



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Energy policy and energy markets [S2EPiO1>PEiRE]

Course

Field of study	Year/Semester
Industrial and Renewable Energy Systems	2/3
Area of study (specialization)	Profile of study
Gas Technology and Renewable Energy	general academic
Level of study	Course offered in
second-cycle	polish
Form of study	Requirements
full-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
15	0	0
Tutorials	Projects/seminars	
0	15	

Number of credit points

2,00

Coordinators

dr hab. inż. Rafał Ślefarski prof. PP
rafal.slefarski@put.poznan.pl

Lecturers

Prerequisites

KNOWLEDGE: Basic knowledge of the economy, entrepreneurship and energy sources (fossil fuels, biomass, wind, sun, etc.) **SKILLS:** The student should have the skills required to solve engineering problems using scientifically sound methodologies. Can effectively obtain information from various sources, including data sheets, literature and the Internet **SOCIAL COMPETENCIES:** He knows the limits of his own knowledge and skills.

Course objective

To familiarize students with the legal aspects governing the production and distribution of fuels and energy, to present basic principles shaping and influencing the production and distribution of fuels and energy, energy security, and the energy market - what laws govern it.

Course-related learning outcomes

Knowledge:

has ordered and in-depth knowledge necessary to understand the issues of energy safety
knows the basic principles of creating and developing various forms of entrepreneurship
has knowledge of structures and processes for managing fuel extraction and processing enterprises

Skills:

- is able to formulate and test hypotheses related to simple research problems
- is able to make a preliminary economic assessment when formulating and solving engineering tasks in the application of industrial power
- is able to communicate on topics related to energy policy with diverse audiences

Social competences:

- 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
- he is ready to initiate actions for the social interest
- 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:

Learning outcomes presented above are verified as follows:

Written exam - the pass condition is to obtain a minimum of 51% of the maximum number of points

Project - the right solution to a design issue

Programme content

Availability of energy resources in the world and in Europe a) fossil fuels: coal, oil, lignite, natural gas, uranium; b) renewable energy: wind, solar energy, geothermal energy, biomass, hydropower; energy prices on world markets, energy law in the EU, Poland, energy exchange, mechanisms of fuel price formation, organization of fuel supply and storage networks in the energy sector

Teaching methods

Lecture - multimedia presentation with talk

Project - independent or group solution of the given problem (s)

Bibliography

Basic

1. Petroleum Economist
2. Gas To Power Journal
3. European Energy Review
4. Wind Energy
5. Oil and Gas Industry Journal

Additional

1. Gaz Woda i Technika Sanitarna
2. Czysta Energia
3. IEA International Energy Agency, British Petroleum BP, EPRI from USA

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,00
Classes requiring direct contact with the teacher	33	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	27	1,00