

ENV-724

Climate economics for Engineers

Thalmann Philippe, Vielle Marc, Vöhringer Frank

Cursus	Sem.	Type
Civil & Environmental Engineering		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Written
Workload	60h
Hours	27
Courses	26
Exercises	1
Number of positions	

Frequency

Every 2 years

Remark

Next time: Every two years / Next time fall 2018. Min 5 participants

Summary

The course introduces non economists to the economic analysis of climate change: economic activity and climate change, estimation of climate impacts, optimal mitigation and adaptation, national and international climate policy, instruments for climate policy.

Content

Economic activity as a source of greenhouse gases, climate scenarios
 Impacts of climate change: valuation and uncertainty, net costs (aggregation, intergenerational discounting)
 Adaptation to climate change
 Mitigation: mitigation as a public good, efficiency and sufficiency, abatement measures, marginal abatement cost curves, innovation
 Solar radiation management: economics and governance
 Instruments for climate policy: voluntary approaches, regulation, economic instruments
 Climate policy: Swiss climate policy, international climate policy, prisoner's dilemma, cooperation, climate risk mitigation game

Note

This course does not require any prior economic knowledge, but it is easier for those who attended ENV-615 "Environmental Economics for Engineers" or Env-620 "Environmental Economics for Engineers (2018)"
 It will only be given for a minimum of 5 students.

Keywords

climate change
 economics

Learning Prerequisites**Recommended courses**

Recommended: ENV-615 Environmental Economics for Engineers (before 2018) or Env-620 "Environmental Economics for Engineers (2018) from 2018

Learning Outcomes

By the end of the course, the student must be able to:

- to explain how economic activities contribute to climate change
- to develop the economic analysis of the main instruments of climate policy
- to explain the main dimensions of climate policy 'games'

Resources

Bibliography

Stern, N. (2015) *Why Are We Waiting? The Logic, Urgency, and Promise of Tackling Climate Change*. Cambridge, MA, USA, MIT Press

OECD (2009) *The Economics of Climate Change Mitigation: Policies and Options for Global Action Beyond 2012*, Paris, France: OECD

Ressources en bibliothèque

- [OECD \(2009\) The Economics of Climate Change Mitigation: Policies and Options for Global Action Beyond 2012](#)
- [Stern, N. \(2015\) Why Are We Waiting? The Logic, Urgency, and Promise of Tackling Climate Change](#)