



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar [S1Eltech1>SD1]

### Course

Field of study

Electrical Engineering

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

### Number of credit points

3,00

### Coordinators

### Lecturers

### Prerequisites

Student which starting this subject should have basic knowledge, skills (including performing calculations and measurements of electrical and non-electrical quantities, writing simple computer programs, designing and building simple electrical systems in the field of electrical engineering) and competences (including verbal communication and teamwork) acquired in earlier years of study that enable the realization of an engineering diploma thesis.

### Course objective

The aim of the course is to explain the essence of an engineering diploma thesis, to present the issues proposed in the diploma theses in the field of electrical engineering, to choose the topic of the diploma thesis by students, and also to learn the principles of its editing and conducting literature recognition in the field of thesis.

### Course-related learning outcomes

Knowledge:

1. has knowledge of the latest solutions used in the electrical engineering in the context of the subject of the thesis
2. has knowledge of the basic techniques, methods and tools used in the implementation of engineering tasks in the field of thesis being implemented

3. has knowledge of the general principles of ethics, copyright and related rights in relation to the thesis being carried out
4. has knowledge about the method of preparing an engineering project in the energy field

#### Skills:

1. knows how to find useful literature sources (also in English) and make a critical assessment of their usefulness in the subject of the engineering work
2. knows how to correctly cite the relevant literature
3. knows how to prepare and, in a manner understandable to a wide audience, to present an oral presentation in the field of electrical engineering
4. knows how to use the acquired knowledge to creatively analyze and solve various engineering problems in the field of electrical engineering

#### Social competences:

Is aware of the responsibility for their own work, is open to exchange of views, accepts critical comments on the subject of own research

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge and skills acquired as part of the seminar classes are verified by:

- observation and assessment of class activity, especially during discussions on analyzed issues
- assessment of knowledge and skills needed to implement an individual topic of engineering work based on a written paper (each student prepares a paper of 10 pages)
- assessment of the content and presentation form of the overall topic of engineering work
- observation and assessment of student work regularity

### Programme content

Basic issues related to the preparation of an engineering thesis, preparation for scientific research, and presentation of the rules and elements of the thesis exam.

### Course topics

Characteristics of the engineering thesis. Discussion of proposed thesis topic areas. Discussion of the composition of the engineering thesis and editorial guidelines and recommendations (formatting of the document, graphic elements). Principles of preparing a general presentation on the topic of the thesis. Methods of literature search in modern databases and the principles of its citation. Discussion of the elements of scientific research methodology and the principles of implementation of research carried out for the purpose of an engineering thesis (within the framework of the class, students present one paper that is a conceptual solution to the problem of the thesis). Participation in scientific research conducted at the promoter's institute related to the electrical engineering major (using PP library resources - scientific journal databases Emerald Engineering, IEEE/IEE Electronic Library (IEL), ScienceDirect/Elsevier/ICM, Springer/ ScienceDirect/ICM - student groups prepare a written review of scientific literature related to the scientific topic assigned by the instructor). Fundamentals of copyright and related rights.

### Teaching methods

Multimedia presentation supplemented with comments and examples given on the board, analysis / discussion of various methods (including unconventional) solutions of exemplary problems and specific problems indicated in the topics of theses of individual students, taking into account various aspects of the problems solved: technical, economic, ecological, legal and social.1. Detailed guidelines for editing the diploma thesis developed at the Promoter Institute

2. Specialist literature about work topics

### Bibliography

Basic:

1. Detailed guidelines for editing the diploma thesis developed at the Promoter Institute
2. Specialist literature about work topics

Additional:

1. Exemplary engineering diploma theses

### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
Classes requiring direct contact with the teacher	40	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	35	1,00