GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrical Installations, PG_00055886		
Field of study	Power Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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	Polish
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 -> 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	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

Acquainting with the construction and principles of selection of elements of electrical 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 circuits and systems protection against electric shocks and phenomena occurring in during normal and emergency operation electrical installations.	[SW3] Assessment of knowledge contained in written work and projects
[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 can select items electrical installation system.	[SW1] Assessment of factual knowledge
[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 can design electrical installation.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Course content – lecture
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	
Example issues/ example questions/ tasks being completed	Design a part of the installation in terms of cable selection and protection (fuse, circuit breaker).	
Practical activites within the subject	Not applicable	

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