

Climate Change and the Capital Markets — FIN 579

Course Syllabus, Winter 2022

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Email is the most reliable and fastest way to reach me.

Office Hours: By appointment, but I am always happy to meet with students. If you would like a 1-1 or group meeting, please include suggested meeting times in your email request.

WHY WOULD YOU WANT TO TAKE THIS COURSE?

Climate change is one of the biggest macro trends facing investors this century. If you aspire to lead a major organization or manage other people's money during your career, this is an issue you are going to have to deal with. This class is your chance to get ahead of the curve.

Since the Rio Earth Summit in 1992, political leaders have been talking about the need to deal with global warming. Similarly, many corporate leaders have made big pledges and investment commitments. But so far, it's not led to much. Emissions have not peaked and the global economy still runs on fossil fuels. While we're stuck in a rut on climate action, the evidence of severe impacts from climate change are increasingly all round us – wildfires, floods, and extreme weather events far beyond what can be attributed to natural causes. These are no longer model projections. They are the here and now. Unfortunately, the lag between cause (emissions) and effect (warming) means that economic activity today is creating lock-in for future climatic conditions. With the world already having experienced average warming of at least 1 degree Celsius (1.8 degrees Fahrenheit) since the pre-industrial era, there is now no time to lose in executing a radical remake of the global economy over the next 30 years.

Extreme weather, failure on climate action, and human environmental damage comprised the top three risks in the World Economic Forum's 2021 Global Risk Survey. Over 70% of global economic output is now covered by some form of net-zero emissions pledge. Where's all this coming from? To many people, it seems that climate change has arrived suddenly on the global business agenda. But the truth is that these pressures have been growing since a scientific consensus emerged about man-made global warming in the 1980s. There is a lot to learn from how and why past efforts have failed.

Meeting the challenge of climate stabilization will entail the greatest industrial transformation the world has ever known, dwarfing even the total shift in industrial output during the Second World War. For global capital markets, that presents both risks and opportunities. Boardroom debates about how to deeply reduce greenhouse gas emissions, how to foster resilience, and how to grow in a carbon-constrained economy - these are investment problems that we can address through the paradigm of risk and return. A critical skills gap is emerging, with companies currently paying a substantial premium for graduates with capabilities in environmental, social and governance (ESG) investing & sustainable finance. My aim is to help position you to get in on that action.

WHAT WILL YOU GET OUT OF THIS COURSE?

I have designed the course to have broad appeal. I understand there will be students in the class with long-standing interests in environmental issues, as well as those pursuing more traditional career paths. Our starting proposition is that climate change and market responses to it will touch every industry on the planet. This course addresses three fundamental questions of importance to anyone who is seeking to understand how climate change is shaping investment strategy.

1. What are the key tools for identifying, quantifying, and managing climate risks?
2. To what degree are these risks priced in financial markets today?
3. How are capital markets adapting to future investment needs?

We will seek to craft solutions to these challenges with an awareness of the limitation that investors face when seeking to align with public policy objectives. To help bridge these gaps, I will offer a set of evidence-based theories, tools, and frameworks. None is, in and of itself, a silver bullet to solve the climate crisis, but they will help you make better decisions about long-term value creation in a global economy facing pressures to decarbonize and adapt.

More formal academic learning objectives for the course are outlined in Appendix A.

WHAT TOPICS WILL WE COVER?

- **Week 1:** Do Investors Care About Climate Risks?
- **Week 2:** Physical Risk: Climate Science and the Science of Uncertainty
- **Week 3:** Transition Risk: Insights from Scenarios Analysis
- **Week 4:** Tools for Assessing Climate-Related Financial Risks
- **Week 5:** Climate Risk Management: Deep Dive on the Banking System
- **Week 6:** Capturing New Opportunities: The Changing Face of Asset Management
- **Week 7:** The Race for Green Finance in Emerging Markets
- **Week 8:** Blended Finance: Bridging Gaps Between Public & Private
- **Week 9:** What Role for Carbon Markets?
- **Week 10:** Course Summary: Investing in Natural Capital

A detailed schedule of assignments, course readings, and weekly activities is provided in Appendix B.

WHAT'S THE FORMAT?

This class is about making investment decisions amidst deep uncertainties in climate science, governmental policy, technological development, and societal responses. To become a better decision-maker, you must practice making decisions with real consequences. Our aim is to develop your skills in analyzing the issues and then making tough choices.

Classes will be taught using a mix of readings, class lectures, and guest lecturers. There is no textbook for this course. The traditional elements of course design serve to facilitate classroom discussion and individual reflection, the twin engines of the learning process that I hope to craft for you. There is no passive path in this class. I expect that every student comes prepared and ready to contribute. My aim is for the class environment to be interactive, participative, and decision focused.

This is the first time this course is being taught at Foster. I teach two identical sections of this course during the Winter Quarter.

- For students registered in Sections 579 E & G (**FIN 579 E & F**), we will meet in person twice a week. The times are **Tuesdays and Thursdays 1:30-3:20pm**.
- For students registered in **Sections 579 F & H (FIN 579 F & H)**, we will meet once a week. The time is on **Wednesdays from 6:00-9:30pm**.

WHAT ARE MY RESPONSIBILITIES AS A PARTICIPANT?

I ask that you commit to the following:

1. Come prepared to every class by reviewing the digital content and completing the assigned readings for each class sessions. Class lectures will typically comprise no more than 20% of class time. You cannot effectively contribute to the remaining 80% if you are not prepared.
2. Participate thoughtfully in discussions by actively listening to others and seeking to bring into the classroom questions and observations that contributes to your own learning process and that of your peers.
3. Be respectful to your classmates and seminar guests. Critical thinking implies debate and dissent – just remember to disagree with statements, not people.
4. Complete all work on time and with your best effort. Please see me if you have challenges preventing you from engaging fully with the course material. I will do my best to accommodate.

WHAT IF I HAVE TO MISS A CLASS MEETING?

Given the focus on active learning, I hope that you can attend all class sessions. Personal emergencies, illness, and professional commitments are bound to arise and so you do not need to let me know in advance if you must miss a class meeting. When that happens, you are responsible for keeping up with the learning experience and should check the Canvas site for updates and additional materials. Please do let me know if a substantial problem arises that would require you to miss >10% of our class sessions.

You are free to use your laptop or mobile phone in the lecture theater for tasks related to the learning experience. I ask that you refrain from multi-tasking during class. It's distracting for you and for your fellow students.

REMINDER — RELIGIOUS ACCOMODATIONS POLICY

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available [here](#). Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request [form](#).

HOW WILL MY WORK IN THE COURSE BE GRADED?

My goal in evaluating your work is not merely to judge, but also to provide feedback that is actionable on your part.

There is a 60/40 weighting of graded individual / group activities. There is no final exam. The graded components are as follows:

Case Exercise 1 (Group)	20%
Case Exercise 2 (Group)	20%
Analytical Assignment 1 (Individual)	20%
Analytical Assignment 2 (Individual)	20%
Class Contribution (Individual)	20%

For each assignment or case, I will provide guidance on my expectations regarding content, format, and length of the submission. Appendix C of this syllabus provides guidance on crafting high quality deliverables for this class. Please see me in advance if you have any concerns about your ability to participate in class or need help in framing useful interventions on your part.

Appendix A: Course Learning Objectives

To be provided two weeks before the class start date.

Appendix B: Class Assignments, Readings and Materials

To be provided two weeks before the class start date.

Appendix C: Guidance on High Quality Written Deliverables

To be provided two weeks before the class start date.