



Subject card

Subject name and code	Electric Lighting, PG_00042185						
Field of study	Power Engineering, Power Engineering, Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group			Optional subject group 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	3	Language of instruction			Polish		
Semester of study	6	ECTS credits			2.0		
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. Stanisław Czapp					
	Teachers	dr inż. Kornel Borowski prof. dr hab. inż. Stanisław Czapp					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	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	3.0		17.0		50
Subject objectives	To achieve basic knowledge and skills in designing of electrical lighting.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U05	Student performs calculation of lighting illuminance, also with the use of specialist software. Analyses costs of using installations with various types of electrical lighting sources.			[SU4] Assessment of ability to use methods and tools		
	K6_W05	Student specifies types of electrical lighting sources and describes their construction. Specifies basic photometric quantities.			[SW1] Assessment of factual knowledge		
Subject contents	Electric lighting. Light and vision. Photometric quantities, units and concepts. Colour qualities, colour temperature and colour rendering index. Types of lamps and luminaires. Construction and operation, properties. Distortion of voltage and current. Lighting design technology. Calculations of illumination. Selection of lamps and luminaires. Economic factors. Maintenance costs.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Written exam	50.0%			100.0%		
Recommended reading	Basic literature	1. Markiewicz H.: Instalacje elektryczne. PWN, Warszawa 2018. 2. Musiał E.: Instalacje i urządzenia elektroenergetyczne. WSiP, Warszawa 2008. 3. Żagan W.: Podstawy techniki świetlnej. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2005.					

	Supplementary literature	1. Żagan W.: Iluminacja obiektów. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2003.
	eResources addresses	Adresy na platformie eNauczenie: Oświetlenie elektryczne [2022/23] - Moodle ID: 28625 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=28625
Example issues/ example questions/ tasks being completed	Perform concept of indoor lighting using DIALux software.	
Work placement	Not applicable	