COURSE DESCRIPTION CARD - SYLLABUS

Course name
Light in architecture and outdoor space [N2Eltech2-TŚ>ŚwAiPZ2]

Course

Field of study
Electrical Engineering

Year/Semester
2/3

Area of study (specialization)
Lighting Engineering

Profile of study
general academic

Level of study
second-cycle

Course offered in
polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
10

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

A student starting this course should have a basic knowledge of lighting engineering. Basic skills in measuring electrical and photometric quantities also in lighting design. The ability to effectively self - study in a field related to the chosen field of study.

Course objective

To provide students with a detailed knowledge of how to illuminate different workplaces and illumination of objects.

Course-related learning outcomes

Knowledge:
1. Has ordered and theoretically founded knowledge in the field of lighting design.
2. Has in-depth knowledge of lighting technology in the field of lighting various objects; knows the processes taking place during the operation of lighting devices.
3. Has extended knowledge of computer-aided design in lighting technology.

Skills:

1. Can perform lighting design project and analyze the obtained effects according to physiological, economic and aesthetic criteria.
2. Can design lighting for various objects.

Social competences:
1. Recognizes the importance of knowledge in solving cognitive and practical problems, and understands that knowledge and skills quickly become obsolete in lighting engineering and therefore require constant replenishment.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The skills acquired during the design exercises are verified on the basis of the lighting design of the facility indicated by the teacher and the discussion of the results obtained. Passing threshold: positive evaluation of the completed project.

Programme content

Analysis of technical, energy, economic and psychophysiological considerations determining the choice of lighting systems. Economic and energy efficiency of lighting systems. Evaluation of the illumination of selected architectural objects. Creating concept of illumination of an architectural object.

Teaching methods

Practical evaluation of illumination of selected objects in Poznań, presentations multimedia presentations, computer lighting programmes.

Bibliography

Basic:
1. Pracki P.: Projektowanie oświetlenia wnętrz, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2011.
2. Bąk J.: Technika oświetlania : wybrane zagadnienia oświetlania wnętrz Stowarzyszenie Elektryków Polskich. Centralny Ośrodek Szkolenia i Wydawnictw, Wraszawa 2014.
3. Żagan W. Iluminacja obiektów. Oficyna Wydawnicza Politechniki Warszawskiej (2003).
4. Żagan W., Krupiński R.: Teoria i praktyka iluminacji obiektów. Oficyna Wydawnicza Politechniki Warszawskiej (2016).

Additional:
1. Literature available on the website: www.licht.de
2. Teaching materials available on the website: http://lumen.iee.put.poznan.pl.
3. Lighting Handbook, Reference & Application. IES of North America, New York 2010.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	10	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	15	0,50