



## Subject card

Subject name and code	Markets of energy, PG_00055957						
Field of study	Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2024/2025		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Faculty of Electrical and Control Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Waldemar Kamrat					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
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	2.0		18.0		50
Subject objectives	The aim of the course is to present students with issues concerning the most important problems related to the creation and functioning of energy markets						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W07] knows the basics of economic calculus in the energy sector; knows the legal, organizational and economic principles of the functioning of energy markets, knows the basic principles of management and running a business	The student knows and understands the basic processes of energy production and use, the principles of operation of modern heating and power systems			[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		
	[K6_W08] has basic knowledge in the field of intellectual property protection and patent law, knows and understands the basic processes of energy production and use, knows and understands the principles of modern heating and power systems	The student is able to present the principles of operation of energy markets			[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		
Subject contents	Energy markets - principles, essence, directions of development. Management of energy markets. Outlays and costs of energy markets development. Energy markets in terms of fuel base and energy demand						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
		60.0%			100.0%		

Recommended reading	Basic literature	1. Energy Markets edit.. Wł. Mielczarski  2. Energy economy edit. W. Kamrat. PWN ,2022
	Supplementary literature	Selected problems of decision making modelling in power engineering.  SETA , Elsevier , 2021
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1. Essence, characteristics of energy markets 2. Directions of development of energy markets 3. Valuation of assets on the energy market	
Work placement	Not applicable	