Diploma Seminar

Basic information

Field of study Renewable Energy and Energy Management **Speciality** All **Department** Faculty of Energy and Fuels **Study level** Second-cycle (engineer) programme **Study form** Full-time studies **Education profile** General academic	**Didactic cycle** 2021/2022 **Subject code** EiPEOZS.IIi4S.113e607328fe3b1feac36d5c37a13bcd.21 **Lecture languages** English **Mandatory** Obligatory **Block** Major Modules **Subject related to scientific research** No

Subject coordinator	Artur Wyrwa
Lecturer	Artur Wyrwa

Period Semester 3	**Examination** Assessment **Activities and hours** Seminars: 30	**Number of ECTS points** 10.0

Subject learning outcomes

Code	Outcomes in terms of	Directional learning outcomes	Examination methods
Skills – Student can:			
U1	prepare presentation on the MSc thesis and discuss its methodology and results.	EOZ2A_U03, EOZ2A_U05, EOZ2A_U06, EOZ2A_U07, EOZ2A_U09	Presentation, Oral answer

U2	prepare presentation on his MSc thesis with the following elements: content methodology research or experiments results conclusions.	EOZ2A_U01, EOZ2A_U02, EOZ2A_U03, EOZ2A_U05, EOZ2A_U06, EOZ2A_U07	Presentation, Oral answer
U3	prepare reports from conducted research or experiments.	EOZ2A_U03, EOZ2A_U05, EOZ2A_U06, EOZ2A_U07	Presentation, Oral answer
Social competences – Student is ready to:			
K1	prove that is a reliable person to contribute to the development of the economy and the society.	EOZ2A_K01, EOZ2A_K02	Activity during classes, Oral answer

Programme content that ensure achieving learning outcomes for the module

During the seminar, students present the graduation status of their master's thesis. They discuss with each other and with the Professor conducting the classes, who is not a job supervisor.

Calculation of ECTS points

Activity form	**Average amount of hours* needed to complete each activity form**
Seminars	30
Preparation of project, presentation, essay, report	220
Student workload	**Hours** 250
Workload involving teacher	**Hours** 30

* hour means 45 minutes

Study content

No.	**Course content**	**Subject learning outcomes**	**Activities**
1.	MSC thesis seminar: Presentation and discussion of the MSc thesis.	U1, U2, U3, K1	Seminars

Course advanced

Teaching methods:

Multimedia presentation, Diploma seminar

Activities	**Examination methods**	**Credit conditions**
Seminar classes	Activity during classes, Presentation, Oral answer	

Method of calculating the final grade

Mark based on evaluation of the presentation and the activity in discussions.

Literature

Obligatory

1. Any book on preparing master thesis.

Directional learning outcomes

Code	Content
EOZ2A_K01	Is aware of the need to critically assess the information received and knowledge acquired, recognizes the importance of knowledge in addressing cognitive and practical problems, in particular in the field of energy.
EOZ2A_K02	Is aware of responsibility for the tasks performed, is willing to think and act in an entrepreneurial and professional manner, is aware of compliance with the principles of professional ethics and the cultivation and dissemination of appropriate practices, as well as initiation of actions for the benefit of the social community and public interest, including the rational use of energy and provision of the national energy security.
EOZ2A_U01	Is able to use knowledge of basic sciences, thermodynamics, material science and related topics to develop physical and mathematical models of analyzed technical issues in order to solve them using advanced IT tools, crytically analyze and evaluate the solution, verify it experimentally and present information.
EOZ2A_U02	Is able to use knowledge to plan and conduct research on energy processes using various methods, including experimental ones, is able to use available software and create own computer codes for the purpose of analysis of the solution, is able to perform a critical analysis of results and prepare a synthetic compilation presenting the results of conducted research in terms of economic and environmental analysis.
EOZ2A_U03	Is able to formulate hypotheses related to the functioning and effectiveness of renewable energy systems, perform verification analysis, apply optimization methods and solve practical technical and economic problems.
EOZ2A_U05	Is able to carry out critical, from the technical, economic, environmental and social point of view - analysis of the functioning of any element of the energy system and develop a project of improvement in the construction and operation of renewable and classic energy equipment and installations.
EOZ2A_U06	Is able to develop a complete project involving machinery, equipment and energy installations, including also relevant automation, control, monitoring and process visualisation systems using a wide range of modern technical, IT and data transmission tools.
EOZ2A_U07	Is able also to assess the impact of energy systems on the global functioning of civilization, including society, natural environment, economic and social development and related issues, is able to present own point of view to a wide range of audiences, also using a foreign language and presentations illustrating advanced technical and non-technical problems in the field of energy.
EOZ2A_U09	Is able to plan self-learning using various forms of information acquisition, including professional publications (also in a foreign language) and to conduct self-learning by criticall analysis of the information acquired.