



Subject card

Subject name and code	Electrical Power Equipment and Substations, PG_00003214						
Field of study	URZĄDZENIA I STACJE ELEKTROENERGETYCZNE						
Date of commencement of studies	February 2025		Academic year of realisation of subject		2025/2026		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Electrical Power Engineering -> Faculty of Electrical and Control Engineering -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Zbigniew Lubośny				
	Teachers		prof. dr hab. inż. Zbigniew Lubośny				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	eNauczanie source addresses: Moodle ID: 874 URZĄDZENIA I STACJE ELEKTROENERGETYCZNE [ET][2025/26] https://enauczanie.pg.edu.pl/2025/course/view.php?id=874						
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	15		5.0		30.0	50
Subject objectives	Acquiring detailed knowledge in the field of power station construction and principles of selecting equipment and station equipment.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U10] is able to calculate short-circuit currents, select substation equipment including power system automation protection automatics		Calculates the parameters of power station equipment, taking into account its role in the system and the system environment.		[SU1] Ocena realizacji zadania		
	[K7_W05] has detailed knowledge of the regulatory processes in the electricity system electricity system, electricity safety and electricity safety automation, is familiar with technologies high voltage		Is able to select the components of a power station with a view to ensuring the correct operation of the power system.		[SW1] Ocena wiedzy faktograficznej		
	[K7_K04] correctly identifies and resolves dilemmas associated with the exercise of the profession, in particular relating to responsibility for his own safety and the safety of others		Assesses the functional safety of power station components.		[SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce		
Subject contents	Course content – lecture Power stations in the system, classification, components of power stations, station rail systems, features of busbars systems, selection of rigid and flexible busbars, current and voltage transformers, selection of current and voltage transformers.						
Prerequisites and co-requisites	Electric power systems						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Test		60.0%		100.0%		
Recommended reading	Basic literature		Santoso S., Beaty H. W. Standard Handbook for Electrical Engineers, Seventeenth Edition McGraw-Hill Education , April 2018 McDonald J. D.: Electric Power Substations Engineering. Taylor & Francis Inc , May 2012				

	Supplementary literature	Santoso S., Beaty H. W. Standard Handbook for Electrical Engineers, Seventeenth Edition McGraw-Hill Education , April 2018 McDonald J. D.: Electric Power Substations Engineering. Taylor & Francis Inc , May 2012
	eResources addresses	
Example issues/ example questions/ tasks being completed	Select the measuring and protection, current and voltage transformers at the MV substation.	
Practical activities within the subject	Not applicable	

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