COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar

Course

Field of study

Power Engineering

Year/Semester

2/4

Area of study (specialization)

Nuclear Energy

Profile of study

general academic

Level of study

Second-cycle studies

Course offered in

polish

Form of study

part-time

Requirements

compulsory

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

20

Number of credit points

15

Lecturers

Responsible for the course/lecturer:

dr hab. inż. Krzysztof Walczak

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tel.: 61 6652797

Wydział Inżynierii Środowiska i Energetyki

ul. Piotrowo 3A, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

He has structured and theoretically founded knowledge in the field of basic technologies of primary energy conversion into work, heat and electricity, knows the construction and operation of power machines.

Can acquire information from literature, databases and other sources; can integrate the obtained information, make their interpretation, as well as apply and formulate and justify opinions.

Understands the need and knows the possibilities of continuous training, raising professional, personal and social competences (eg by second and third cycle studies, postgraduate studies, courses); and is ready to critically assess his knowledge, recognizes its importance in solving cognitive and practical problems.

Course objective

Developing the skills of discussing, arguing, formulating judgments in a given area of science.

Developing skills of effective presentation and communication in the field of research topics being developed

Getting to know the development of power devices and thermal circuits, getting acquainted with the balance methods of energy systems

Course-related learning outcomes

Knowledge

Has structured and theoretically founded knowledge in the field of information management, operational control structures, telemechanics systems and data acquisition; knows the rules of protection of industrial property and copyright.

Has advanced general knowledge in the field of development trends in the scope of work of generating sources in the power system in this distributed generation.

Skills

Can determine the directions of further learning and implement the process of self-education and guide others in this area.

Can develop detailed documentation of the results of the experiment, project or research task; is able to prepare a study including a discussion of these results, taking into account non-technical aspects using a systemic approach.

Social competences

Is ready to critically evaluate and analyze issues and recognizes the importance of knowledge in solving cognitive and practical problems in the field of energy

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

In the initial part of the seminar, issues are first discussed on the blackboard and then implemented in groups - practical exercises. Skills acquired as part of the project classes are verified on the basis of short presentations during the semester, questions from the teacher and on the basis of the final project developed. Passing threshold: 50% of points.

Programme content

As part of the diploma seminar, it is planned to prepare a presentation and a written report in the form of an article using the possibilities of computer editing programs. Presentations will concern selected issues in the area of thermal energy covered by studies. The presentation will concern the diploma thesis being prepared. Students prepare a presentation using appropriate programs, which will contain the following elements:

- basic determinants of the problem discussed, based on literature,

- identification of the problem,

- presentation of the engineering discussion of the problem, and, if possible, a variant approach to its presentation,

- conclusions and own thoughts.

Teaching methods

1. Classes seminars: discussing the theory and assumptions for classes on the board and performing tasks given by the teacher, independent work on the project task.

Project presentations are presented on the forum of the whole group.

Bibliography

Basic

The literature will be defined individually for each of the proposed topics of presentation in accordance with the areas recorded in the content of the subject

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	375	15,0
Classes requiring direct contact with the teacher	125	5,0
Student's own work: literature studies, preparation for project classes; preparation project [1]	250	10,0

[1] delete or add other activities as appropriate