

Subject card

Subject name and code	Electrical Installations, PG_00055886								
Field of study	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. i	ubośny						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	t	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 classes include plan				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 automation and automation, knows the selection of electric drive systems and		matic e principles of rical devices,	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 systen	าร							
Assessment methods	Subject passing criteria		Passing threshold			Percentage of the final grade			
and criteria	Colloquium		60.0%			100.0%			

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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						

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