FWP Environmental economics and climate change

Code: EECC

Lecturer	
Prof. Dr. Jens Horbach	

Intended Learning Outcomes

Knowledge Targets

Students know about the theoretical background of environmental and climate change problems such as the theory of external effects and international negotiations. They are familiar with the concept and the pathways to a sustainable development.

Capabilities

The students are able to assess different policy options such as tradable permits, eco-taxes and international negotiations as solutions for mitigating climate change problems. Furthermore, they know indicators of a sustainable development and climate change so that they can empirically assess these problems.

Professional skills

The students are able to evaluate current climate policy measures with respect to their ecological and economic effects. They are able to enrich scientific discussions on sustainability issues.

Content

Detailed Course Description

Introduction to environmental economics and sustainability

- Environmental and climate problems as a market failure problem
- Economic growth, the environment and sustainable development
- Environmental policy instruments
- Determinants of eco-innovation
- Employment and output effects of eco-innovation
- Valuing the environment
- Trade and the environment, international trade agreements, strategic trade policy
- Environmental policy and international competitiveness: The Porter Hypothesis

Climate change

- The science of climate change
- Determinants and impacts of climate change
- Climate change as an international problem, international negotiations
- Empirics of climate change
- Policy options for climate change mitigation

Seminar on recent topics on environmental and climate change problems

Teaching & Learning Methods

Interactive classes / Seminar / Assigned presentations and working papers

Media Presentation with beamer, tablet
Relation / Interface to other Modules ---
Additional Information ---
Literature Buchholz, Wolfgang, Rübbelke, Dirk (2020): Foundations of Environmental Economics, Springer Nature Switzerland, Cham Hanley, Nick, Shogren, Jason F., White, Ben (2019): Introduction to Environmental Economics – In Theory and Practice, 3rd edition, Oxford University Press, New York Horbach, J., Reif, C. (eds.) (2018): New Developments in Eco-Innovation Research, Series Sustainability and Innovation, Springer, Cham Tol, Richard S. J. (2023): Climate Economics. Economic Analysis of Climate, Climate Change and Climate Policy, 3rd edition, Edward Elgar Publishing, Northhampton

Organisation

<table>
<tr><td>ECTS-Credits

4</td><td>SWS

4</td><td>Language

English</td></tr>
<tr><td>Type of module

FWP</td><td>Turn

Summer and Winter Term</td><td>Duration

1 semester</td></tr>
<tr><td colspan="3">Semester of Study
3rd Year, 5th till 7th Semester</td></tr>
<tr><td colspan="3">Prerequisite for participation
See §6 Study- and Examination Regulations
Recommended Requirements
• Books and scientific articles
• Study notes taken in class
• Participation in the lecture</td></tr>
<tr><td colspan="3">Workload
4 ECTS-Credits: 120 hours,
combined out of:</td></tr>
<tr><td>Course Attendance

45 hours</td><td>Preparation / Homework / Self-study

15 hours</td><td>Time for Exercises and Group Work

15 hours</td></tr>
<tr><td>Presentation and thesis paper preparation

45</td><td>Exam Preparation</td><td>Exam Time</td></tr>
<tr><td colspan="3">Prerequirement for Exam
None</td></tr>
<tr><td colspan="2">Exam requirements
Presentation and thesis paper</td><td>Weighting of Final Grade
Presentation: 30%
Thesis paper: 70 %</td></tr>
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