GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrical Installations, PG_00055886		
Field of study	Power Engineering, Power Engineering, Power Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	English
Semester of study	3	ECTS credits	3.0
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	dr inż. Seweryn Szultka 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	15.0	0.0	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	8.0	37.0	75

Subject objectives

Get knowledge related to structure, requirements and design of low voltage installations.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W08] has basic knowledge in the field of intellectual property protection and patent law, knows and understands the basic processes of energy production and use, knows and understands the principles of modern heating and power systems	The student knows the systems and systems of protection against electric shocks and the phenomena occurring during normal and emergency operation of electrical installations.	[SW2] Assessment of knowledge contained in presentation
[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	The student is able to select the elements of the electrical installation system.	[SK5] Assessment of ability to solve problems that arise in practice
[K6_W03] knows the basics of automation and automatic regulation, knows the principles of the selection of electrical devices, drive systems and their control	The student is able to design electrical installations.	[SW1] Assessment of factual knowledge

Subject contents

Electrical LV installations - definitions, structures, requirements. Load and short-circuit currents influence on low voltage grids. Electric cables, fuses, switchgears, overvoltage protection - construction and characteristics. Electric installations design.

Prerequisites and co-requisites

Electric power systems

Assessment methods and criteria

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

Recommended reading	Basic literature	Bill Atkinson, Electrical Installations Designs. John Wiley & Sons, 2013 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.
	eResources addresses	Adresy na platformie eNauczanie: Instalacje elektryczne - Moodle ID: 26977 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=26977
Example issues/ example questions/ tasks being completed	Design part of low voltage grid including cables and protective devices, eg. fuses or switches.	
Work placement	Not applicable	