

Title of course	Economics of Climate Change
Responsible instructor	Wiebke Störmann
Learning objectives	<p>Students learn to assess and evaluate the impacts of climate change in different parts of the world. They deal with the optimal measures to mitigate climate change and receive information on adaptation to climate change. In the future, this will be an important field not only for government institutions, but will also have a significant impact on the economic activities of individual companies. Therefore, students become familiar with climate adaptation and mitigation measures at the company level in extensive case studies during the course. The application of theoretical knowledge to the example cases trains the students' analytical skills and thus their employability.</p> <ul style="list-style-type: none"> ▪
Course contents	<p>The Economics of Climate Change is a course on the economic assessment of the impacts of climate change. The course covers theoretical and empirical work dealing with the analysis of mitigation, adaptation, impacts and other issues related to the policy and management of greenhouse gases. The course is intended to be interdisciplinary, focusing on aspects of economics, but also incorporating other fields that are necessary to gain important insights. These fields include natural sciences and technology as well as social sciences, psychology and geography, to name but a few. The course is understood to be international, covering topics from around the world, ranging from the local to the global.</p> <p>The course starts with a brief introduction (chapter 1). The main chapters contain the analysis of the global climate change projection based on IPCC reports on different continents or countries (chapter 2) and system transitions (chapter 3). In the following section (chapter 4), the international climate agreements are analyzed from the perspective of the different continents or countries. Finally, in the next section (chapter 5), measures for climate adaptation on different continents or countries are examined and the need for further action is identified.</p> <ol style="list-style-type: none"> 1. Introduction 2. IPCC Report <ol style="list-style-type: none"> 2.1. Africa 2.2. Australasia 2.3. Central and South America 2.4. Europa 2.5. North America 2.6. Small Islands 2.7. Key risks across sectors and regions 2.8. Decision making options for managing risk 2.9. Climate resilient development pathways 3. System Transitions <ol style="list-style-type: none"> 3.1. Land, Ocean and Ecosystems Transition 3.2. Urban, Rural and Infrastructure Transition 3.3. Energy System Transition 3.4. Cross Sectoral System Transition 4. History of Climate Change Conversation <ol style="list-style-type: none"> 4.1. 1800s until 1992 4.2. U.N. Framework Convention on Climate Change at the Rio Earth Summit 1992 4.3. From First “conference of parties” in Berlin (COP 1) to COP3 in Kyoto 1997

	<p>4.4. From COP 13 in Bali 2007 to COP19 in Warsaw 2013 4.5. Paris Agreement 2015 4.6. Development after 2015</p> <p>5. Adaption Policy 5.1. Adaption versus mitigation 5.2. Institutional actors in climate change adaption 5.3. Climate-adapted urban development 5.4. Climate adaptation at regional level 5.5. Local implementation of adaptation concepts 5.6. Climate adaptation in the business sector</p>
Teaching methods	<ul style="list-style-type: none"> ▪ Lectures ▪ Exercises ▪ Hermeneutic discourses ▪ Maieutic discourses ▪ Discussion ▪ Self-study
Prerequisites	There are no formal requirements.
Suggested reading	<p>IPCC, 2022: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Cambridge University Press, Cambridge, UK and New York, NY, USA, 3056 pp., doi:10.1017/9781009325844.</p> <p>Richard S.J. Tol (2023), Climate Economics – Economic Analysis of Climate, Climate Change, and Climate Policy (3rd edition), Edward Elgar, Cheltenham.</p> <p>Literature for the case studies will be announced in the course.</p> <ul style="list-style-type: none"> ▪
Applicability	This module is also suitable for other economics-oriented degree programmes at Schmalkalden University of Applied Sciences.
Workload	<p>Total workload: hours 150, of them:</p> <ul style="list-style-type: none"> ▪ Lecture: 60 ▪ Self-study: 90, of them: <ul style="list-style-type: none"> ▪ Course preparation (in particular reading): 30 ▪ Follow-up: 30 ▪ Readings and exam preparation (including mid-term): 60
ECTS credit points and weighting factor	5 ECTS credit points; weighting factor: 5/180 (degree programmes in economics and international business and economics) or 5/210 (Programmes in Economics and Business Administration), respectively
Basis of student evaluation	<ul style="list-style-type: none"> ▪ Comprehensive written examination, 60 minutes (67%) ▪ Case study 33%
Time	Summer semester

Frequency	Each academic year, at least often enough so that this module can be chosen by every age cohort between the respective 4th and 6th semester.
Duration	One semester
Course type	Elective course
Remarks	Teaching language is English.