

Climate Finance

2023 Course Description

ENV 1707 F

Instructor: Susan McGeachie, Adjunct Professor, Climate Finance, Graduate Studies

Time:	Mondays 6:30 – 8:30 pm
Background:	Climate Finance involves the application of new and established financial market instruments and practices to the management of climate change related risks and investment opportunities, and the incorporation of such factors into stock valuation and selection processes, as well as shareholder engagement strategies. Asset owners and managers, banks, insurance companies, venture capitalists, corporations and government agencies are becoming increasingly engaged in the financing of climate change mitigation and resilience to manage risks and capitalize on new opportunities. This course explores the research, projected outcomes and recommendations from the IPCC, multi-stakeholder initiatives and finance collaborations, and assesses signals of future actions to address them. An in-depth knowledge of financial markets is not required.
Career Applicability	Students leaving the course will be able to apply their new knowledge to a variety of career paths. The following professions and/or fields will benefit from a knowledge of climate finance and environmental markets: <ul style="list-style-type: none"> - Financial analyst, portfolio manager, financial product development - Investment and management consultant - Sustainability specialists (especially for firms in high impact sectors such as oil & gas, forestry, chemicals, metals and mining and utilities) - Commodities trader - Venture capitalist, private equity, or real estate investor - Credit and insurance risk analysts - Investor relations, public relations, communications - Not-for-profit managers and executives
Objectives & Scope:	The objective of the course is to provide students with a firm grounding in the range of issues at stake in climate change and the application of finance to address it. The course will examine how established practices, procedures and tools from within the mainstream financial and corporate markets are being adapted to integrate a climate lens in the pursuit of financial performance goals from both an investor and corporate perspective.
Reading Materials	Fernandes, Nuno: <u>Climate Finance</u> ; 2023 Environmental Finance: https://www.environmental-finance.com

ENV 1707 F: Lecture topics by week

Week 1: September 11

Introduction to Climate Finance

- Financial concepts relating to financing the low carbon transition and climate adaptation
- Economic consequences of climate change and competing theories to address them
- Key drivers and players
- Investment need how mainstream financial products and services are being adapted to meet it
- National industrial and capital allocation strategies
- Corporate strategy

Readings:

Fernandes, Nuno: Climate Finance; Chapter 2 (2.1 – 2.6)
Economist: *The Economics of the Climate*; 2021 (Quercus)

Week 2: September 18

The science of climate change

- Understanding global warming
- Potential impacts and associated risks
- Low carbon transition pathways
- Adaptation requirements and investment need
- Actions required and observed to achieve the low carbon energy transition and resilience
- Where do we go from here?

Assign groups and projects

Readings:

Fernandes, Nuno: Climate Finance; Chapter 1 (1.1 & 1.3)
IPCC AR6 Synthesis Report: *Summary for Policy Makers*; 2023
https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf

Guest lecturer: Professor Steve Easterbrook, Director, School of the Environment, University of Toronto

Week 3: September 25

The financial impact of climate change

- Impact of climate change on asset valuation
 - Incorporating climate effects into business and asset valuation
 - Impacts of climate change on cash flow drivers
 - CAPEX and OPEX considerations
 - Cost of capital adjustments and changing capital rules to account for climate exposures
 - The role of Central Banks

Readings:

Fernandes, Nuno: Climate Finance; Chapters 2 (2.7) and 6 (6.6)

Green Central Banking: *Climate Adjusted Capital Requirements*; 2023

<https://greencentralbanking.com/2023/02/21/climate-adjusted-capital-requirements/>

Guest lecturer: Professor Jan Mahrt-Smith, Associate Professor of Finance, Rotman School of Management (cross-appointed to School of the Environment), University of Toronto

Week 4: October 2

Climate change risk management and investment opportunities

- Identifying climate change-related risks:
 - Policy changes
 - Technological advancement
 - Access to capital
 - Weather volatility
 - Shifting customer and stakeholder expectations
- Incorporating climate scenario analysis into established risk management practices
- Offsetting risk to the capital markets: Weather derivatives and catastrophe bonds

Readings:

Fernandes, Nuno: Climate Finance; Chapters 1 (1.5) and 2 (2.2 – 2.6)

World Economic Forum: *Global Risk Survey*; 2023

<https://www.weforum.org/reports/global-risks-report-2023/>

Student presentations: Financing climate change commitments

1. Carbon offsets **should/should not** be traded to realize global GHG reduction goals
2. Nuclear **should/should not** be included in a national low carbon energy strategy
3. Permitting processes **should / should not** be expedited for climate solutions
4. Financial institutions **should / should not** be required to reduce the emissions associated with their lending and investment portfolios
5. Government investment in climate solutions **should / should not** include a requirement for active involvement from groups that have been historically marginalized e.g., women, Indigenous Peoples

Week 5: October 9

Thanksgiving: Independent reading

Week 6: October 16

Financial innovation

- Investment and lending strategies
 - The evolution (and controversy) of ESG
 - Active vs passive approaches
 - Equities / fixed income
- Product and service innovation

- Climate and transition bonds
- Green and sustainability-linked loans
- Decarbonization financing strategies
- Project finance
- Carbon markets

Readings:

Fernandes, Nuno: Climate Finance; Chapters 3 and 6 (6.1)

Canadian Climate Institute: *Why uncertainty regarding the value of future carbon credits is a policy problem that needs solving*; 2023

<https://climateinstitute.ca/why-uncertainty-value-carbon-credits-policy-problem/>

Guest Lecturer: Managing Director, Sustainable Finance (TBC)

Week 7: October 23

Climate-related reporting and disclosure

- Shifting requirements for climate-related materiality considerations and the impact on reporting and disclosure regulations and frameworks
- Investor collaborative initiatives through the global [Climate Action 100+](#) and the domestic [Climate Engagement Canada](#).
- [Standards](#) for evaluating progress toward net zero-aligned climate action
- Recently launched [IFRS Sustainability Disclosure Standards](#) and the [Task force on Climate-related Financial Disclosures](#) (TCFD) on which it was predicated
- Evolving governance requirements and pressures
- The role of corporate executives and boards

Readings

Fernandes, Nuno: Climate Finance; Chapters 4 (4.3 and 4.4) and 6 (6.3)

CSA Staff Notice 51-354: Report on Climate Change-Related Disclosure Project

http://www.osc.gov.on.ca/en/SecuritiesLaw_csa_20180405_51-354_disclosure-project.htm

+ Review resources in links above

Guest lecturer: Sarah Keyes, CEO, ESG Global Advisors

Week 8: October 30

Climate Justice

- Avoiding negative economic impacts of the transition
 - Strategically increasing access to capital for entrepreneurs facing systemic barriers
 - Protecting disadvantaged communities that are disproportionately impacted by climate change
- The role of impact investing
- Improving north/south capital flows
- **COURSE CONTENT REVIEW**

Readings

Fernandes, Nuno: Climate Finance; Chapter 6 (6.2)
London School of Economics and Grantham Research Institute: *Financing a Just Transition*
<https://www.lse.ac.uk/granthaminstitute/financing-a-just-transition/>

Week 9: November 6

READING WEEK

Week 10: November 13

MID TERM EXAM

Week 11: November 20

Group project discussion and in-class work

Week 12: November 27

Group project presentations and feedback (Part 1)

Week 13: December 4

Group project presentations and feedback (Part 2)

Week 14: December 11

OPTIONAL: In class feedback on final report

Week 15: December 18

Submission of group project reports

Evaluation:**15% Student presentation**

Students will be organized into presentation teams and take a position on the pros and cons of a conscious effort to accelerate climate finance and other strategies to stimulate investment in the low carbon transition.

35% - Mid-term exam

Course material will be assessed in one midterm exam, which may include multiple choice, short and/or long answer questions and will include some choice.

40% - Group assignment

Small groups will work with real 'clients' to address a research question or practical/implementation challenge around environmental finance or responsible investment. Susan will oversee these research projects, which will culminate with a final presentation at the end of the course.

10% Participation

Grades will reflect participation in class discussion, preparedness, and attendance (including bringing and displaying your name plate in class). Participation marks will also reflect active involvement and preparation for case study discussions. The course is run as a seminar – your ongoing engagement is critical to its success and your outcome.

About the instructor

Susan enjoys bringing a practitioner perspective to learning professionals. She continues to network with (and in select cases has hired!) students in the industry after graduation.

Biography

Susan McGeachie is Co-Founder and Managing Partner of the [Global Climate Finance Accelerator](#). She has over 20 years of experience identifying, evaluating, and managing ESG-related risks and strategic positioning opportunities. Following her years in ESG research and analytics, she held leadership positions in banking, management consulting, and engineering firms as the Head of the BMO Climate Institute, Global Director of the Climate Change and Sustainability practice at Hatch, and the Central Market Leader for EY's Climate Change and Sustainability Services practice.

Susan is an adjunct professor at the University of Toronto where she teaches a graduate course in climate finance and an executive education course through an [ESG Designation program](#) at the Rotman School of Management. She is also a member of the [Climate Governance Experts panel](#) and a former board member of the Canadian Responsible Investment Association. Susan was named to the Canadian delegation of COP 26 and 27 and, in 2021, was awarded one of twenty-six Canadian Climate Champions by the [Canada Climate Law Initiative](#) and the British High Commission. In 2014 she was named to the [Clean50 and Clean 16](#) lists of practitioners, which recognize contributions to advancing the clean economy.

Susan received her MBA from the Schulich School of Business, York University with a specialization in international finance and sustainability.