

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Diploma seminar		Code 1010325341010320081
Field of study Electrical Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 4
Elective path/specialty Lighting Engineering	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: 18		No. of credits 13
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 Technical sciences		ECTS distribution (number and %) 13 100% 13 100%
Responsible for subject / lecturer: dr inż. Małgorzata Zalesińska email: malgorzata.zalesinska@put.poznan.pl tel. 6652398 Faculty of Electrical Engineering ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	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	Skills	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	Social competencies	Is aware of the need to broaden their competence, willingness to work together as a team. Verbal communication .
Assumptions and objectives of the course: Preparation and execution of future self-thesis		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Use knowledge of lighting techniques mainly in the selection of lighting systems, evaluating technical feasibility and operational - [K_W15 +++]		
Skills:		
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 ++]		
Social competencies:		
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 ++]		
Assessment methods of study outcomes		

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