

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Fundamentals of lighting engineering		Code 1010321261010320832
Field of study Electrical Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty Light Engineering	Subject offered in: polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 2 Classes: - Laboratory: 1 Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences		ECTS distribution (number and %) 4 100%
Responsible for subject / lecturer: Małgorzata Zalesińska PhD email: Malgorzata.Zalesinska@put.poznan.pl tel. 61 6652398 Electrical Engineering Piotrowo 3A Street, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Knowledge of the basics of lighting engineering: the calculation and the measurement of light parameters, lighting equipment.
2	Skills	The ability to use knowledge in lighting engineering to carry out computations, measurement and evaluation of lighting parameters. Ability to effectively self-education in a field related to the chosen field of study.
3	Social competencies	Is aware of the need to broaden their competence, willingness to work together as a team.
Assumptions and objectives of the course: Grounding knowledge of the physiology of vision, and the relationship between the basic lighting parameters.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. Describe the process of vision. List and describe the functions of the eye. Characterize the photometric properties of materials. Indicate the relationship between the parameters of light. - [K_W05 ++, K_W14 +, K_W15 +++]		
Skills: 1. Assess the impact of lighting on the quality parameters of view. Analyze the results. - [K_U02 +, K_U14 +++]		
Social competencies: 1. Able to share and coordinate the work between team members. - [K_K03 +]		
Assessment methods of study outcomes		
Lecture: assess the knowledge and skills listed on the written exam Laboratory exercises: assess the knowledge and skills associated with the implementation of the tasks your practice, the assessment report performed exercise. Get extra points for the activity in the classroom, especially for the following: ability to work within a team performing a task specific practice in the laboratory; developed aesthetic diligence reports and tasks, the self-study.		

Course description		
The basic relationship between the photometric parameters, the spatial distributions of the photometric parameters. Vision system - structure and basic operations of the eye, visual way, the types of visual sensations. Photometric properties of materials. Glare in lighting.		
Basic bibliography:		
1. Bąk J., Pabiańczyk W.: Podstawy techniki świetlnej. Wyd. Pol. Łódzkiej, Łódź 1994.		
2. Żagan W.: Podstawy techniki świetlnej. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2005		
3. Laboratorium z techniki świetlnej. Praca zbiorowa. Wyd. Pol. Pozn. nr 1792, Poznań 1989.		
4. Lighting Handbook, Reference & Application. IES of North America, New York 2010		
Additional bibliography:		
1. Hauser J.: Elektrotechnika ? Podstawy elektrotermii i techniki świetlnej, Wyd. PP, Poznań, 2006		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation in lecture classes	30	
2. Participation in laboratory activities	15	
3. Participation in consultation	20	
4. Homework	20	
5. Participation for an exam	15	
6. Exam	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	102	4
Contact hours	67	2
Practical activities	35	1