

**ECON 6773-001**  
**SEMINAR IN PUBLIC ECONOMICS**  
**SPRING 2023**

Location and time	Tues/Thurs, 12 p.m. – 1:15 p.m. in Room # 326, Cate Center One													
Duration	January 17, 2023 – May 5, 2023													
Instructor	Dr. Jayash Paudel 308 Cate Center One, Room # 422 <a href="mailto:jayash.paudel@ou.edu">jayash.paudel@ou.edu</a>													
Student hours	Thursdays (Room # 422, Cate Center One) 1:30 p.m. – 2:30 p.m.													
Course description	<p>This course delves into public goods and externalities in the context of global environmental problems. In doing so, we will consider policy tools and other institutions to address these effects. Optimal environmental regulation involves trade-offs between market and regulatory imperfections. Government intervention to mitigate imperfections such as externalities can be costly and can even make market performance worse. As such, the course will focus on recent empirical analysis of the costs and benefits of environmental and energy policies. Topics will include environmental regulation, carbon taxes, energy subsidies, oil and economic development, fiscal spending and environment, environmental policy, air and water pollution, climate change, voting behavior and hedonics in the context of environmental hazards, renewable energy, and environmental justice.</p> <p>The primary goal of this course is to cultivate the skills required to conduct academic research, actively engage in thoughtful discussions of assigned articles and complete your original research paper by the end of the semester. We will carefully read 3-4 peer-reviewed journal articles every week and discuss them in-depth during class. Please plan your time effectively for the course.</p>													
Important dates	<p>These are university holidays and dates for paper submissions and two in-class exams:</p> <table><tr><td>Exam 1:</td><td>Thursday, February 23 (In-class)</td></tr><tr><td>Paper, First Draft</td><td>Tuesday, March 7</td></tr><tr><td>Spring break</td><td>March 11-19</td></tr><tr><td>Paper, Final Draft</td><td>Thursday, April 27</td></tr><tr><td>Final Exam:</td><td>Tuesday, May 9 (1:30-3:30 pm)</td></tr></table>		Exam 1:	Thursday, February 23 (In-class)	Paper, First Draft	Tuesday, March 7	Spring break	March 11-19	Paper, Final Draft	Thursday, April 27	Final Exam:	Tuesday, May 9 (1:30-3:30 pm)		
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Grading	<p>Participation, assignments and exams in the course have these weights:</p> <table><tr><td>Class participation:</td><td>30%</td></tr><tr><td>Weekly assignment:</td><td>5%</td></tr><tr><td>Exam 1:</td><td>15%</td></tr><tr><td>Paper, First Draft:</td><td>15%</td></tr><tr><td>Paper, Final Draft:</td><td>20%</td></tr><tr><td>Final exam:</td><td>15%</td></tr></table>		Class participation:	30%	Weekly assignment:	5%	Exam 1:	15%	Paper, First Draft:	15%	Paper, Final Draft:	20%	Final exam:	15%
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There is no set “curve” for this course or designated number of certain grades. No other extra credit opportunities are allowed.

Course grades are A: 90 or above, B: 80-89, C: 70-79, D:60-69, F: lower than 60.

**Course website**

Canvas

**Class format**

Readings

Upcoming reading assignments (150+ pages a week) will be announced in class. Please note that this is a seminar, and I expect in-depth readings, active engagement, and regular attendance throughout the semester. The readings will be made available on Canvas.

Class participation and discussion

Students are expected to come to each class after having read the assigned readings, and to actively participate in classroom discussions. Otherwise, a student will be awarded zero points for class participation.

Careful reading and discussion of the papers should address the following questions:

1. What is the research question?
2. Why is it interesting or important?
3. What is the nature of data used in the study?
4. What is the empirical strategy of the paper?
5. What are the key results?
6. What are the contributions of the paper relative to previous studies in the literature? Explain why the paper provides novel contributions.
7. What are your questions and critiques of the paper? Think of these questions to lead the class discussion.

Weekly assignment

You will provide a 1-page summary of one of the assigned readings every week. The summary should touch on 7 questions outlined above. You are required to upload these summaries online in Canvas on Mondays before 11:59 pm CT. The first weekly assignment will be due Monday (January 23<sup>rd</sup>, 11:59 pm).

If more than one article is assigned during the week (which is certainly the case in this course), you can choose to write a 1-page summary on any assigned reading of your choice. These weekly 1-page summaries will be graded as:

- A (100 points: well written and discussed/analytical),
- B (80 points: sufficient)
- C (70 points: not thorough and poorly written)

Paper

You have 2 options for your research paper:

1. Default option (Preferred): Complete your own original empirical research that you started doing in the first sequence of public economics course last fall (with Dr. Rogers). **You are required to upload the paper you submitted in the previous class by Thursday (January 19<sup>th</sup>), 11:59 pm on Canvas.** This will help evaluate your progress this semester.

2. Alternative option: If you do not have a topic yet, you are required to discuss potential research ideas with me by the end of the first week of the semester.

I strongly discourage you from writing a single paper for two different courses. The total length of the paper should be between 7,000 and 9,000 words (excluding the reference list, figure legends and table notes) In terms of style, I recommend that you follow the structure of articles published in peer-reviewed economics journals (such as the *American Economic Review*, the *Journal of Public Economics*) that we discuss in our class.

### Exams

There will be a total of two exams. These exams are closed book and you will not be permitted access to any outside materials. The exam will focus on key concepts and in-class discussions about the assigned readings. The final exam will be based on material after the first exam.

Make-up exams will only be given for legitimate reasons (e.g., illness, family emergency, religious holiday) with verifiable documentation (e.g., letter from physician). Unless you have a legitimate reason with third-party, verifiable documents for your absence during an exam, you will not be allowed to take a make-up exam. Notification in advance, if possible, is appreciated.

### **Class protocol**

Class attendance is expected and critical to success in this course. You will be responsible for learning a lot of unfamiliar material in a short amount of time and the worst thing you can do is fall behind. If you miss class, it is your responsibility to find out about announcements made in class and go over the material that was covered.

I expect you to engage in class. You should turn off your cell phone. You may not receive or make phone calls, text messages, or otherwise play with your phone. Thoughtful contributions to classroom discussions will positively affect your grade, as will helping other students.

### **Audits**

While I welcome students who choose to audit the course, my course is a no-free-rider zone. Even if you choose to audit, you will be required to participate in class presentations and discussions as if you were taking the course for credit. Students who audit the course are exempt from turning in weekly assignments, paper drafts, and from taking the exam.

### **Seminars**

All students should attend the weekly departmental seminar series in the Economics Department. The seminar runs from 3 to 4:15 pm CT either in-person in Gaylord Hall (Room # 2030) or via Zoom. The list of seminar speakers for this spring semester is available at: <https://www.ou.edu/cas/economics/research-seminars/spring>

In addition, the following sites will be of interest to students interested in pursuing research on environmental and energy economics: the EEE NBER Working Paper Series (<http://www.nber.org/papersbyprog/EEE.html>) and the Energy Economics Exchange blog from UC Berkeley (<http://energyathaas.wordpress.com/>). You can sign up for notifications of new papers and posts and be familiar with new research.

## **Tentative outline**

### **Week 1: Overview**

A Brief Review of Environmental Economics (Lecture Slides uploaded on Canvas)

### **Week 2 and 3: Environmental Regulation**

Shapiro, Joseph S., and Reed Walker. 2018. "Why Is Pollution from US Manufacturing Declining? The Roles of Environmental Regulation, Productivity, and Trade." *American Economic Review*, 108 (12): 3814-54.

Tanaka, Shinsuke, Kensuke Teshima, and Eric Verhoogen. 2022. "North-South Displacement Effects of Environmental Regulation: The Case of Battery Recycling." *American Economic Review: Insights*, 4 (3): 271-88.

Lade, Gabriel E., and Ivan Rudik. "Costs of inefficient regulation: Evidence from the Bakken." *Journal of Environmental Economics and Management* 102 (2020): 102336.

Bushnell, James, Yihsu Chen, and Matthew Zaragoza-Watkins. "Downstream regulation of CO2 emissions in California's electricity sector." *Energy Policy* 64 (2014): 313-323.

Wang, Chunhua, JunJie Wu, and Bing Zhang. "Environmental regulation, emissions and productivity: Evidence from Chinese COD-emitting manufacturers." *Journal of Environmental Economics and Management* 92 (2018): 54-73.

Keiser, David A., and Joseph S. Shapiro. "Consequences of the Clean Water Act and the demand for water quality." *The Quarterly Journal of Economics* 134, no. 1 (2019): 349-396.

Liu, Pengfei, Yu Wang, and Wei Zhang. "The influence of the Environmental Quality Incentives Program on local water quality." *American Journal of Agricultural Economics* 105, no. 1 (2023): 27-51.

Lipscomb, Molly, and Ahmed Mushfiq Mobarak. "Decentralization and pollution spillovers: evidence from the re-drawing of county borders in Brazil." *The Review of Economic Studies* 84, no. 1 (2016): 464-502.

### **Week 4 and 5: Carbon Taxes**

Timilsina, Govinda R. 2022. "Carbon Taxes." *Journal of Economic Literature*, 60 (4): 1456-1502.

Zhao, Jiaxin, and Linus Mattauch. "When standards have better distributional consequences than carbon taxes." *Journal of Environmental Economics and Management* 116 (2022): 102747.

Shapiro, Alan Finkelstein, and Gilbert E. Metcalf. "The macroeconomic effects of a carbon tax to meet the US Paris Agreement target: The role of firm creation and technology Adoption." *Journal of Public Economics* 218 (2023): 104800.

Yamazaki, Akio. "Environmental taxes and productivity: lessons from Canadian manufacturing." *Journal of Public Economics* 205 (2022): 104560.

Leslie, Gordon. "Tax induced emissions? Estimating short-run emission impacts from carbon taxation under different market structures." *Journal of Public Economics* 167 (2018): 220-239.

### **Week 6: Energy Subsidy (Including Exam 1)**

Hahn, Robert W., and Robert D. Metcalfe. 2021. "Efficiency and Equity Impacts of Energy Subsidies." *American Economic Review*, 111 (5): 1658-88.

Muehlegger, Erich, and David S. Rapson. "Subsidizing low-and middle-income adoption of electric vehicles: Quasi-experimental evidence from California." *Journal of Public Economics* 216 (2022): 104752.

Abrell, Jan, Mirjam Kosch, and Sebastian Rausch. "Carbon abatement with renewables: Evaluating wind and solar subsidies in Germany and Spain." *Journal of Public Economics* 169 (2019): 172-202.

Haan, Peter, and Martin Simmler. "Wind electricity subsidies—A windfall for landowners? Evidence from a feed-in tariff in Germany." *Journal of Public Economics* 159 (2018): 16-32.

### **Week 7 and 8: Oil, Environment and Local Development**

Hill, Elaine, and Lala Ma. 2017. "Shale Gas Development and Drinking Water Quality." *American Economic Review*, 107 (5): 522-25.

Berry, Kevin, Alexander James, Brock Smith, and Brett Watson. "Geography, Geology, and Regional Economic Development." *Journal of Environmental Economics and Management* 115 (2022): 102715.

James, Alexander, and Brock Smith. "There will be blood: Crime rates in shale-rich US counties." *Journal of Environmental Economics and Management* 84 (2017): 125-152.

James, Alexander, and Nathaly M. Rivera. "Oil, Politics, and “Corrupt Bastards”." *Journal of Environmental Economics and Management* 111 (2022): 102599.

Blundell, Wesley, and Anatolii Kokoza. "Natural gas flaring, respiratory health, and distributional effects." *Journal of Public Economics* 208 (2022): 104601.

### **Week 9: Spring Break**

### **Week 10: Fiscal Spending and Environment**

López, Ramón, Gregmar I. Galinato, and Asif Islam. "Fiscal spending and the environment: theory and empirics." *Journal of Environmental Economics and Management* 62, no. 2 (2011): 180-198.

Flynn, Patrick, and Tucker Smith. "Rivers, lakes and revenue streams: The heterogeneous effects of clean water act grants on local spending." *Journal of Public Economics* 212 (2022): 104711.

Andersen, Jørgen Juel, and Rune Jørgen Sørensen. "The zero-rent society: Evidence from hydropower and petroleum windfalls in Norwegian local governments." *Journal of Public Economics* 209 (2022): 104650.

### **Week 11: Environmental Policy**

Moffette, Fanny, Marin Skidmore, and Holly K. Gibbs. "Environmental policies that shape productivity: Evidence from cattle ranching in the Amazon." *Journal of Environmental Economics and Management* 109 (2021): 102490.

Shapiro, Joseph S. "Pollution trends and US environmental policy: Lessons from the past half century." *Review of Environmental Economics and Policy* 16, no. 1 (2022): 42-61.

Bragança, Arthur, and Ricardo Dahis. "Cutting special interests by the roots: Evidence from the Brazilian Amazon." *Journal of Public Economics* 215 (2022): 104753.

Greenstone, Michael, and B. Kelsey Jack. 2015. "Envirodevonomics: A Research Agenda for an Emerging Field." *Journal of Economic Literature*, 53 (1): 5-42.

Hungerman, Daniel, and Vivek Moorthy. 2023. "Every Day Is Earth Day: Evidence on the Long-Term Impact of Environmental Activism." *American Economic Journal: Applied Economics*, 15 (1): 230-58.

### **Week 12 and 13: Air Pollution**

Bondy, Malvina, Sefi Roth, and Lutz Sager. "Crime is in the air: The contemporaneous relationship between air pollution and crime." *Journal of the Association of Environmental and Resource Economists* 7, no. 3 (2020): 555-585.

Barreca, Alan I., Matthew Neidell, and Nicholas J. Sanders. "Long-run pollution exposure and mortality: Evidence from the Acid Rain Program." *Journal of Public Economics* 200 (2021): 104440.

Deng, Hao, and Robert Mendelsohn. "The Effect of Urbanization on Air Pollution Damage." *Journal of the Association of Environmental and Resource Economists* 8, no. 5 (2021): 955-973.

Deryugina, Tatyana, Garth Heutel, Nolan H. Miller, David Molitor, and Julian Reif. 2019. "The Mortality and Medical Costs of Air Pollution: Evidence from Changes in Wind Direction." *American Economic Review*, 109 (12): 4178-4219.

Isen, Adam, Maya Rossin-Slater, and W. Reed Walker. "Every breath you take—every dollar you'll make: The long-term consequences of the clean air act of 1970." *Journal of Political Economy* 125, no. 3 (2017): 848-902.

Levinson, Arik. "Valuing public goods using happiness data: The case of air quality." *Journal of Public Economics* 96, no. 9-10 (2012): 869-880.

### **Week 14: Climate Change**

Dell, Melissa, Benjamin F. Jones, and Benjamin A. Olken. "What do we learn from the weather? The new climate-economy literature." *Journal of Economic Literature* 52, no. 3 (2014): 740-98.

Barreca, Alan, Karen Clay, Olivier Deschenes, Michael Greenstone, and Joseph S. Shapiro. "Adapting to climate change: The remarkable decline in the US temperature-mortality relationship over the twentieth century." *Journal of Political Economy* 124, no. 1 (2016): 105-159.

Beattie, Graham. "Advertising and media capture: The case of climate change." *Journal of Public Economics* 188 (2020): 104219.

Stern, Nicholas. "Public economics as if time matters: Climate change and the dynamics of policy." *Journal of Public Economics* 162 (2018): 4-17.

### **Week 15: Voting Behavior and Hedonics**

Elliott, Robert, Viet Nguyen-Tien, Eric Strobl, and Thomas Tveit. "Natural disasters and voting behavior: Evidence from environmental legislation in the US senate." *Journal of the Association of Environmental and Resource Economists* (2023, forthcoming).

Harleman, Max, Jeremy G. Weber, and Daniel Berkowitz. "Environmental hazards and local investment: a half-century of evidence from abandoned oil and gas wells." *Journal of the Association of Environmental and Resource Economists* 9, no. 4 (2022): 721-753.

Wolf, David, and Kenji Takeuchi. "Holding back the storm: Dam capitalization in residential and commercial property values." *Journal of Environmental Economics and Management* 116 (2022): 102732.

Banzhaf, H. Spencer. "Difference-in-differences hedonics." *Journal of Political Economy* 129, no. 8 (2021): 2385-2414.

### **Week 16: Renewable Energy and Environmental Justice**

Borenstein, Severin. 2012. "The Private and Public Economics of Renewable Electricity Generation." *Journal of Economic Perspectives*, 26 (1): 67-92.

Banzhaf, S., Ma, L., & Timmins, C. (2019). Environmental justice: The economics of race, place, and pollution. *Journal of Economic Perspectives*, 33(1), 185–208. <https://doi.org/10.1257/jep.33.1.185>

Harris, Robert I., and Travis E. Dauwalter. "Distributional Benefits of Rooftop Solar Capacity." *Journal of the Association of Environmental and Resource Economists* (2023, forthcoming).

Brunner, Eric, Ben Hoen, and Joshua Hyman. "School district revenue shocks, resource allocations, and student achievement: Evidence from the universe of US wind energy installations." *Journal of Public Economics* 206 (2022): 104586.

Christensen, Peter, Ignacio Sarmiento-Barbieri, and Christopher Timmins. "Housing discrimination and the toxics exposure gap in the United States: Evidence from the rental market." *Review of Economics and Statistics* 104, no. 4 (2022): 807-818.

Hernandez-Cortes, Danae, and Kyle C. Meng. "Do environmental markets cause environmental injustice? Evidence from California's carbon market." *Journal of Public Economics* 217 (2023): 104786.



### **Additional recommended readings:**

- Albouy, David, Peter Christensen, and Ignacio Sarmiento-Barbieri. "Unlocking amenities: Estimating public good complementarity." *Journal of Public Economics* 182 (2020): 104110.
- Lang, Corey. "Assessing the efficiency of local open space provision." *Journal of Public Economics* 158 (2018): 12-24.
- Marcus, Michelle, and Pedro HC Sant'Anna. "The role of parallel trends in event study settings: an application to environmental economics." *Journal of the Association of Environmental and Resource Economists* 8, no. 2 (2021): 235-275.
- Weck-Hannemann, Hannelore, and Bruno S. Frey. "Are incentive instruments as good as economists believe? Some new considerations." In *Public economics and the environment in an imperfect world*, pp. 173-186. Springer, Dordrecht, 1995.
- Wu, JunJie, Jialing Yu, and Walid Oueslati. "Open Space in US Urban Areas: Where Might There Be Too Much or Too Little of a Good Thing?." *Journal of the Association of Environmental and Resource Economists*, volume 10, number 2, March (2023): 315-352.
- Xu, Huayu. "The long-term health and economic consequences of improved property rights." *Journal of Public Economics* 201 (2021): 104492.
- Zhang, Ruohao, Huan Li, and Neha Khanna. "Environmental justice and the COVID-19 pandemic: Evidence from New York State." *Journal of environmental economics and management* 110 (2021): 102554.

### **University Policies**

#### **Academic integrity**

Cheating is strictly prohibited at the University of Oklahoma. Academic misconduct inhibits learning, erodes educational value, and damages the professional reputations of those affiliated with the University. Violations have serious consequences and will be referred to the Office of Academic Integrity Programs. For specific definitions on what constitutes cheating, review the [Student's Guide to Academic Integrity](#).

#### **Reasonable accommodation**

Students in this course who have a disability that may prevent them from fully demonstrating their abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate educational opportunities. The Accessibility and Disability Resource Center is committed to supporting students with disabilities to ensure that they are able to enjoy equal access to all components of their education. This includes your academics, housing, and community events. If you are experiencing a disability, a mental/medical health condition that has a significant impact on one or more life functions, you can receive accommodations to provide equal access. Possible disabilities include, but are not limited to, learning disabilities, AD(H)D, mental health, and chronic health. To discuss potential accommodations, please contact the ADRC at 730 College Avenue, (ph.) 405.325.3852, or [adrc@ou.edu](mailto:adrc@ou.edu).



<b>Title IX resources</b>	For any concerns regarding gender-based discrimination, sexual harassment, sexual misconduct, stalking, or intimate partner violence, the University offers a variety of resources, including advocates on-call 24/7, counseling services, mutual no contact orders, scheduling adjustments and disciplinary sanctions against the perpetrator. Please contact <a href="#">OU Advocates</a> (available 24/7 at 405-615-0013) to learn more or to report an incident. For more information, please visit the <a href="#">Institutional Equity Office</a> .
<b>Mental health support services</b>	If you are experiencing any mental health issues that are impacting your academic performance, counseling is available at the University Counseling Center (UCC). The Center is located on the second floor of the Goddard Health Center, at 620 Elm Rm. 201, Norman, OK 73019. To schedule an appointment call (405) 325-2911. For more information, please visit <a href="#">University Counseling Center</a> .
<b>Adjustments for pregnancy or childbirth issues</b>	Should you need modifications or adjustments to course requirements because of documented pregnancy-related or childbirth-related issues, please contact me or the Accessibility and Disability Resource Center at 405/325-3852 as soon as possible. Please see <a href="#">FAQ on Pregnant and Parenting Students' Rights</a> for answers to commonly asked questions.
<b>Religious observances</b>	It is the policy of the University to excuse student absences that result from religious observances and reschedule examinations and additional required classwork that may fall on religious holidays, without penalty.
<b>Final Exam Preparation</b>	Pre-finals week will be defined as the seven calendar days before the first day of finals. Faculty may cover new course material throughout this week. For specific provisions of the policy, please refer to OU's <a href="#">Final Exam Preparation Period policy</a> .
<b>Emergency Protocol</b>	During an emergency, there are official university <a href="#">procedures</a> that will maximize your safety. Please review the link to understand emergency protocol for severe weather, armed subject/campus intruder and fire alarm/general emergency.