Syllabus

Course Description

Course Title	The Economics of Climate Change
Course Code	27360
Course Title Additional	
Scientific-Disciplinary Sector	SECS-P/02
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, 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 and research papers prepared at home.
Mandatory Attendance	Not compulsory but recommended
Specific Educational Objectives and Learning Outcomes	Knowledge and understanding Knowledge of the economic theory of the demand and supply of goods and services, equilibrium and pricing mechanisms in market

	economies; knowledge of the theories of competition in markets with respect to classical, neoclassical and evolutionary theoretical models knowledge of the basic theorems of welfare economics understanding of the behaviour of microeconomic actors, with particular reference to theories of consumption, the firm and the application of game theory knowledge of the fundamentals of political-economic activities and collective decisions understanding of the role and management of public goods, the role of institutions and information understanding of the effect of economic policy actions in specific sectors and the role of research, development and innovation knowledge of various macroeconomic models for analysing economic changes in the short and medium term, understanding of the causes of economic growth knowledge and understanding of the role of expectations in financial markets, for consumption and for monetary and fiscal policies understanding of exchange rate mechanisms and monetary and fiscal policies in the European Monetary Union Understanding the use of non-renewable resources and the principles of sustainability Understanding of the effects of digitisation on economic and business activities Knowledge of the mechanisms underlying effective communication of theoretical and empirical economic arguments in three languages: Italian, German and English Ability to apply knowledge and understanding to be able to carry out an analysis of the demand for goods and services and assess the cost structure, its role and its importance for business decisions to be able to critically compare the various theories of the enterprise to be able to conduct an analysis of the role and function of macroeconomic variables in closed economies, in the short, medium and long term

	knowing how to carry out an analysis of the economic behaviour of public and private actors using game theory being able to assess the role of governments and the need for political-economic interventions in market economies being able to formulate economic policy objectives and assess their results, and to use available information to assess the appropriateness of monetary and fiscal policies with respect to macroeconomic variables be able to use available information to apply and understand the fundamentals and operational implications of theories of competition and industrial policies knowing how to analyse economic activity with regard to sustainability be able to communicate the results of economic analyses prepared according to international professional standards in three languages: Italian, German and English Making judgments Identify the most important issues in complex decision-making situations. Conduct a critical analysis of the facts and situations to be addressed. Learning skills Find the information needed to keep up to date with the changing context, both general and specialized.
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.
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.
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 Information	
Sustainable Development Goals (SDGs)	Climate action