

Subject card

Electric Power Generation Technology, PG_00038432								
Electrical Engineering								
October 2022		Academic year of realisation of subject			2022/2023			
first-cycle studies		Subject group						
Full-time studies		Mode of delivery			at the university			
1		Language of instruction			Polish			
2		ECTS credits			2.0			
general academic profile		Assessment form			assessment			
Department of Electrical Power Engineering -> Faculty of Electrical and Control Engineering								
Subject supervisor		dr inż. Andrzej Augusiak						
Teachers		dr inż. Andrzej Augusiak						
		dr inż. Marcin Jaskólski						
Lesson type	Lecture	Tutorial	Laboratory	<u> </u>	t	Seminar	SUM	
Number of study hours		0.0	0.0	0.0		0.0	30	
E-learning hours inclu	uded: 0.0		1		,			
Learning activity		sses included in study		Participation in consultation hours		udy	SUM	
Number of study hours	30		2.0		18.0		50	
Acquiring knowledge of main energy conversion technologies and their practical implementation in fundamental types of power plants.								
Course out	Course outcome		Subject outcome			Method of verification		
K6_W09		is able to discuss the main technologies of electricity production and discuss their most important features, including energy efficiency			[SW1] Assessment of factual knowledge			
K6_U06		can discuss the importance of energy generation in the modern world			[SU2] Assessment of ability to analyse information			
Types and forms of primary energy, energy conversion processes and their efficiency, chains of energy conversion processes in power plants, efficiency of power plants and its components, gross and net efficiency of power plants, thermodynamic cycles in thermal power plants, Carnot cycle and its energy conversion efficiency, means of increase of energy conversion efficiency in thermal power plants, influence of fossil fuel energy use on environment, power plants using Renewable Energy Sources, construction and principle of work in hydro- and wind power plants, nuclear power plants - construction and principle of work of PWR-type power plants, cooperation of power plants with power system								
Subject passing criteria		Passing threshold		Percentage of the final grade				
riteria Midterm colloquium		50.0%			100.0%			
Basic literature	Marecki J.: Podstawy przemian energetycznych. WNT, Warszawa 2007 Chmielniak T.: Technologie energetyczne. WNT, Warszawa 2008							
Supplementary literature		3 Pawlik M. Strzelczyk F.: Elektrownie, WNT, Warszawa 2000						
eResources addresses		Uzupełniające Adresy na platformie eNauczanie:						
	Electrical Engineering October 2022 first-cycle studies Full-time studies 1 2 general academic pro Department of Electri Subject supervisor Teachers Lesson type Number of study hours E-learning hours inclu Learning activity Number of study hours Acquiring knowledge fundamental types of Course out K6_W09 K6_U06 Types and forms of p conversion processes efficiency of power pl conversion efficiency of fossil fuel energy u principle of work in hy of PWR-type power p Subject passin Midterm colloquium Basic literature	Course outcome K6_W09 Cotober 2022 first-cycle studies Full-time studies 1 2 general academic profile Department of Electrical Power Eng Subject supervisor Teachers Lesson type Lecture Number of study hours E-learning hours included: 0.0 Learning activity Participation in classes including plan Number of study hours Acquiring knowledge of main energy fundamental types of power plants. Course outcome K6_W09 K6_U06 Types and forms of primary energy, conversion processes in power plan efficiency of power plants, thermody conversion efficiency, means of incomorphiciple of work in hydro- and wind of PWR-type power plants, cooperated by the	Electrical Engineering October 2022 Academic yrealisation first-cycle studies Full-time studies Mode of de Language of ECTS cred general academic profile Department of Electrical Power Engineering -> Fac Subject supervisor Teachers Department of Electrical Power Engineering -> Fac Subject supervisor Teachers Creachers Department of Electrical Power Engineering -> Fac Subject supervisor Teachers Creachers Creacher	Electrical Engineering October 2022 Academic year of realisation of subject first-cycle studies Subject group Full-time studies Mode of delivery 1 Language of instruction general academic profile Pepartment of Electrical Power Engineering -> Faculty of Electrical Subject supervisor Teachers dr inż. Andrzej Augusiak dr inż. Marcin Jaskólski Lesson type Lecture Lecture Tutorial Laboratory Number of study hours E-learning hours included: 0.0 Learning activity Participation in didactic classes included in study plan Number of study hours Course outcome Subject outcome K6_W09 Subject outcome K6_W09 Is able to discuss the main technologies of electricity production and discuss their important features, including energy efficiency K6_U06 Can discuss the importance denergy of power plants. 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Andrzej Augusiak dr in2. Andrzej Augusiak dr in2. Andrzej Augusiak dr in2. Andrzej Augusiak dr in3. Marcin Jaskolski Lesson type Lecture Tutorial Laboratory Project Seminar Number of study hours E-learning hours included: 0.0 Learning activity Participation in didactic classes included in study plan Number of study hours Acquiring knowledge of main energy conversion technologies and their practical implementation technologies of electricity production and discuss the main technologies of electricity production and discuss the importance of energy generation in the modern wind K6_W09 K6_U06 Can discuss the importance of energy generation in the modern wind Types and forms of primary energy, energy conversion processes and their efficiency, chains o conversion processes in power plants, efficiency of power plants and its components, gross an energy generation in the modern wind Types and forms of primary energy, energy conversion processes and their efficiency, chains o conversion processes in power plants, efficiency of power plants and its components, gross an efficiency of power plants, efficiency of power plants and its components, gross an efficiency of power plants, cooperation of power plants in the modern wind Types and forms of primary energy, energy conversion processes and their efficiency, chains o conversion processes in power plants, efficiency of power plants in the modern wind Types and forms of primary energy, energy conversion processes and their efficiency in thermal power plant scan to the province and the power plant scan to the university Event Passing threshold Percentage of the Midterm colloquium So.0% 1. 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example questions/	What is the value of energy efficiency in classic thermal plants? What parameters of the plants' technology do influence that value? Which of these parameters are of crucial importance? How can one improve that efficiency? What is the value of energy efficiency in other types of power plants (hydro, wind, nuclear)? Why?
Work placement	Not applicable

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