



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Transmission and distribution of electric energy [S2Eltech2-IWN>PIREE]

Course

Field of study

Electrical Engineering

Year/Semester

2/3

Area of study (specialization)

High Voltage Engineering

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

0

Number of credit points

2,00

Coordinators

prof. dr hab. inż. Aleksandra Rakowska
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Lecturers

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

Course topics

none

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 | 2,00 |
| Classes requiring direct contact with the teacher | 32 | 1,00 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 28 | 1,00 |