GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrical Power Equipment and Substations, PG_00038354		
Field of study	Electrical Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	
Mode of study	Part-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Electrical Power Engineering -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Zbigniew Lubośny	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	10.0	0.0	0.0	0.0	0.0	10

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	10	2.0	13.0	25

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_W05] has detailed knowledge of the regulatory processes in the electricity system electricity system, electricity safety and electricity safety automation	Analyses and interprets processes occurring in the power system.	[SW1] Assessment of factual knowledge
[K7_W11] has detailed knowledge of substation construction, is familiar with the principles of selecting substation facilities and equipment, is familiar with technologies high voltage	Has structured knowledge of the construction of power stations.	[SW1] Assessment of factual knowledge
[K7_U10] is able to calculate short-circuit currents, select substation equipment including power system automation protection automatics	Uses mathematical methods to solve problems covered by the course.	[SU3] Assessment of ability to use knowledge gained from the subject
[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	Solves problems relating to the safety of persons and property that arise in practice.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Course content – lecture

Power stations in the system, classification, components of power stations, station rail systems, features of rail 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	H. Markiewicz, Urządzenia elektroenergetyczne, WNT Warszawa 2006. Poradnik inżyniera elektryka. WNT Warszawa 2011 (tom 3), 2007 (tom 2).
	Supplementary literature	E. Musiał, Instalacje i urządzenia elektroenergetyczne, WSiP Warszawa1998. A. Kanicki, J. Kozłowski: Stacje elektroenergetyczne. Politechnika Łódzka, Łódź 2004.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Select current and voltage, measurement and protection transformers at the MV substation.	
Practical activites within the subject	Not applicable	

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