

**Subject card**

<b>Subject name and code</b>	Energy transition and climate change , PG_00199002						
<b>Field of study</b>	Economics						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2027/2028		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	4	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			exam		
<b>Conducting unit</b>							
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Marcin Wołek				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	15.0	0.0	15.0	0.0	45
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	45		0.0		5.0	50
<b>Subject objectives</b>	Introducing the student to the basic principles of the functioning of the energy sector in Poland and worldwide, as well as the links between energy production and climate change.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONL3_W03] knows the relations between economic agents and social organisations operating in the national, international and intercultural arenas	The student has knowledge of the fundamental issues related to the energy transition and climate change in Poland and worldwide.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
	[EKONL3_K01] recognises the importance of economic knowledge in identifying and solving economic problems and of consulting experts when difficulties in solving them independently	The student recognizes knowledge in the field of economics as a starting point for analyzing and assessing policy decisions regarding the Green Deal and energy security.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
	[EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions	By drawing on interdisciplinary knowledge, the student is able to assess the impact of different energy sources, including renewables, on energy policy and the environment.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
	[EKONL3_K02] is aware of the level of knowledge in the field of economics and understands the need to deepen and update this knowledge throughout life	The student understands the complexity of issues related to the energy transition and climate change, as well as the dynamic progress in technology and knowledge. Consequently, they are aware of the necessity to continuously verify and update their knowledge in this field throughout their life.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
	[EKONL3_U02] is able to use the knowledge of theory and data to analyse concrete economic and social processes and phenomena and to analyse these phenomena using methods developed in economics, finance and management sciences	The student is able to properly assess and select an appropriate method for analyzing a specific problem in the field of energy transition and climate change in Poland and worldwide.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
	[EKONL3_W04] knows the types of economic and social ties and the regularities governing them	The student is able to identify the most important entities of the energy sector at the national and global level, as well as indicate the relationships between them.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[EKONL3_U10] has the ability to prepare oral presentations, in Polish and in a foreign language, on economic and social issues, using specialist terminology, theoretical approaches, principles of collecting various sources of data, their description and interpretation, and making inferences from scientific literature, and is able to take an active part in a debate	Based on their knowledge and critically selected sources, the student is able to prepare an oral presentation and/or take part in a discussion on changes in the energy sector and climate change.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report [SU4] test/exam - oral or written	
Subject contents	<p>Energy basic measures and concepts  The development process of the energy sector in Poland and worldwide  The importance of energy for socio-economic development  Emissive energy sources  Non-emissive energy sources  The functioning of the electricity market in Poland  Energy as an element of geopolitics  The European Unions energy and climate policy  Sustainable development and the premises of energy sector transformation  Climate change - facts and myths  Scenarios of climate change  Carbon footprint  Adaptation to climate change at the level of the country, city, and household</p> <p>Any questions or concerns regarding the discussed issues may be addressed with the Instructor during the consultation session.</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	attendance rate in lectures	65.0%	25.0%
	exam	51.0%	75.0%

Recommended reading	Basic literature	The Palgrave Handbook of International Energy Economics. Ed. M. Hafner, G. Luciani. Palgrave 2022.  The latest version of the IPCC report
	Supplementary literature	M. Kahn: Adapting to Climate Change : Markets and the Management of an Uncertain Future,. Yale University Press 2021
	eResources addresses	
Example issues/ example questions/ tasks being completed	Definition of LCOE (Levelized Cost of Energy) Major oil producers Major natural gas producers Major coal producers Export directions of oil and natural gas Export directions of hard coal Comparative analysis of emissive energy sources Comparative analysis of non-emissive energy sources Entity structure of the electricity market in Poland The European Unions energy and climate policy Climate change scenarios according to the IPCC	
Work placement	Not applicable	

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