

05107: Climate Economics

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Ludwig Maximilian University of Munich

MSc in Economics

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Office hours: by appointment

Lectures: Luisenstr. 37 (C) - Room C006 (Ground floor)

Mondays, 10:00 - 12:00 AM

Tutorials: Luisenstr. 37 (C) - Room C006 (Ground floor)

Mondays, 12:00 - 14:00 AM

Moodle Name: Climate Economics

Moodle key: [ClimEcon26](#)

Course Overview

This course introduces the economic analysis of climate change and the role of public policy in addressing its causes and consequences. It covers the nature and distribution of climate damages, the implications of inequality, uncertainty, and discounting for policy design, and the main frameworks used to model climate–economy interactions. Students are also introduced to key mitigation policy instruments, the international dimension of climate governance, and empirical approaches for evaluating climate policies. Finally, we will explore the fundamental ideas of the economics of adaptation, including how households, firms, and governments respond to rising temperature exposure and climate variability.

Topics

This is the list of topics covered in the course:

1. Introduction + Recap on Public Economics
2. Climate Damages & Inequality

3. The Role of Discounting and Uncertainty
4. Climate-Economy Modelling
5. Climate Policy Instruments
6. International Dimension of Climate Policy
7. Evaluation of Climate Policies
8. Economics of Adaptation to Climate Change

The list of topics is tentative and subject to change. The topics covered will be listed on the Moodle page.

Weekly Schedule

Week	Date	Activity	Topic	Instructor
1	13.04.26	Lectures & Tutorials	1	Filippo Pavanello, PhD
2	20.04.26	Lectures & Tutorials	2	Filippo Pavanello, PhD
3	27.04.26	Lectures & Tutorials	2	Filippo Pavanello, PhD
4	04.05.26	Lectures & Tutorials	3	Prof. Dr. Karen Pittel
5	11.05.26	Lectures & Tutorials	4	Prof. Dr. Karen Pittel
6	18.05.26	Lectures & Tutorials	5	Prof. Dr. Karen Pittel
7	25.05.26	No Class	—	—
8	01.06.26	Lectures & Tutorials	5	Prof. Dr. Karen Pittel
9	08.06.26	Lectures & Tutorials	5	Prof. Dr. Karen Pittel
10	15.06.26	Lectures & Tutorials	6	Prof. Dr. Karen Pittel
11	22.06.26	Lectures & Tutorials	7	Filippo Pavanello, PhD
12	29.06.26	Lectures & Tutorials	8	Filippo Pavanello, PhD
13	06.07.26	Exam Prep	—	Filippo Pavanello, PhD
14	13.07.26	Exam	—	—

Class Structures

Lectures

The lectures introduce the conceptual and theoretical foundations of climate economics. Topics range from the estimation of climate damages and their distributional consequences to the design and evaluation of mitigation and adaptation policies. Where relevant, lectures draw on recent empirical research to illustrate key mechanisms and policy trade-offs.

Tutorials

Tutorials will complement the preceding lectures by: (1) delving deeper into the derivations of the models, with quantitative exercises that can help students apply the ideas in the lecture to other settings; (2) covering empirical applications to estimate climate damages and adaptation behaviours, and to evaluate mitigation policies (this might include replication exercises in R language).

Course Materials

Lecture Notes

Lecture and tutorial notes will be made available on Moodle.

Bibliography

There is no required textbook for this class. The examination will be based on the lecture and tutorial notes uploaded to Moodle.

If students want to explore any topic further, they can consult the following sources:

- The research papers mentioned in the class notes;
- [Handbook of the Economics of Climate Change](#) (Lint Barrage and Solomon Hsiang).

Assessment

The final exam will take place on **July 13** during the usual class time. The final exam will be based on both the lectures and the tutorials.

Please note that registering for the exam is mandatory. Without registration, participation in an examination is not possible, and no exceptions are allowed. If you have any difficulties with exam registration, please contact the ISC directly at isc@econ.lmu.de.