COURSE DESCRIPTION CARD - SYLLABUS

Course name
Economics in power engineering [S2ZE1E>EwE]

Course

Field of study
Green Energy

Year/Semester
1/2

Area of study (specialization)
–

Profile of study
general academic

Level of study
second-cycle

Course offered in
english

Form of study
full-time

Requirements
elective

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Student has knowledge in the scope of enterprise and knows the basic principles of economy. Student knows how to determine relations between market enterprises. He can to determine profitabilityof power enterprises on market. Student accept readiness to start collective work and to take a decision

Course objective

To get know of definitions and the basic kinds of power enterprises, understanding of their action and to gain skills and competencesallowing to estimate situation of power enterprises in country with reference to worldtrend taking into account energy consumptionof production processes. To learn cost methods of evaluation of economic profitability of power investments.

Course-related learning outcomes

Knowledge:
1. Student knows fundamental notions in the scope of power economy. Student has basic knowledge about the role and importance of power engineering, about energy resources and the way of their utilization taking into account the production structure of National Energy System. Student knows the role and place of power enterprises on market .

2. Student has the basic knowledge in the scope of power enterprise functioning and knows the principles of economy and of managingof enterprise on Market. Student knows accountmethods of economic profitabilityassessmentof power enterprises.

Skills:
1. Student is able to estimate the demand for electricity
2. Student is able to balance the various energy facilities in accordance with the principles of rational use of energy
3. Has the ability to solve practical problems in the energy sector

Social competences:
1. Student has the consciousness of importance of economic aspects in power enterprise managing on market.
2. Student has the consciousness about responsibility for taken decisions concerning economic profitability of power enterprises. Student is ready to think and act in an entrepreneurial way.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture
- evaluation of knowledge and competitions by written test permanent evaluation during every classes(rewarding for activity and particularly proposing to discuss new aspects of problem)
Tutorials
- assessment of knowledge and skills demonstrated at the colloquium on methods for assessing the profitability of energy investments
- continuous assessment during each class (rewarding activity and quality of perception)

Programme content

Lecture
Definition and types of power enterprises on the market. Their place and importance for National Energy System. Division of energy sources into renewable and non-renewable sources and division of power enterprises. Costing methods of assessing economic profitability of power enterprisesand, their devision of static and dynamic methods (discount). Discount account. Criteria for annual costs and profit. Issues related to investment risk assessment in power engineering for cost method.
Tutorials
Solving tasks from cost methods for assessing the economic viability of energy enterprises, broken down into static and dynamic methods, i.e. discount ones. Discount invoice. Annual cost criterion. Solving tasks using static and dynamic profit methods. Issues regarding investment risk assessment in the energy sector.

Teaching methods

Lecture with multimedia presentation
Tutorials: Solving tasks

Bibliography

Basic:
1. Sierpińska M., Jachna T., Ocena przedsiębiorstwa według standardów światowych, Wydawnictwo Naukowe PWN, Warszawa 2007.
2. Pąsik M., Truszkowska-Kurstak M. , Analiza ekonomiczna w przedsiębiorstwie, Wydawnictwo Politechniki Białostockiej, Białystok 2002 .
3. Leszczyński Z., Skowronek-Mielczarek A., Analiza ekonomiczno-finansowa firmy, Difin, Warszawa 2000.
4. Paska J., Ekonomika w elektroenergetyce, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2007.

Additional:
1. Ustawa z dnia 10 kwietnia 1997 r. PRAWO ENERGETYCZNE z Rozporządzeniami Ministra Gospodarki w

sprawie szczegółowych zasad kształtowania i kalkulacji taryf oraz zasad rozliczeń w obrocie energia elektryczną.
2. Sierpińska M., Wędzki D., Zarządzanie płynnością finansową w przedsiębiorstwie, Wydawnictwo Naukowe PWN, 2008
3. Michalak J., Ocena ryzyka inwestycyjnego w energetyce, Przegląd Naukowo-Metodyczny, Edukacja dla bezpieczeństwa 2014.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00