

90-893 Policy Topics: Environmental Policy

Course Information:

Spring 2021: Course 90-893 W4, 6 Units

Location: Remote

Meeting Times: Mondays 6:30-9:20 PM

Faculty: Darrell Winner

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Office Hours: By Appointment

Prerequisites: Graduate Level Enrollment

Course Description: This class will challenge students to consider and evaluate current environmental problems while developing tools for working in the policy world. Students will explore approaches from both environmental economics and policy, including regulatory, market-based, and voluntary tools. Students will apply their knowledge of cost-benefit analysis to controversial issues and discover and debate key challenges. The current issues will draw students to consider issues of governance, such as the reach of executive authority and the relationship between federal and state government. In exploring these matters of policy design and environmental management, the course will analyze issues in climate change, air quality, water policy, energy supply, and resource management.

Course Objectives:

Learning Objective

How Assessed

Apply critical thinking and policy evaluation skills to current environmental regulatory problems.	Policy Brief, Class Participation, Online Discussion
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Analyze complexities of establishing relevant performance measures	Policy Brief, Class Participation, Online Discussion
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Evaluate the limits and opportunities for integrating scientific and technical information into decision making	Policy Brief, Class Participation, Online Discussion
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Articulate in oral and written form policies to build a sustainable future	Policy Brief, Class Participation, Online Discussion
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Course Requirements:

Grades will be based on: Policy Brief: 50%

On-line Discussion: 20%

Class Participation: 30%

Grading Scale: Students will be graded using the standard Heinz College grading scale (see program handbook).

Course Materials:

Textbook: Environmental Policy, New Directions for the Twenty-First Century, 11th Ed, N.J. Vig, M.E. Kraft, B.G. Rabe 2021.

Additional videos and readings as assigned.

Plagiarism and cheating notice

Plagiarism and other forms of academic misrepresentation are taken extremely seriously. Misrepresentation of another's work as one's own is widely recognized as among the most serious violations. The violation is clearly flagrant when it occurs as plagiarism on a required paper or assignment or as cheating on an examination, regardless of whether it is a take-home or in-class examination. The punishment for such offenses can involve expulsion from the program. There are many other ways in which a violation can occur.

Academic Dishonesty. Students are expected to maintain the highest ethical standards inside and outside the classroom. Cheating on exams and term papers (i.e. plagiarism and unauthorized collaboration) is obviously discouraged and will be treated appropriately. The usual penalty for violations is a failing grade for the particular assignment in question; however, in some instances, such actions may result in a failing grade for the course.

Academic conduct. Students are subject to Carnegie Mellon University's policies on academic integrity (<http://www.cmu.edu/academic-integrity/plagiarism/index.html>). Plagiarism is a serious offense that will result in the student failing the course. Note that all academic integrity violations will be reported to the Associate Dean. Additional penalties may be imposed. Plagiarism includes:

- Presenting another writer's work as your own;
- Cutting and pasting content verbatim without using quotation marks to indicate a direct quote;
- Inserting a direct quote or paraphrasing content without citing the source in-text using footnotes, endnotes, or parenthetical citations with a corresponding Works Cited, References, or Notes page – in a manner consistent with an APA, MLA, or Chicago style guide;
- Providing incomplete or incorrect information about the source cited;
- Over-relying on templates or other writers' phrasing.

Also, submitting work written for another course is not acceptable; consequently, a failing grade will be issued for that assignment.

Accommodations for Students with Disabilities

If you have a disability and have an accommodations letter from the Disability Resources office, I encourage you to discuss your accommodations and needs with me as early in the semester as possible. I will work with you to ensure that accommodations are provided as appropriate. If you suspect that you may have a disability and would

benefit from accommodations but are not yet registered with the Office of Disability Resources, I encourage you to contact them at access@andrew.cmu.edu.

Attendance Policy

Class participation is graded (it is worth 30% of the total course grade – see grading section of syllabus). Students are expected to attend all classes. However, there can be unforeseen circumstances and emergencies that arise. Students may be granted an excused absence for the course which could include an illness or personal emergency or an apprenticeship-related travel/opportunity that is worked out with me in advance of the missed class. In order to be considered an excused absence, the student must submit a make-up assignment (due within two weeks of the missed class) OR receive a “0” for their participation grade for each missed class which will factor into the student’s final grade for the course. The make-up assignment is a short (1-2 page) summary or reaction to the assigned reading for the missed class. Please note that even if a student misses a class, assignments due for that day must still be completed and handed in. Under certain circumstances, such as illness of the student, the instructor may grant extensions to due dates.

Requirements and Grading

Class Participation (30%): Discussions are an integral part of this class. Class participation will account for 30% of the total grade. Unexcused absences are grounds for reduction in this grade component. To receive full credit for this portion of the grade, students must consistently demonstrate through participation in class discussions that they have completed required readings and thought through the issues in advance of the class.

Online Discussion (20%): Students must also participate in the online Canvas class discussion. Students should post at least one comment/question to the “Discussion” section of the class page each week related to the readings or recorded lectures by noon on Monday.

Policy Brief (50%): Due May 5. Submit topic and thesis statement by April 7. Prepare a 1,500 to 2,000-word policy brief directed to a decision official (e.g. EPA Administrator, NOAA Administrator, USDA Secretary, CEQ Chairman, MDE Secretary, Mayor) on a current environmental issue. The brief should address: 1) the scientific background describing the policy problem; 2) the current status of addressing that issue (policy tools or actions currently in place to mitigate the problem; 3) a brief critique of the current approach to the problem; 4) alternative (or enhanced) options for addressing the

issue; 5) a recommended course of action (updated regulations; new statutory authority; revised administrative actions such as new performance metrics, re-allocated funding, program restructuring); and 6) key political, economic, and social feasibility considerations. Grading will use a rubric based on use of relevant science to discuss the environmental issue; demonstration of understanding of different types of policy tools and their respective merits and limitations; and contextual understanding of issues of political, economic, and environmental feasibility.

Required Viewings and Readings: Textbook: Environmental Policy, New Directions for the Twenty-First Century, 11th Ed, N.J. Vig, M.E. Kraft, B.G. Rabe 2021.

Course Outline

March 29 Renewable Energy, Energy Policy, and Green Jobs

Jonathan Scott's Power Trip

<https://www.pbs.org/independentlens/films/jonathan-scotts-power-trip/>

<https://www.powertriptruth.com/> "Property Brothers co-host and home-renovation expert Jonathan Scott journeys all across the U.S. to uncover why clean, renewable energy isn't available to all. While traveling to learn both the obstacles and opportunities for achieving energy freedom, Jonathan talks with conservatives fighting for solar freedom; sits down with farmers struggling to make ends meet; engages coal workers desperate for a new, healthy means of making an income; the Navajo Nation who built a utility-scale solar plant; religious leaders who made a desperate attempt to help meet their community's energy needs; and politicians at the forefront of the battle for energy freedom."

VKR Chap. 8, p. 180-203, ENERGY POLICY

VKR Chap. 14 p. 323-345, CREATING THE GREEN ECONOMY GOVERNMENT, BUSINESS, AND A SUSTAINABLE FUTURE

April 5 No class

VKR Chap. 1, p. 2-33, US ENVIRONMENTAL POLICY A HALF-CENTURY ASSESSMENT

VKR Chap. 3, p.63-84 POLITICS, PRICES, AND PROOF AMERICAN PUBLIC OPINION ON ENVIRONMENTAL POLICY

April 12 Climate

[Climate Science: What's New?](#) July 2018 Katharine Hayhoe Texas Tech. “Human emissions of greenhouse gases now overwhelm the influence of natural drivers on Earth's climate. How will our energy choices and resulting emissions affect temperature and precipitation, extreme events, sea level rise and more, over this century and beyond? What are the implications for meeting the targets of the Paris Agreement and avoiding dangerous change? And what about the potential for surprise, as we push the climate system harder and faster than any time in human history?”

[Climate Change and Coronavirus](#): 10 Things They Have In Common, Katharine Hayhoe Texas Tech

[The Path Back to Paris](#) Exploring the role of the United States as an international leader on climate action. “In early November 2020, the United States became the first and only nation in the world to formally withdraw from the Paris Agreement, the historic international accord on climate change. The landmark agreement, which the United States joined in 2015 together with more than 190 other nations and the European Union, aims to limit global temperature rise to well below 2°C above pre-industrial levels through non-binding national targets. During his campaign, President-Elect Joe Biden pledged his commitment to rejoin the accord on his first day in office. Here, a distinguished set of panelists explored the steps that the United States might take to reposition the country as an international leader on climate action. They also considered the commitments and policy actions the United States could take while factoring in the political, economic, and social obstacles that must be overcome.”

VKR Chap. 12, p.274-299, GLOBAL CLIMATE CHANGE GOVERNANCE CAN THE PROMISE OF PARIS BE REALIZED?

Optional:

[Fourth National Climate Assessment](#) Read the overview

[Scientists Have Been Underestimating the Pace of Climate Change](#)

[Losing Earth: The Decade We Almost Stopped Climate Change](#)

and the reply [Capitalism Killed Our Climate Momentum. Not “Human Nature”](#)

April 19 Measuring the social cost of carbon

[The Social Cost of Carbon: Key Scientific and Policy Considerations for the Biden Administration](#)

“On his first day in office, President Joe Biden took a number of early actions to address climate change, including signing an “Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.” A key component of that order focuses on accounting for the benefits of reducing climate pollution—including revisiting and recommitting to the social cost of carbon (SCC), which estimates economic damages that would result from greenhouse gas emissions. Under the order, the federal government is reconvening an interagency working group to oversee the process for updating estimates of the social costs of carbon dioxide, methane, and nitrous oxide, taking into account near-term recommendations from the National Academies of Sciences (NAS). The group is tasked with publishing interim estimates within 30 days and a final set of updated estimates by January 2022.”

<https://www.rff.org/publications/explainers/social-cost-carbon-101/>

[Eight priorities for calculating the social cost of carbon](#)

VKR Chap. 10, p. 227-248, APPLYING MARKET PRINCIPLES TO ENVIRONMENTAL POLICY

[Country-level social cost of carbon](#)

Optional:

[Looking Ahead: Benefit-Cost Analysis for Environmental Regulation](#)

[Revisiting the social cost of carbon](#)

[The deadly hidden risks within the most prominent economic model of climate change](#)

April 26 Local solutions

[LA's Green New Deal](#) Lauren Faber O'Connor, Chief Sustainability Officer for the City of Los Angeles, LA's Green New Deal, released by Mayor Garcetti in April 2019, sets a global model for upholding and exceeding the Paris Climate Agreement by prioritizing urgency, equity, and prosperity. Uniquely, the city of Los Angeles runs the largest municipally owned electricity and water utility in the country, the second busiest airport in the country, and the largest and busiest container port in the Western Hemisphere. Come learn about how the second largest city in the country, and the third largest

metropolitan center of the world, is operating on the global stage on climate action while pursuing the ‘five zeros’ (zero carbon grid, zero carbon buildings, zero carbon transportation, zero waste, and zero wasted water) at home. Further, learn about how Los Angeles is ensuring a recovery from the COVID-19 crisis reinforces rather than delays these goals.

[State Carbon Trading: The Regional Greenhouse Gas Initiative \(RGGI\) Example](#) Franz Litz, Litz Energy Strategies LLC. “The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort of [eleven] Northeast and MidAtlantic states to cap and reduce carbon dioxide emissions from power plants through a market-based, emissions trading program.”

[The transition to a decarbonized transportation system](#) Hear from Mary Nichols, the Chair of the California Air Resources Board (CARB), who has spent years guiding, navigating and sometimes battling for a transition to a decarbonized transportation system. She discusses the years of prescient policies, changing economics and technology that have paved the way for zero-emission vehicles to become more mainstream.

VKR Chap. 2, p. 34-62, RACING TO THE TOP, THE BOTTOM, OR THE MIDDLE OF THE PACK? THE EVOLVING STATE GOVERNMENT ROLE IN ENVIRONMENTAL PROTECTION

VKR Chap. 11, p. 249-273 SUSTAINABILITY AND RESILIENCE IN CITIES WHAT CITIES ARE DOING

May 3 Environmental Justice

[How Environmental Racism Shapes the US](#) Robert Bullard. “The U.S. is segregated, and so is pollution. These words come from the so-called “father of environmental justice,” Robert Bullard. As a sociologist, he has proved that minority communities in Houston suffer most from pollution and has written more than a dozen books on sustainable development, environmental racism and climate justice. He sits down with Walter to discuss his life’s work.”

[Climate Science, Policy, and Justice](#) Marine biologist Dr. Ayana Elizabeth Johnson “is a writer, policy expert, and organizer. Described as “the most influential marine biologist of our time,” she works at the intersection of climate, policy, and race.”

[Green New Deal](#)