COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma seminar [N2EPiO1-ECiO>SD]

Course

Field of study
Industrial and Renewable Energy Systems

Year/Semester
2/3

Area of study (specialization)
Thermal and Renewable Energy

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
0

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
9

Number of credit points

4,00

Coordinators

prof. dr hab. inż. Andrzej Frąckowiak
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Lecturers

Prerequisites

Knowledge: Development and management of industrial products and service systems in the life cycle perspective, including environmental, economic and social aspects. Skills: Effective acquisition of the information from various sources including datasheets, literature and webpages. Social competencies: Realized restrictions of knowledge and skills; understanding the need for lifelong education, consciousness and understanding of the extra technical aspects and results of the engineers activity.

Course objective

To acquaint students with the schedule of writing of master thesis and its proper drafting.

Course-related learning outcomes

Knowledge:
1. knows the basic processes occurring in the life cycle of devices, facilities and technical systems used energy industry, needed to write the thesis.
2. knows the principles of industrial property protection (including intellectual property) as well as economic, legal and ethical conditions of activities related to energy production.
3. has in-depth knowledge of methods of linear measurements, temperature, pressure, humidity, fluid

streams, speed, automation systems and modern digital interfaces used in control systems.

Skills:
1. is able to use his knowledge and skills to adapt existing or create new methods and tools that are necessary to prepare the thesis.
2. is able to formulate and test hypotheses related to the preparation of the diploma thesis.
3. is able to formulate and test research hypotheses related to the topic of the thesis.

Social competences:
1. is ready to critically assess knowledge and received content, related to writing the thesis.
2. is ready to recognize the importance of knowledge in solving cognitive and practical problems and to seek expert opinions in the event of difficulties in solving the problem yourself .
3. is ready to perform responsible professional roles, taking into account changing social needs, including: developing the profession"s achievements, maintaining the ethos of the profession, compliance with and development of the principles of professional ethics and actions to comply with these principles.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Evaluation on the basis of information about the prepared stages of the Master thesis

Programme content

Master thesis writing process (the genesis of topic, data sources, and preparatory activities), development of master thesis (basic principles, editing principles, and ethical problem), the role of the promoter in the process of creating the work, principles for the evaluation of master thesis.

Course topics

1. Master thesis writing process (the genesis of topic, data sources, and preparatory activities),
2. development of master thesis (basic principles, editing principles, and ethical problem),
3. the role of the promoter in the process of creating the work, principles for the evaluation of master thesis.

Teaching methods

Multimedia presentation

Bibliography

Basic
1. Majchrzak J., Mendel T., Metodyka pisania prac magisterskich i dyplomowych. Wydawnictwo Akademii Ekonomicznej w Poznaniu, Poznań 2005.
2. Pułło A., Prace magisterskie i licencjackie. PWN, Warszawa 2000.
3. Szkutnik Z., Metodyka pisania pracy dyplomowej. Wyd. Poznańskie, 2005
Additional
1. Leszek W. Nieempiryczne procedury badawcze w naukach przyrodniczych i technicznych. Wydawnictwo ITE, Radom 1999.

Breakdown of average student's workload

	Hours	ECTS
Total workload	120	4,00
Classes requiring direct contact with the teacher	20	0,70
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	100	3,30