

1.3.1 Sustainability of Renewable Energy (University of Oldenburg)

Name of Module/Course	Sustainability of Renewable Energy			
Short description				
Name of Programme	PPRE			
Name of University	University of Oldenburg			
Name of Lecturer	Dr. Herena Torio			
Responsible University lecturer	Dr. Herena Torio			
Credit Points	SWS	Attendance (h)	Self-study (h)	Total workload (h)
6	4	Ca.52 h	Ca. 128h	180h
Start & end dates, WS		timeslot:		
21.4. – 21.7.2022		Thursdays, 8.00 – 12.00		
Registration until		Number of possible AGEP participants		
20.4.2022		Max. 5		
Content and goals of qualification	<p>In order to understand the complex transformation processes of our current energy supply system towards a more sustainable one we have to consider implications that go far-beyond the technological arena. In this module, the mobility transition in Germany is taken as a concrete example to analyse and understand such transformation processes as well as its main indicators. In the course of the seminar the buzzword 'sustainability' will be explained, including its development, assessment methods and implications for energy systems analysis. Electric vehicles are being re-discovered in the context of mobility transition as one of the promising facettes to decarbonize the transportation system. Additionally, effects of the COVI-19 pandemic are shifting the focus to integral mobility planning, home working and mobility avoidance. Thus, the transition from a predominantly fossil-fuelled combustion-engine and individual passenger based mobility system towards a more diversified and electric one will be analysed. Several lectures highlighting the theoretical framing of the sustainability debate, the dynamics of such a transformation and mechanisms involved in it, as well as a sound introduction to several methods for sustainability assessment (LCA, scenarios, MCDM or discourse analysis) are delivered. The students then choose and develop their own research question in the context of the mobility transition, work in depth with one of the proposed assessment methods and thereby apply the methodological and theoretical knowledge gained during the lecture.</p> <p>After successful completion of the module students should be able to:</p> <ul style="list-style-type: none"> - analyse, and critically compare and evaluate selected sustainability concepts and strategies addressing renewable energy systems - critically appraise and analyse the principles and implications of selected scientific methods and theories for a sustainable energy supply 			

	<ul style="list-style-type: none"> - critically evaluate the suitability and meaningfulness of different sustainability indicators, theories, methods and practices regarding their role and impact for developed countries, on the one hand, and developing countries, on the other - perform an integral assessment, involving several relevant aspects related to the sustainability of a particular real-life renewable energy project as well as identify the main barriers, potentials and driving factors for improving it - perform a literature review on selected sustainability approaches to a professional standard, extract the main related conclusions, and arguing critically on them
Preconditions for participation	
Teaching Methods	Videos, online coaching sessions and discussions
lesson format (online/face-to-face)	Online BBB/ StudIP
Assessment method	Presentation and report
language	English
Inscription external student	Inscription on the course should take place via StudIP. The students obtain a guest-student status