COURSE DESCRIPTION CARD - SYLLABUS

Course name
Transmission and distribution of electric energy

Course

Field of study
Electrical Enginnering
Area of study (specialization)
High Voltage Engineering
Level of study
Second-cycle studies
Form of study
full-time

Year/Semester
2/3
Profile of study
general academic
Course offered in
Polish
Requirements
elective

Number of hours

Lecture
30
Laboratory classes
0
Other (e.g. online)
0
Tutorials
Projects/seminars
0

Number of credit points

2

Lecturers

Responsible for the course/lecturer:
prof. dr hab. inż. Aleksandra Rakowska
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3A Piotrowo Str., 60-965 Poznan

Responsible for the course/lecturer:

Prerequisites

Knows and understands typical engineering technologies in the field of study studied and is familiar with the latest development trends in the field of study studied

Is able to use literature sources available in print and electronic versions, integrate acquired information, evaluate it and make their interpretation and draw conclusions as well as formulate and justify opinions, discuss about themJ

Is aware of the need to initiate actions in the interest of the public interest, understands the various aspects and effects of electrical engineer activities, including environmental impact, and the associated responsibility for making decisions, discuss them

Course objective

Acquaintance with technologies and methods related to the transmission and distribution of electricity to discuss about them

Course-related learning outcomes

Knowledge

Has knowledge of development trends, new achievements and dilemmas of modern engineering

Has in-depth knowledge of the construction and operation of the power system as well as issues related to the distribution and transmission of electricity

Skills

Is able to design components as well as complex electrical devices and systems, taking into account given non-technical (utility and economic) criteria, if necessary adapting existing or developing new methods, techniques and computer aided design tools

Social competences

Is aware of the need to develop professional achievements and compliance with the principles of professional ethics, fulfill social obligations, inspire and organize activities for the benefit of the social environment

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Assessment of knowledge and skills demonstrated at the written colloquium at the last lecture and assessment of activity in class - a question about the content of the previous lecture (rewarding activity)

Programme content

Overhead power transmission and distribution lines as well as cable and gas insulated lines (GIL). Power lines of alternating and direct current

Teaching methods

Lecture
- multimedia presentation, demonstration of samples of conductors, cables, accessories, etc.

Bibliography

Basic

1. Wasiak I., Elektroenergetyka w zarysie, Przesył i rozdział energii elektrycznej, Łódź 2010, dostęp – Internet
2. Hoły A., Wiatr J., Podstawy projektowania elektroenergetycznych linii napowietrznych, Dom Wydawniczy MEDIUM, 2014
3. Wiatr J., Orzechowski M., Lenartowicz R., Podstawy projektowania i budowy elektroenergetycznych linii kablowych, Dom Wydawniczy MEDIUM, 2009

4. Jakubowski J., Cichy A., Rakowska A., Wytyczne projektowania linii kablowych 110 kV, Wydawnictwo PTPiREE, Poznań, 2019

Additional

Catalogs and websites of domestic and global producers of overhead line components as well as medium and high voltage cable lines. The conference materials and technical brochures provided by the lecturer

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for tests) [1]	30	1,0

[1] delete or add other activities as appropriate