

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Diploma seminar</b>		Code <b>1010325341010320081</b>
Field of study <b>Electrical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 4</b>
Elective path/specialty <b>Lighting Engineering</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>Second-cycle studies</b>	Form of study (full-time, part-time) <b>part-time</b>	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: <b>18</b>		No. of credits <b>13</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>13 100%</b> <b>13 100%</b>
<b>Responsible for subject / lecturer:</b>  dr inż. Małgorzata Zalesińska email: malgorzata.zalesinska@put.poznan.pl tel. 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 technology: the calculation and measurement of basic lighting, lighting equipment, general requirements for lighting design. Basic knowledge of computer science. Basic knowledge of physics, electrical engineering, thermometry and termokinetics
2	<b>Skills</b>	The ability to use knowledge in lighting technology 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. Verbal communication .
<b>Assumptions and objectives of the course:</b> Preparation and execution of future self-thesis		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b>		
1. Use knowledge of lighting techniques mainly in the selection of lighting systems, evaluating technical feasibility and operational - [K_W15 +++]		
<b>Skills:</b>		
1. Analyze the psychophysiological and technical requirements for the selection and design of interior lighting and outdoor lighting - [K_U23 ++]		
2. Develop documentation on lighting design and prepare presentation with a discussion of the results of this task - [K_U23 ++]		
<b>Social competencies:</b>		
1. Is aware of and understands the importance and impact of non-technical aspects of electrical engineering activities, including the impact of light and lighting on the environment and the consequent responsibility for decisions - [K_K01 ++]		
2. Able to work in a group. Able to share and coordinate the work between team members - [K_K03 ++]		
<b>Assessment methods of study outcomes</b>		

<p>Verification of progress in the development of the thesis topic on the basis of the presentation. Assessment of the knowledge and skills related to the execution of the assignment.</p> <p>Get extra points for the activity in the classroom, the organizational skills, ability to work within a team developed aesthetic care tasks.</p>		
<b>Course description</b>		
Content directly related to the topic of the paper. Formal and substantive aspects of the preparation of the thesis.		
<b>Basic bibliography:</b>		
<ol style="list-style-type: none"> <li>1. Bąk J., Pabiańczyk W.: Podstawy techniki świetlnej. Wyd. Pol. Łódzkiej, Łódź 1994.</li> <li>2. Technika Świetlna. Poradnik. PWT, Warszawa 1960.</li> <li>3. Laboratorium z techniki świetlnej. Praca zbiorowa. Wyd. Pol. Pozn. nr 1792, Poznań 1989</li> <li>4. Żagan W.: Podstawy techniki świetlnej. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2005</li> <li>5. Hauser J.: Elektrotechnika ? Podstawy elektrotermii i techniki świetlnej, Wyd. PP, Poznań, 2006</li> <li>6. Dybczyński Wł.: Miernictwo promieniowania optycznego. Wyd. Pol. Białostockiej, Białystok 1996</li> <li>7. Wiśniewski A.: Elektryczne źródła światła. Oficyna Wydawnicza Politechniki Warszawskiej. Wydanie I , 2010</li> <li>8. Helbig E: Podstawy fotometrii. WNT, Warszawa 1975.</li> <li>9. Bunting F., Fraser B., Murphy C.: Profesjonalne zarządzanie barwą, wydanie II. Helion 2006,</li> <li>10. Hering M.: Termokinetyka dla inżynierów. WNT, Warszawa 1980</li> </ol>		
<b>Additional bibliography:</b>		
<ol style="list-style-type: none"> <li>1. Technika Świetlna ?09. Poradnik ? Informator. Wyd. PKOś, Warszawa 2009</li> <li>2. Lighting Handbook, Reference ;Application. I ES of Nofth America, New York 2010</li> <li>3. Normy przedmiotowe</li> </ol>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. participation in seminar classes	18	
2. participate in the consultations on the seminar	40	
3. preparing material for the thesis	42	
4. develop substantive thesis	100	
5. develop a formal thesis	115	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	315	13
Contact hours	95	4
Practical activities	177	3