

## **B8212 Climate Policy**

### **Spring 2024 A-term (1.5 Credits)**

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TEACHING ASSISTANT

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Office Hours by appointment.

Office Hours:

Wednesday 2:30-4:30 pm

Please sign up via [calendly.com/gwa/oh](https://calendly.com/gwa/oh), or join me on a [morning run](#). If none of these times work, please [email me](#).

Communications from professor and teaching assistants about the course will take place through Canvas. Students should make sure they regularly check for announcements and messaging notifications.

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#### **COURSE DESCRIPTION**

Climate change is the world's most perfect public policy problem: it's more global, more long-term, more uncertain, and more irreversible than most others. It stands alone in the combination of all four. That also turns it into the world's most perfect global externality problem: the benefits of fossil-fuel use are internalized, the costs largely externalized. And while misguided market forces are the root cause of climate change, guiding them in the right direction is fundamental to the solution. In this course we explore the fast-changing global climate policy landscape shaping business. We explore the economic principles at work, analyze individual corporate and finance efforts to lead, dive into the regulatory environments around the world, and look to how the clean-energy race creates unique challenges and opportunities.

#### **PRE & COREQUISITE COURSES**

Core courses in Managerial Economics and Corporate Finance as well as Business and Climate Change (B8705).

#### **STUDENT LEARNING OUTCOMES**

This course is designed for both MBA students planning careers in any kind of business or financial sector directly impacted by climate change, and for students planning careers in a climate change-related field (such

as renewable energy companies, non-profit or government organizations), who want to understand the process of policy formulation and their impacts.

Specifically, the course objectives are to:

- Understand and analyze both the risks of unmitigated climate change and the risks and opportunities posed by fast-changing climate policy and regulatory environments.
- Gain an understanding of current and future climate policies and how they shape the clean-energy race affecting business, the economy, and other policy priorities like national security.
- Develop tools to analyze competing technologies and business models in response to various policies, using e.g. net-present value analyses.
- Detect the difference between earnest efforts to lead toward a low-carbon future and attempts to greenwash, obfuscate, or otherwise delay the inevitable transition.

## REQUIRED COURSE MATERIALS

All cases, articles, and background notes, including book chapters, will be available via Canvas. Given the fast-changing nature of the climate policy landscape, readings and topics might change throughout the semester. All changes will be announced via Canvas.

## CONNECTION TO THE CORE

The learning in this course will utilize, build on and extend concepts covered in the following core courses:

Core Course	Connection with Core
Corporate Finance	1. Time value of money (& discounting)
Managerial Economics	1. Consumer demand 2. Externalities (& public goods) — building on the congestion charging game from your core micro class(!) 3. Cost analysis 4. Agency and incentives

Students will be expected to have mastered these concepts and be able to apply them in the course.

## COURSE SCHEDULE

Session	Topic(s)	Required Pre-Readings
1	<b>Climate Economics &amp; Political Economy 101</b> <ul style="list-style-type: none"> <li>• Pricing negative externalities</li> </ul>	<ul style="list-style-type: none"> <li>○ The Cost to Achieve Net-Zero (Caseworks 220310)</li> <li>○ Wagner &amp; Weitzman, <a href="#">Climate Shock</a> (chapter 3, “Fat Tails”)</li> </ul>

	<ul style="list-style-type: none"> <li>• Subsidizing positive externalities</li> <li>• Policy sequencing</li> </ul>	<ul style="list-style-type: none"> <li>○ Daniel, Litterman, Wagner, "<a href="#">Declining CO<sub>2</sub> Price Paths</a>" [abstract &amp; conclusion]</li> <li>○ Wagner et al, "<a href="#">Push renewables to spur carbon pricing</a>"</li> <li>○ Meckling, Sterner, Wagner, "<a href="#">Policy sequencing toward decarbonization</a>"</li> </ul>
2	<b>Climate policy design</b> <ul style="list-style-type: none"> <li>• Carbon Prices &amp; Markets</li> <li>• Prices vs Subsidies</li> <li>• Unintended consequences: Rebound, leakage &amp; 'Green Paradox'</li> <li>• Compliance v offset markets</li> </ul>	<ul style="list-style-type: none"> <li>○ Wagner, "<a href="#">Taming Carbon</a>"</li> <li>○ Owen, "<a href="#">The efficiency dilemma</a>" &amp; Lovins's <a href="#">Letter to the Editor</a></li> <li>○ Gillingham, Rapson &amp; Wagner, "<a href="#">The Rebound Effect and Energy Efficiency Policy</a>" [skim]</li> <li>○ McKinsey, "<a href="#">The Inflation Reduction Act: Here's what's in it</a>"</li> <li>○ "<a href="#">Brian Deese, John Podesta and Jake Sullivan on the Inflation Reduction Act</a>" <i>Economist</i> By Invitation</li> </ul>
3	<b>US &amp; EU policies</b> <ul style="list-style-type: none"> <li>• Inflation Reduction Act of 2022</li> <li>• EU climate policies</li> <li>• Global Climate Race</li> </ul>	<ul style="list-style-type: none"> <li>○ Lizza, "<a href="#">As the World Burns</a>," <i>New Yorker</i> (2010) [skim]</li> <li>○ Mufson, "<a href="#">The surprising political shifts that led to the climate bill's passage</a>"</li> <li>○ McKinsey, "<a href="#">The Inflation Reduction Act: Here's what's in it</a>" (24 October 2022)</li> <li>○ "<a href="#">Brian Deese, John Podesta and Jake Sullivan on the Inflation Reduction Act</a>" <i>Economist</i> By Invitation (24 January 2023)</li> <li>○ "<a href="#">Case study: Gjensidige applies basic economics to net-zero</a>" (1 February 2023)</li> <li>○ Wagner, "<a href="#">The Clean-Energy Race Is On</a>"</li> </ul>
4	<b>China, India, Brazil &amp; Emerging Markets</b> <ul style="list-style-type: none"> <li>• Kyoto to Copenhagen to Paris</li> <li>• Chinese climate leadership(!?)</li> <li>• India &amp; Southeast Asia</li> <li>• Brazil &amp; (global) deforestation</li> </ul>	<ul style="list-style-type: none"> <li>○ Victor, "<a href="#">Why Paris Worked: A Different Approach to Climate Diplomacy</a>"</li> <li>○ Kormann, "<a href="#">The false choice between economic growth and combatting climate change</a>"</li> <li>○ Columbia Center on Global Energy Policy, "<a href="#">Guide to Chinese Climate Policy</a>" [skim]</li> <li>○ Zheng, "<a href="#">Which ASEAN countries will be the front-runners to decarbonize their power sectors?</a>" (2022)</li> </ul>

		<ul style="list-style-type: none"> <li>○ Camuzeaux, Sterner, Wagner, <a href="#">“India in the coming ‘climate G2’?”</a></li> <li>○ Elgin, <a href="#">“This Timber Company Sold Millions of Dollars of Useless Carbon Offsets”</a> <i>Bloomberg</i> (2022)</li> </ul>
5	<b>Power &amp; steel</b> <ul style="list-style-type: none"> <li>• Tech v policy</li> <li>• Coal phase-out policies &amp; politics</li> <li>• Power Purchasing Agreements</li> </ul>	<ul style="list-style-type: none"> <li>○ Electra steel case (CaseWorks <b>TBC</b>)</li> <li>○ Wagner, <a href="#">“Is Nuclear Power Part of the Climate Solution?”</a></li> <li>○ <a href="#">“High stakes for Asian Development Bank’s ambitious coal power retirement plan”</a> <i>IEEF</i> (Sep 2021)</li> <li>○ <a href="#">“Designing Coal Retirement Mechanisms for Equity and Impact”</a> <i>Sierra Club</i> (Nov 2021)</li> <li>○ World Bank <a href="#">“Power Purchase Agreements (PPAs) and Energy Purchase Agreements (EPAs)”</a> [skim]</li> </ul>
6	<b>The Business Opportunity</b> <ul style="list-style-type: none"> <li>• Net Zero Pledges</li> <li>• Forest offsets &amp; air capture technologies</li> <li>• Shareholder Perspectives</li> <li>• Shaping the future of policy</li> </ul>	<ul style="list-style-type: none"> <li>○ <a href="#">“Managing the net-zero transition”</a> <i>BlackRock Investment Institute</i> (Feb 2022)</li> <li>○ Jessop, <a href="#">“BlackRock expects 75% of company and govt assets to be net zero-aligned by 2030”</a> <i>Reuters</i> (14 April 2022)</li> <li>○ Frank &amp; Cullenward, <a href="#">“Climate-related financial risk and corporate net-zero commitments”</a></li> <li>○ Stripe case (Caseworks <b>TBC</b>)</li> <li>○ Last Week Tonight with John Oliver on <a href="#">“Carbon Offsets”</a> (24 minutes; warning: coarse language!)</li> <li>○ <a href="#">How individual actions can combat climate change</a></li> </ul>

## METHOD OF EVALUATION

The focus of the classes is on understanding concepts, and the challenges and opportunities of applying those concepts in real-world settings. The chosen readings and cases analyze climate change mitigation and adaptation by businesses, and the strategies used by business leaders to manage the resulting opportunities and challenges. This course requires active class participation, and students’ grades will be heavily dependent on the quality of class discussion. Students are expected to challenge one another, guests, and the professor. There is no final exam or project.

Students’ grades in the course are based on the following metrics:

Five weekly policy memos/op-eds, due before classes 2 through 6 (B <sup>1</sup> Indiv + Discussion)	50%
Peer reviews of policy memos/op-eds (C - individual)	10%
Participation (C - individual)	40%

## CLASSROOM NORMS AND EXPECTATIONS

### Core Culture

Students are expected to adhere to [CBS Core Culture](#) in this class by being Present, Prepared, Participating. Students are required to prepare for each class by reading and analyzing the assigned cases and other materials and utilizing any study guidance questions provided via Canvas. In class, students are expected to add thoughtful points to each class discussion.

### Honor Code and Academic Integrity

The [Columbia Business School Honor Code](#) calls on all members of the School community to adhere to and uphold the notions of truth, integrity, and respect both during their time in school, and throughout their careers as productive, moral, and caring participants in their companies and communities around the world. All students are subject to the Honor Code for all of their academic work. Failure to comply with the Honor Code may result in [Dean's Discipline](#). Here you can review [examples of Academic Misconduct](#) which may result in discipline.

### Course Attendance Policies

Students from all programs should review and be familiar with the [MBA Core attendance policy here](#). Students are required to attend each class – class attendance and participation will be recorded. Students should reach out to the professors and the TA regarding excused absences (for religious observances; personal, medical, and family emergencies; military service; court appearances such as jury duty). Unexcused absences will affect your class participation grade and your overall course grade, as follows:

- Students that miss more than 33% of their classes (unexcused absences) will at most receive a P for the course grade.
- Students that miss more than 50% of their classes (unexcused absences) will receive an F for the course grade.

This course may use PollEverywhere as a tool to increase in-class student engagement. PollEverywhere may also be used to confirm student attendance and participation records. Students who have concerns regarding whether their responses have been recorded should contact the instructor. If a student is not present in the classroom at the time of a poll (due to absences or any other reasons), the poll should not be answered. Responding to a poll when not present in the classroom is a violation of the Honor Code.

### Inclusion, Accommodation, and Support for Students

At Columbia Business School we believe diversity strengthens any community or business model and brings it greater success. The School is committed to providing all students with equal opportunity to thrive in the classroom by providing a learning, living, and working environment free from discrimination, harassment, and bias on the basis of gender, sexual orientation, race, ethnicity, socioeconomic status, or ability.

Students with documented disabilities may receive reasonable accommodations. Students are encouraged to contact the Columbia University's Office of Disability Services for [information about registration](#).

Columbia Business School adheres to all community, state, and federal regulations as relate to Title IX and student safety. Read more about CBS' policies to support [Inclusion, Accommodations and Support for Students here](#).