STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Fundamentals of lighting engineering**		Code **1010321361010320832**
Field of study **Electrical Engineering**	Profile of study (general academic, practical) **(brak)**	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: **30** Classes: **-** Laboratory: **15** Project/seminars: **-**		No. of credits **3**
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 %) **3 100%** **3 100%**

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 engineering: the calculation and the measurement of light parameters, lighting equipment.
2	**Skills**	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	**Social competencies**	Is aware of the need to broaden their competence, willingness to work together as a team.

Assumptions and objectives of the course:

Grounding knowledge of the physiology of vision, and the relationship between the basic lighting poarameters.

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

Knowledge:

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 +++]]

Skills:

1. Assess the impact of lighting on the quality parameters of view. Analyze the results. - [[K_U02 +++, K_U14 +++]]

Social competencies:

1. Able to share and coordinate the work between team members. - [[K_K03 +]]

Assessment methods of study outcomes

Lecture:
assess the knowledge and skills listed on the written exam
Laboratory exercises:
assess the knowledge and skills associated with the implementation of the tasks your practice,
the assessment report performed exercise.
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.

Course description

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.

Basic bibliography:

1. Bąk J., Pabiańczyk W.: Podstawy techniki świetlnej. Wyd. Pol. Łódzkiej, Łódź 1994.
2. Żagan W.: Podstawy techniki świetlnej. Ofic. Wyd. Pol. Warszawskiej, Warszawa 2005
3. Laboratorium z techniki świetlnej. Praca zbiorowa. Wyd. Pol. Pozn. nr 1792, Poznań 1989.
4. Lighting Handbook, Reference &Application. IES of Nofth America, New York 2010

Additional bibliography:

1. Hauser J.: Elektrotechnika: Podstawy elektrotermii i techniki świetlnej, Wyd. PP, Poznań, 2006

Result of average student's workload

Activity	Time (working hours)
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

Student's workload

Source of workload	hours	ECTS
Total workload	92	3
Contact hours	37	2
Practical activities	35	1