



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Electrical installations in buildings

Course

Field of study

Year/Semester

Electrical Engineering

2/3

Area of study (specialization)

Profile of study

Distribution Devices and Electrical Installations

general academic

Level of study

Course offered in

Second-cycle studies

Polish

Form of study

Requirements

full-time

elective

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

0

15

0

Tutorials

Projects/seminars

0

0

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

mgr inż. Krzysztof Dziarski

Faculty of Environmental Engineering and
Energy

Institute of Electric Power Engineering

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Prerequisites

Basic knowledge on the construction and operation of electrical equipment and installations as well as measuring apparatus and its use. Ability to obtain information from subject literature and other sources as well as critically analyze them. Understanding the need for creative action to promote and implement the effects of technical progress.

Course objective

Acquiring extended knowledge in the field of operation, construction and design of electrical building infrastructure, taking into account the integration of systems ensuring their proper cooperation in normal operating conditions and in disturbances.



Course-related learning outcomes

Knowledge

student has theoretical knowledge in the design of electrical equipment and systems, taking into account their impact on the environment. Student has extended knowledge of the construction and design of complex electrical systems in the field of electrical installation systems in buildings.

Skills

Student is able to take into account the utility and economic criteria in the design of components and installation systems. Student is able to design installation systems for specific applications.

Social competences

Understands the need for continuous education and the importance of knowledge for solving technical problems.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Laboratory classes:

- current check and rewarding knowledge necessary for the accomplishment of the problems in the area of laboratory tasks,
- evaluation of reports performed on laboratory classes,
- rewarding activities related to the implementation of laboratory classes.

Programme content

Laboratory classes:

Classes discussing the regulations of the laboratory, topics of laboratory classes and OHS training related to the operation of laboratory positions. To perform 6 two-hour laboratory classes in the field of lecture.

Teaching methods

Laboratory classes:

- object-oriented presentations supported by illustrated examples presented on the board,
- presentations of selected experiments,
- initiating teamwork.

Bibliography

Basic

1. Markiewicz H., Instalacje elektryczne, WNT, Warszawa, 2018.
2. Lejdy B., Instalacje elektryczne w obiektach budowlanych, WNT W-wa, wyd. 2, 2005.



3. Markiewicz H. , Bezpieczeństwo w elektroenergetyce, WNT, Warszawa, wyd. 2, 2002.
4. Rozporządzenie Ministra Gospodarki Przestrzennej i Budownictwa z 14 grudnia 1994 roku w sprawie warunków jakim powinny odpowiadać budynki i ich usytuowanie. Tekst jednolity.
5. PN-IEC 60364, Instalacje elektryczne w obiektach budowlanych.
6. Electrical installation. Design Guide. Calculation for Electricians and Designers. 3rd Edition. The Institution of Engineering and Technology.

Additional

1. Praca zbiorowa, Switchgear manual, ABB Schaltanlagen GmbH, Mannheim, Federal Republic of Germany, 11-th editions 2006.
2. Periodyki: Elektroinstalator, Elektroinfo.
3. Poradnik inżyniera elektryka, WNT.
4. Dombek, G.; Książkiewicz, A.; Janiszewski, J. Electrodynamic contact bounce induced by fault current in low-voltage relays. Energies, 2018, vol. 12, no. 20, pp. 3926-1-3926-13.
5. Catalogs
6. Internet publications.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for laboratory classes, preparation of reports) ¹	10	0,5

¹ delete or add other activities as appropriate