarku.edu. The Career Connections Center is located on the first floor of the Alumni & Student Engagement Center (ASEC).

Disclaimer

I reserve the right to modify any information in this syllabus, including assignments and the organization of the course, at any time during the semester. Changes will be announced in class and an updated syllabus and/or course schedule will be posted on Canvas.

Course Schedule

This schedule is tentative and subject to change. Any changes will be announced in class and an updated schedule will be posted on Canvas. Exam dates, however, will not change.

Readings should be completed *before* the class for which they are listed. Quiz articles are posted on Canvas by the preceding Monday. [DE] = Data Exercise (submitted as part of a problem set).

Part I: Economic Foundations

#	Date	Topic	Reading
1	Mon Aug 24	Course Introduction; Climate Change Status and Trends	Ripple et al. (2024); IPCC (2023); MEOEEA (2022b)
2	Thu Aug 27	Demand: Trade-offs, Willingness to Pay, Demand Curve	Jaeger Ch. 2
3	Mon Aug 31	Supply: Production, Costs, Supply Curve	Jaeger Ch. 3
4	Thu Sep 3	Markets and Economic Efficiency	Jaeger Ch. 2–3
	Mon Sep 7	<i>Labor Day — No Class</i>	
5	Thu Sep 10	Market Failures: Externalities	Jaeger Ch. 5
6	Mon Sep 14	Market Failures: Public Goods and the Commons	Jaeger Ch. 5
7	Thu Sep 17	Discounting and Dynamic Efficiency	Jaeger Ch. 4

Part II: Climate Change Economics

8	Mon Sep 21	Sustainability and Economic Growth	Jaeger Ch. 6–7
9	Thu Sep 24	The Economics of Pollution	Field and Field Ch. 5
10	Mon Sep 28	Climate Impacts and Adaptation	MEOEEA (2022b); Moore et al. (2021)

Midterm Exam 1 — Session 11, Thursday, October 1 (covers Parts I–II)

Part III: Benefit-Cost Analysis and the Social Cost of Carbon

12	Mon Oct 5	Benefit-Cost Analysis: Measuring Benefits	Jaeger Ch. 14
13	Thu Oct 8	Benefit-Cost Analysis: Measuring Costs	Field and Field Ch. 8
	Mon Oct 12	<i>Fall Break — No Class</i>	
14	Thu Oct 15	BCA in Practice: Risk, Uncertainty, and a Case Study	Jaeger Ch. 15
15	Mon Oct 19	Integrated Assessment Models and the Social Cost of Carbon [DE #1]	EPA (2023); Carleton and Greenstone (2022); Weyant (2017); Rebonato Ch. 5, 8–9

#	Date	Topic	Reading
Part IV: Climate Policy			
16	Thu Oct 22	Institutions and International Agreements	Jaeger Ch. 9; Tal Ch. 2
17	Mon Oct 26	Climate Policies: Pricing Carbon (Tax vs. Cap-and-Trade)	Jaeger Ch. 10; Rabe (2018); Tal Ch. 4
18	Thu Oct 29	Climate Policies in Practice (RGGI, EU ETS, Massachusetts) [DE #2]	World Bank (2023); MEOEEA (2022a); RGGI (nd); Spencer et al. (2017)
19	Mon Nov 2	Technology and Innovation Policy	Tal Ch. 1, 3, 5–6
20	Thu Nov 5	Distributional Effects of Climate Policy and Just Transition	TBD
Part V: Trade, Globalization, and Climate Change			
21	Mon Nov 9	International Trade and Climate Change: Comparative Advantage	Jaeger Ch. 8
22	Thu Nov 12	Pollution Haven Hypothesis and Carbon Leakage	Copeland and Taylor (2004); Levinson and Taylor (2008)
23	Mon Nov 16	Competitiveness and Carbon Border Adjustment (CBAM)	Hillman et al. (2025); Shapiro (2021)
24	Thu Nov 19	Climate Clubs and International Negotiations	Falkner et al. (2022); Nordhaus (2015)
25	Mon Nov 23	Trade Flows and Emissions Data [DE #3]	—
Part VI: Wrap-Up			
	Thu Nov 26	<i>Thanksgiving Break — No Class</i>	
26	Mon Nov 30	Policy Failures and Climate Politics	Jaeger Ch. 13; Aklin and Mildenberger (2020); Bosetti et al. (2025); Mackay et al. (2025)
Midterm Exam 2 — Session 27, Thursday, December 3 (covers Parts III–VI)			
28	Mon Dec 7	Course Wrap-Up and Closing Arguments	Jaeger Ch. 17
Final Report due — during the finals period, December 10–16 (there is no final exam)			

Full citations for every reading listed in the schedule above. Book chapters are cited by author only; the year appears here. Not every item will be assigned—selections will be announced in class.

References

- Aklin, M. and Mildenberger, M. (2020). Prisoners of the wrong dilemma: Why distributive conflict, not collective action, characterizes the politics of climate change. *Global Environmental Politics*, 20(4):4–27.
- Bosetti, V. et al. (2025). Green backlash and right-wing populism. *Nature Climate Change*, 15:822–828.
- Carleton, T. and Greenstone, M. (2022). A guide to updating the U.S. government’s social cost of carbon. *Review of Environmental Economics and Policy*, 16(2):196–218.

- Copeland, B. R. and Taylor, M. S. (2004). Trade, growth, and the environment. *Journal of Economic Literature*, 42(1):7–71. UNVERIFIED – confirm details before distributing.
- EPA (2023). Report on the social cost of greenhouse gases: Estimates incorporating recent scientific advances. Technical report, National Center for Environmental Economics, U.S. Environmental Protection Agency. Assigned reading is the Introduction and Summary.
- Falkner, R. et al. (2022). Climate clubs: Politically feasible and desirable? *Climate Policy*, 22(4):480–487.
- Field, B. C. and Field, M. K. (2017). *Environmental Economics: An Introduction*. McGraw-Hill Education, 8 edition.
- Hillman, J. et al. (2025). Trade tools for climate action: Carbon border adjustment mechanisms. Technical report, Council on Foreign Relations.
- IPCC (2023). Summary for policymakers. In *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. IPCC, Geneva, Switzerland.
- Jaeger, W. K. (2005). *Environmental Economics for Tree Huggers and Other Skeptics*. Island Press, Washington, DC. Primary text. E-book available through Goddard Library.
- Levinson, A. and Taylor, M. S. (2008). Unmasking the pollution haven effect. *International Economic Review*, 49(1):223–254. UNVERIFIED – confirm details before distributing.
- Mackay, S. et al. (2025). Addressing climate inaction as our greatest threat to sustainable development. *Global Climate Change*, 91:102969. Journal name transcribed as given in the Bauer syllabus; verify — the volume and article number suggest Global Environmental Change.
- Mankiw, N. G. (2021). *Principles of Economics*. Cengage Learning, 9 edition. Optional. Any recent edition is acceptable; used in ECON 10/11 at Clark. Chapters 4, 7, 10 and 11 are the relevant ones. Edition/year not from the Bauer syllabus.
- MEOEEA (2022a). Massachusetts clean energy and climate plan for 2025 and 2030. Technical report, Massachusetts Executive Office of Energy and Environmental Affairs. Cited as MEOEEA 2022b in the Bauer syllabus. The a/b suffixes printed here are assigned by BibTeX and need not match Bauer's.
- MEOEEA (2022b). Massachusetts climate change assessment. Technical report, Massachusetts Executive Office of Energy and Environmental Affairs. Cited as MEOEEA 2022a in the Bauer syllabus. The a/b suffixes printed here are assigned by BibTeX and need not match Bauer's.
- Moore, C., Morley, J. W., Morrison, B., Kolian, M., et al. (2021). Estimating the economic impacts of climate change on 16 major fisheries. *Climate Change Economics*, 12:2150002.
- Nordhaus, W. (2015). Climate clubs: Overcoming free-riding in international climate policy. *American Economic Review*, 105(4):1339–1370. UNVERIFIED – confirm details before distributing.
- Rabe, B. (2018). Why carbon pricing is appealing. In *Can We Price Carbon?*, chapter 1. MIT Press.
- Rebonato, R. (2024). *How to Think About Climate Change: Insights from Economics for the Perplexed but Open-Minded Citizen*. Cambridge University Press.
- RGGI (n.d.). The regional greenhouse gas initiative: Program summary. Regional Greenhouse Gas Initiative, <https://www.rggi.org/>. Cited only as “RGGI Summary” in the Bauer syllabus; the specific document and its year still need to be identified.
- Ripple, W. J. et al. (2024). The 2024 state of the climate report: Perilous times on planet earth. *BioScience*, 74:812–824.

- Shapiro, J. S. (2021). The environmental bias of trade policy. *Quarterly Journal of Economics*, 136(2):831–886. UNVERIFIED – confirm details before distributing.
- Spencer, B. et al. (2017). Case studies in co-benefits approaches to climate change mitigation and adaptation. *Journal of Environmental Planning and Management*, 60(4):647–667. The Bauer syllabus schedule cites this as 2016 but its reading list gives 2017; 2017 used here.
- Tal, A. (2024). *Making Climate Tech Work: Policies that Drive Innovation*. Island Press, Washington, DC. Primary text. E-book available through Goddard Library.
- Weyant, J. (2017). Some contributions of integrated assessment models of global climate change. *Review of Environmental Economics and Policy*, 11(1):115–137.
- World Bank (2023). Reality check: Lessons from 25 policies advancing a low-carbon future. Technical report, World Bank, Washington, DC.