STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Lighting engineering		**1010321361010321119**
Field of study: **Electrical Engineering**	Profile of study (general academic, practical): **general academic**	Year /Semester: **3 / 6**
Elective path/specialty: **Lighting 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: **15** Classes: **-** Laboratory: **-** Project/seminars: **-**		No. of credits: **1**
Status of the course in the study program (Basic, major, other): **other**	(university-wide, from another field): **university-wide**	
Education areas and fields of science and art: **technical sciences** **Technical sciences**		ECTS distribution (number and %): **1 100%** **1 100%**

Responsible for subject / lecturer:

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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.
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

Assumptions and objectives of the course:

-Understanding the basic requirements of lighting and lighting design methods.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Able to characterize the basic principles of lighting techniques in the selection of lighting systems, evaluating technical feasibility and operation - [[K_W15 +++ K_W09 ++]

Skills:

1. He can use the knowledge of lighting techniques in the selection of lighting systems, evaluating technical feasibility and operation. - [K_U23 ++ K_U14 ++]

Social competencies:

1. Understands the need to know the capabilities and continuous training. Is aware of the importance of activity in electrical engineering - [K_K03 +++]

Assessment methods of study outcomes

-Assess the knowledge listed on the written test.

-extra points for the activity.

Course description

-Quantitative and qualitative parameters of lighting.
Visual comfort and visual effectiveness.
The choice of lighting systems, the selection of sources and luminaires.
Changes during the lighting parameters and operation of the lighting.
Basic methods of lighting design.
Today's regulatory recommendations and requirements.

Basic bibliography:

1. Technika Świetlna 09. Poradnik Informator. Wyd. PKOś, Warszawa 2009
2. Wiśniewski A.: Elektryczne źródła światła. Oficyna Wydawnicza Politechniki Warszawskiej. Wydanie I (2010)
3. Philips, Lighting Manual. Wyd.V 1993 r
4. Lighting Standards

Additional bibliography:

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

Result of average student's workload

Activity	Time (working hours)
1. participation in lectures	15
2. participation in the consultation	10
3. preparation to the test	6
4. participation in the exam	3

Student's workload

Source of workload	hours	ECTS
Total workload	34	1
Contact hours	28	1
Practical activities	0	0