

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject <b>Computer aided design</b>		Code <b>1010322331010322818</b>
Field of study <b>Electrical Engineering</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 3</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>full-time</b>	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: <b>15</b>		No. of credits <b>1</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>1 100%</b> <b>1 100%</b>
<b>Responsible for subject / lecturer:</b> dr inż. Krzysztof Wandachowicz email: Krzysztof.Wandachowicz@put.poznan.pl tel. 61 6652585 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 and computer science. Knowledge of basic tools used in CAD programs to create objects.
2	<b>Skills</b>	The ability to draw and create objects in CAD programs. Ability to choose lighting equipment to create illumination of buildings.
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> Knowledge of environment, basic tools and possibilities of 3ds MAX program. Ability to create computer visualizations of illumination.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 1. Knowledge of basic functions and possibilities of 3ds MAX program. Knowledge of lighting equipment used to illuminate buildings. - [KW_13++, KW_18 ++]		
<b>Skills:</b> 1. Can create computer visualization of building - [KU_03++, KU_12]		
<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. Can work creatively. - [KK_01++]		
<b>Assessment methods of study outcomes</b>		
Assessment of the knowledge and skills associated with the implementation of the project.		
<b>Course description</b>		
Understanding the issues related to computer visualizations of building's illumination. Creation of visualization illumination of the buildings. Assessment of luminance distribution on the facade of the building.		

**Basic bibliography:**

1. Żagan W.: Iluminacja obiektów. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2003.
2. Kelly L. Murdock 3ds MAX 2012 Helion 2012

**Additional bibliography:**

1. Lighting Handbook, Reference & Application. IES of North America, New York 2010

**Result of average student's workload**

Activity		Time (working hours)
1. Participation in project activities.		15
2. Participation in consultations.		5
3. Preparation of the concept and development of computer visualization.		15
Student's workload		
Source of workload	hours	ECTS
Total workload	35	1
Contact hours	20	1
Practical activities	35	1