

Subject card

Subject name and code	Global energy transition and perspectives, PG_00202506						
Field of study	Economics, International Economic Relations, International Business, Logistics and Mobility						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English English		
Semester of study	4		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Tomasz Laskowicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
	eNauczanie source address: https://mdl.ug.edu.pl/course/view.php?id=13723						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		0.0		95.0	125
Subject objectives	The aim of the course is to develop an understanding of the mechanisms of the contemporary energy market and the role of renewable energy sources in the energy transition of European and global economies. The course is designed to provide knowledge of the economic, social, technological, and geopolitical challenges related to the energy transition, while developing the ability to critically assess the ways in which governments, businesses, and international institutions respond to these challenges. Particular emphasis is placed on energy security, the economic efficiency of energy investments, the development of offshore wind energy, and the impact of the energy transition on economic competitiveness and socio-economic development.						

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 understands the relationships between energy companies, public institutions, and social organizations in the energy transition process at national and international levels.	[SW4] test/exam - oral or written
	[IBL3_W02] knows and understands fundamental concepts and terminology of international business, international economic and financial relations and complementary disciplines	The student knows and understands the basic concepts and terminology related to the international energy market, energy transition, and low-carbon economy.	[SW4] test/exam - oral or written
	[MSG3_W03] has an advanced and structured knowledge of the world economy and international economic relations; understands the process of their evolution, including its causes and consequences	The student has structured knowledge of global energy transition processes and understands their causes, consequences, and impact on the global economy and the economic security of countries.	[SW4] test/exam - oral or written
	[MSGMU2_W02] knows an advanced terminology in the field of international economics, international economic relations and complementary disciplines	The student knows advanced terminology related to the international energy transition, low-carbon economy, and the economic aspects of the energy market.	[SW4] test/exam - oral or written
	[EKONL3_W04] knows the types of economic and social ties and the regularities governing them	The student understands the economic and social mechanisms and interdependencies related to the functioning of the energy market, energy transition, and energy security.	[SW4] test/exam - oral or written
	[MSG3_W02] has an advanced knowledge and understanding of the terminology of international economic relations and complementary disciplines	The student knows and understands advanced terminology related to the international energy market, energy transition, and the energy security of economies.	[SW4] test/exam - oral or written
	[IBMU2_W03] knows advanced terminology in the field of international business, international economics and financial relations and complementary disciplines	The student knows advanced terminology related to the energy market, energy transition, renewable energy sources, and energy security.	[SW4] test/exam - oral or written
	[EKONMU2_W02] has an in-depth knowledge of various types of existing economic entities and organisations as well as an extended knowledge of public institutions	The student has in-depth knowledge of the role of energy companies, infrastructure operators, public institutions, and international organizations in the energy transition process.	[SW4] test/exam - oral or written
Subject contents	1. Global energy transition and its economic determinants 2. The impact of human activity on climate change 3. European and global energy mix 4. Development of renewable energy sources and the low-carbon economy 5. Offshore wind energy and its importance for Europe's energy security 6. Renewable energy sources in maritime areas 7. Financing the energy transition and climate policies 8. Economic efficiency indicators for energy investments, including LCOE 9. Energy infrastructure, capacity markets, and energy security 10. The importance of energy systems for the economic competitiveness of countries and regions 11. Logistics and supply chains for the renewable energy sector 12. Technological innovation and artificial intelligence in the energy sector 13. Public acceptance of the energy transition and social challenges related to climate adaptation		
Prerequisites and co-requisites	Basic knowledge of economics and international relations.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Pytania egzaminacyjne	51.0%	100.0%

Recommended reading	Basic literature	Perkins, John. (2022). Daniel Yergin. The new map: energy, climate and the clash of nations: New York, NY: Penguin Press, 2021. Journal of Environmental Studies and Sciences. 12. 10.1007/s13412-022-00768-8. IEA. (2025) World Energy Outlook. International Energy Agency. IRENA. (205) <i>World Energy Transitions Outlook</i>. International Renewable Energy Agency.
	Supplementary literature	Raut, Nirmal. (2022). Kate Raworth (2017). Doughnut Economics: Seven Ways to Think Like a 21st Century Economist. Economic Journal of Nepal. 45. 113-114. 10.3126/ejon.v45i1-2.58544. Klein, N. (2014). <i>This changes everything: Capitalism vs. the climate</i>. Simon & Schuster.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Comparative analysis of electricity generation costs from different energy sources based on the Levelised Cost of Energy (LCOE) indicator, including an understanding of the limitations of this metric and the identification of costs not captured by the analysis, such as system costs related to the variability of renewable energy generation. Interpretation of daily electricity price volatility and analysis of electricity import and export mechanisms between countries through international transmission infrastructure. A case study of the energy market based on the Polish Power Exchange (Towarowa Gielda Energii) and assessment of the impact of the energy mix and geopolitical conditions on electricity prices.	
Work placement	Not applicable	

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