Syllabus

Course Description

Course Title	The Economics of Climate Change
Course Code	27360
Course Title Additional	
Scientific-Disciplinary Sector	ECON-02/A
Language	English
Degree Course	Bachelor in Economics and Management
Other Degree Courses (Loaned)	
Lecturers	Prof. Dr. Elisabeth Gsottbauer, Elisabeth.Gsottbauer@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/36371
Teaching Assistant	
Semester	Second semester
Course Year/s	optional
CP	6
Teaching Hours	36
Lab Hours	-
Individual Study Hours	-
Planned Office Hours	
Contents Summary	The course introduces students to the economic theory and instruments of climate policy. Core topics include the science of climate change, integrated assessment models, the social cost of carbon, and economic policy tools for mitigation and behavioral change. Students learn to apply economic theory to evaluate climate policies, critically assess data and models, and understand behavioral biases in decision-making.

	The course combines analytical frameworks with empirical evidence and case studies to equip students with practical skills for climate policy analysis.
Course Topics	This course provides an introduction to the economics of climate change, combining scientific foundations with economic theory and practical policy analysis. Students will first develop a solid understanding of the basic science of climate change, including key concepts such as greenhouse gas dynamics and the links between economic growth and environmental quality. Building on this foundation, the course explores how climate change impacts are assessed, from evaluating vulnerability and human capital effects to analyzing adaptation strategies and the economic costs of climate disruptions. The second part of the course focuses on mitigation and policy solutions, examining global emission trends, technological options, and the economic logic behind instruments such as carbon taxes, emissions trading systems, subsidies, and regulatory approaches. Special attention is given to the social cost of carbon and the practical functioning of carbon markets worldwide. Alongside policy design, the course addresses the role of corporations and competitiveness under climate regulation, climate finance and the macro-transition, as well as the behavioral dimensions of climate action, including biases, social norms, and interventions that shape decision-making.
Keywords	Climate Policy; Environmental Economics; Mitigation and Adaptation; Carbon Pricing; Behavioral Climate Action
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	The course is taught through a combination of lectures, in-class discussions, and applied exercises. While lectures provide the theoretical and empirical foundations of climate economics, students are actively involved in discussing assigned case studies, research papers and newspaper articles.
Mandatory Attendance	Not compulsory but recommended
Specific Educational Objectives and Learning Outcomes	ILO 1 Knowledge and understanding ILO 1.1 Knowledge of the economic theory of demand and supply of goods and services, equilibrium and price formation mechanisms

	in the market economy ILO 1.2 Knowledge of the fundamentals of political-economic action and collective decision-making ILO 1.3 Understanding the role and management of public goods, the role of institutions and information ILO 1.4 Understanding the impact of economic policies in specific sectors and the role of research, development and innovation ILO 1.5 Understanding the management of finite resources and principles of sustainability ILO 2 Ability to apply knowledge and understanding ILO 2.1 Be able to assess the role of governments and the need for political economy interventions in market economies ILO 2.2 be able to formulate economic policy objectives and evaluate their outcomes and use available information to assess the appropriateness of monetary and fiscal policies in relation to macroeconomic variables ILO 2.3 be able to analyse economic activity in terms of sustainability ILO 3 Making judgements ILO 3.1 recognise the main problems in complex decision-making situations ILO 3.2 critically analyse the facts and the situations to be dealt with ILO 4 Learning skills ILO 4.1 Obtain information to update the constantly changing general and specific context of reference
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	For attending students, grading is based on a final exam containing open questions which makes up 100%. Non attending students will be assessed through a final exam test (100%) that covers all course material. The exam format ensures the evaluation of students' knowledge and understanding of core economic concepts (ILO 1), their ability

	to apply these concepts to policy-relevant questions (ILO 2), and their capacity for critical analysis and sound judgement (ILO 3).
Evaluation Criteria	The written exam evaluates students on their ability to demonstrate a clear understanding of core concepts in the economics of climate change and to apply these concepts to concrete policy questions. Answers are assessed based on the accuracy of economic reasoning, the ability to integrate scientific and empirical evidence, and the clarity and coherence of argumentation. The exam contributes to the following Intended Learning Outcomes: ILO 1 – Knowledge and Understanding The exam assesses students' knowledge of fundamental economic principles, including market mechanisms, political-economic decision-making, public goods, institutional frameworks, and sustainability. Students are expected to demonstrate an understanding of how economic policies operate within different sectors. ILO 2 – Ability to Apply Knowledge and Understanding Students are required to apply theoretical concepts to concrete economic and policy contexts. This includes assessing the role of governments in addressing market failures, formulating and evaluating economic policy objectives, and analysing economic activity from a sustainability perspective. ILO 3 – Making Judgements The exam evaluates students' ability to identify and structure complex economic problems, critically assess alternative policy approaches, and develop well-founded arguments supported by appropriate evidence. ILO 4 – Learning Skills Students demonstrate their ability to independently draw on

	relevant theoretical and empirical knowledge, integrate information from different sources such as academic papers and newspapr articels, and apply it to evolving economic challenges.
Required Readings	IPCC Special Report on Global Warming of 1.5C (2018) Perman, R. (2003). Natural resource and environmental economics. Pearson Education. Stern, N. (2006). Stern Review: The economics of climate change.
Supplementary Readings	Further references (academic papers) are provided alongside lectures.
Further Information	Part of the course will be taught online.
Sustainable Development Goals (SDGs)	Climate action