



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

### Course

Field of study

Power Engineering

Area of study (specialization)

Level of study

Second-cycle studies

Form of study

part-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

10

### Number of credit points

5

### Lecturers

Responsible for the course/lecturer:

dr hab. inż. Andrzej Tomczewski

Responsible for the course/lecturer:

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Wydział Automatyki, Robotyki i Elektrotechniki

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### Prerequisites

Student starting this subject should have knowledge, skills (including performing calculations and measurements of electrical and non-electrical quantities, writing computer programs, designing and building systems in the field of power engineering) and competences (including verbal communication and teamwork) acquired in previous years studies, including first-cycle, necessary to carry out research in the field of thesis.

### Course objective

Understanding the proposed issues of master's thesis and the pre-selection of the topic with justification. Understanding the principles of composition and editing of the master's thesis and



conducting research (laboratory and simulation) in the area related to the topic of thesis. Initial literature recognition and participation in scientific research in the field of power engineering.

### Course-related learning outcomes

#### Knowledge

1. has knowledge of the latest solutions used in the energy sector in the context of the subject of the thesis
2. has knowledge of the methodology of writing master's theses
3. has a basic knowledge of the principles of conducting and describing scientific research

#### Skills

1. knows how to use the databases of scientific journals, including English-language literature
2. knows how to make a critical review of scientific literature on an indicated specific topic related to the field of study
3. is able to make scientific theses, determine directions of further learning and organize the process of self-education

#### Social competences

Understands the need to comply with the principles of professional ethics and fulfill social obligations

Is aware of the need to develop professional achievements

### 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 the analysis of methods for solving research topics
- assessment of knowledge and skills needed to conduct scientific research in the field of written review of scientific literature
- assessment of the content and form of the presentation regarding the concept of solving the research problem undertaken as part of the thesis
- observation and assessment of student work regularity.

### Programme content

Characteristics of the thesis, including differences in relation to the engineering thesis. Discussion of the proposed thematic areas of theses. Discussion of the composition of the thesis, editorial guidelines and recommendations (document formatting, graphic elements). Rules for preparing a general presentation on the topic of work. Methods of searching for literature in modern databases and rules for citing it. Discussion abouts elements of scientific research methodology and rules for the implementation of



research carried out for the purposes of the thesis (as part of the course, students present one paper that is a concept of solving the problems of the thesis). Participation in scientific research conducted at the promoter institute related to the field of power engineering (using PP library resources - the database of scientific journals Emerald Engineering, IEEE / IEE Electronic Library (IEL), ScienceDirect / Elsevier / ICM, Springer / ScienceDirect / ICM - student groups are preparing written review of the scientific literature related to the scientific topic asked by the teacher). Fundamentals of Copyright and related rights.

### Teaching methods

Multimedia presentation supplemented with comments and examples given on the board, analysis and discussion of various methods (including unconventional) solutions to research issues, including 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.

### 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	125	5,0
Classes requiring direct contact with the teacher	68	3,0
Student's own work (literature studies, preparation of the final paper, preparation of thesis presentation) <sup>1</sup>	57	2,0

<sup>1</sup> delete or add other activities as appropriate