GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electric Lighting, PG_00055962		
Field of study	Power Engineering		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
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		

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	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

Electric lighting. Light and vision. Photometric quantities, units and concepts. Colour qualities, colour temperature and colour rendering index. Types of lamps and luminaries. 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 eNauczanie:
Example issues/ example questions/ tasks being completed	Perform concept of indoor lighting using DIALux software.	
Work placement	Not applicable	