



## Subject card

Subject name and code	Electrical equipment and installations, PG_00044394						
Field of study	Civil Engineering						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2021/2022		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study		
Mode of study	Part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		2.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Electrical Engineering of Transport -> Faculty of Electrical and Control Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jacek Skibicki				
	Teachers		dr inż. Izabela Prażuch				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	5.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie:						
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	The main purpose of the subject is to become familiar with the principles of using electrical installations and the basics of their design. Information on the construction of electrical installations, their types, protections, electric shock protection, etc. will be provided. In addition, students will learn the methods of energy transmission in the power system and how to produce it.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W01] has knowledge of selected branches of mathematics, physics and chemistry, which is a base of construction subjects, such as construction theory and material technology and id needed to formulate and solve typical problems of civil engineering		Ability to recognize elements of the electrical installation. Knowledge of types of energy consumption. Identifying sources of electricity.				
	[K6_W11] Knows selected software supporting the calculation and design of construction as well as construction management		Ability to select overcurrent protections. The ability to choose the cross section of the electrical installation cable in accordance with applicable regulations.				
Subject contents	The concept of electrical installation. Construction of domestic and industrial installations. Electricity receivers. Overcurrent protection. Electric shock protection. Electrical installation in industry. Electricity transmission, overhead and cable lines. Electricity generation, conventional, nuclear, hydro, wind, solar and micro power plants.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Lecture final test		60.0%		65.0%		
	Colloquium on exercises		50.0%		35.0%		

Recommended reading	Basic literature	Musiak E.: Instalacje i urządzenia elektroenergetyczne. Warszawa. WSiP.  Wiatr J., Orzechowski M.: Poradnik projektanta elektryka. Warszawa. Medium.
	Supplementary literature	Niestępski S, Parol M., Pasternakiewicz J., Wiśniewski T.: Instalacje elektryczne, budowa, projektowanie i eksploatacja. Warszawa OWPW.  Lichnowski J.: Urządzenia elektryczne na placu budowy. Warszawa. Arkady.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Selecting the cross section of electrical wiring. Selection of short-circuit protection.	
Work placement	Not applicable	