GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrical Power Equipment and Substations, PG_00003214		
Field of study	Electrical Engineering		
Date of commencement of studies	February 2023	Academic year of realisation of subject	2023/2024
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		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Zbigniew Lubośny	
	Teachers	prof. dr hab. inż. Zbigniew Lubośny	

Lesson types and methods of instruction

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

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_W11	Has knowledge of the construction of power stations, knows the principles of selecting devices and station equipment, and knows high-voltage technologies.	[SW3] Assessment of knowledge contained in written work and projects
K7_K04	can react in abnormal and emergency situations, threats to health and life when using automation and robotics elements and systems	[SK5] Assessment of ability to solve problems that arise in practice
K7_U10	Is able to calculate short-circuit currents, select elements of the equipment of a power station, including power protection automatics.	[SU3] Assessment of ability to use knowledge gained from the subject
K7_K04	Correctly identifies and resolves dilemmas related to the construction and equipment of power stations, in particular those related to the responsibility for their own and others' safety.	[SK5] Assessment of ability to solve problems that arise in practice
K7_W05	Has detailed knowledge of regulatory processes in the power system, power security and power protection automation.	[SW3] Assessment of knowledge contained in written work and projects

Subject contents

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	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	Adresy na platformie eNauczanie: URZĄDZENIA I STACJE ELEKTROENERGETYCZNE [2023/24] - Moodle ID: 32206 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=32206
Example issues/ example questions/ tasks being completed	Select the measuring and protection, current and voltage transformers at the MV substation.	
Work placement	Not applicable	