

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Fundamentals of lighting engineering</b>		Code <b>1010321361010320832</b>
Field of study <b>Electrical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>Lighting Engineering</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>30</b> Classes: <b>-</b> Laboratory: <b>15</b> Project/seminars: <b>-</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>3 100%</b> <b>3 100%</b>
<b>Responsible for subject / lecturer:</b>  Małgorzata Zalesińska Ph.D. email: Malgorzata.Zalesinska@put.poznan.pl tel. 61 6652398 Faculty of Electrical Engineering ul. Piotrowo 3A 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Knowledge of the basics of lighting engineering: the calculation and the measurement of light parameters, lighting equipment.
2	<b>Skills</b>	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	<b>Social competencies</b>	Is aware of the need to broaden their competence, willingness to work together as a team.
<b>Assumptions and objectives of the course:</b> Grounding knowledge of the physiology of vision, and the relationship between the basic lighting parameters.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 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 +++]]		
<b>Skills:</b> 1. Assess the impact of lighting on the quality parameters of view. Analyze the results. - [[K_U02 +++, K_U14 +++]]		
<b>Social competencies:</b> 1. Able to share and coordinate the work between team members. - [[K_K03 +]]		
<b>Assessment methods of study outcomes</b>		

<p>Lecture:          assess the knowledge and skills listed on the written exam</p> <p>Laboratory exercises:          assess the knowledge and skills associated with the implementation of the tasks your practice,          the assessment report performed exercise.</p> <p>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.</p>		
<b>Course description</b>		
<p>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.</p>		
<p><b>Basic bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Bąk J., Pabiańczyk W.: Podstawy techniki świetlnej. Wyd. Pol. Łódzkiej, Łódź 1994.</li> <li>2. Żagan W.: Podstawy techniki świetlnej. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2005</li> <li>3. . Laboratorium z techniki świetlnej. Praca zbiorowa. Wyd. Pol. Pozn. nr 1792, Poznań 1989.</li> <li>4. Lighting Handbook, Reference &amp; Application. IES of Nofth America, New York 2010</li> </ol>		
<p><b>Additional bibliography:</b></p> <ol style="list-style-type: none"> <li>1. Hauser J.: Elektrotechnika: Podstawy elektrotermii i techniki świetlnej, Wyd. PP, Poznań, 2006</li> </ol>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Participation in lecture classes	30	
2. Participation in laboratory activities	15	
3. Participation in consultation	10	
4. Homework	20	
5. Participation for an exam	15	
6. . Exam	2	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	92	3
Contact hours	37	2
Practical activities	35	1