



## Subject card

Subject name and code	Electric Lighting, PG_00055962						
Field of study	Power Engineering						
Date of commencement of studies	October 2026	Academic year of realisation of subject				2028/2029	
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 -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Stanisław Czapp					
	Teachers						
Lesson types	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		2.0		18.0	50
Subject objectives	To achieve basic knowledge and skills in designing of electrical lighting.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_W03] knows the basics of automation and automatic regulation, knows the principles of the selection of electrical devices, drive systems and their control		Student specifies types of electrical lighting sources and describes their construction. Specifies basic photometric quantities.			[SW1] Assessment of factual knowledge	
	[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		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.			[SW3] Assessment of knowledge contained in written work and projects	
Subject contents	Course content – lecture 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	<p>1. Markiewicz H.: Instalacje elektryczne. PWN, Warszawa 2018.</p> <p>2. Musiał E.: Instalacje i urządzenia elektroenergetyczne. WSiP, Warszawa 2008.</p> <p>3. Żagan W.: Podstawy techniki świetlnej. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2005.</p>
	Supplementary literature	1. Żagan W.: Iluminacja obiektów. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2003.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Perform concept of indoor lighting using DIALux software.	
Practical activities within the subject	Not applicable	

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