GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrical equipment and installations (WEIA), PG_00042094		
Field of study	Power Engineering, Power Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	English
Semester of study	6	ECTS credits	4.0
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	15.0	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	5.0	65.0	100

Subject objectives

Acquainting with the construction and principles of selection of elements of electrical installations.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K03] is able to react in emergency situations, threats to health and life when using energy devices, is aware of the impact of engineering activities on the environment		
[K6_U01] can obtain information from literature and other sources, organize, interpret it and draw and formulate conclusions; has the ability to self-educate, interprets the results of completed engineering tasks, is able to design simple energy systems and their systems		
[K6_W05] has structured knowledge in the field of electrical engineering and electronics, necessary to understand the basics of operation and selection of electrical machines, electricity transmission systems and power electronic devices		
[K6_W03] knows the basics of automation and automatic regulation, knows the principles of the selection of electrical devices, drive systems and their control		

Subject contents

Electrical installations - definitions, structure, requirements. Impact of working and short-circuit currents on installation components. Power cables, fuses, circuit breakers, differential circuit breakers - design and characteristics. Principles of installation design.

Prerequisites and co-requisites

Basics of electrical engineering.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	60.0%	100.0%

Recommended reading	Basic literature	Markowski H.: Urządzenia i instalacje elektroenergetyczne. WNT Warszawa 2006. Musiał E.: Urządzenia elektroenergetyczne. PWSiP, Warszawa 2003. Poradnik Inżyniera elektryka. WNT Warszawa 2011. N SEP-E-002 Instalacje elektryczne w obiektach budowlanych. Instalacje elektryczne w obiektach mieszkalnych. Warszawa 2006. Electrical installation guide. According to IEC International Standards. Schneider Electric, 2018 Electrical installations handbook. Protection, control and electrical devices. ABB SACE 2010
	Supplementary literature	Ismail Kasikci, Short Circuits in Power Systems. A practical Guide to IEC 60909. Wiley-VCH. 2002. IEC 60364)Low-voltage electrical installations. PN-IEC 60364 Instalacje elektryczne w obiektach budowlanych. Bill Atkinson, Electrical Installations Designs. John Wiley & Sons, 2013
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Design a part of the installation in terms of cable selection and protection (fuse, circuit breaker).	
Work placement	Not applicable	