



UNIVERSITY OF PIRAEUS

1) GENERAL

SCHOOL	ECONOMICS, BUSINESS AND INTERNATIONAL STUDIES		
ACADEMIC UNIT	ECONOMICS		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	ΟΚΕΦΠ01	SEMESTER	5
COURSE TITLE	ENERGY ECONOMICS AND NATURAL RESOURCES		
INDEPENDENT TEACHING ACTIVITIES	WEEKLY TEACHING HOURS	CREDITS	
Lectures	4	5	
COURSE TYPE	SCIENTIFIC EXPERTISE		
PREREQUISITE COURSES	-		
LANGUAGE OF INSTRUCTION and EXAMINATIONS	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	https://eclass.unipi.gr/courses/OEP324/		

2) LEARNING OUTCOMES

Learning Outcomes

The main aim of the course Energy Economics and Natural Resources is to provide the appropriate knowledge and skills for the design, development and implementation of energy policy procedures and practices. During the course, the most important energy issues facing modern economies are addressed. The main purpose of the course's subject is to provide the appropriate

knowledge and skills for the design, development and implementation of energy policy processes and practices. In this context, the demand for energy products (natural gas and electricity) is analyzed in detail both on the basis of its past years and on the projections for its future development in order to identify the main factors affect its level in the short and long term. From the results of the above analysis, useful conclusions can be drawn for the course of demand over time. In addition, the structure of energy markets is analyzed at the Greek and European level, with particular emphasis on the institutional framework governing the electricity and gas networks. At the same time, in the course of the course, the issues of natural resources economics are developed, while the cognitive areas of the regulation of the energy markets and of the competition policy are covered. After successful completion of the course, the student will be fully aware of the functioning of the energy markets. He will also have acquired skills in practical issues such as expertise and empirical analysis of energy models, while being able to understand regulatory issues related to energy planning and the liberalization of energy markets (electricity and gas).

General Competences

- Decision-making
- Individual/Independent work
- Adapting to new situations
- Project planning and management
- Introduction of innovative research

3) SYLLABUS

1. Introduction to Energy Economics, Review of the Basics of Supply, Demand and Price formation in Competitive Markets.
2. Energy Demand: Short Run and Long Run Price and Income Elasticities.
3. Structure of the Electricity Industry (demand, supply).
4. Structure of the Natural gas Industry (demand, supply).
5. Structure of the Petroleum industry (demand, supply)
6. European Energy Markets – Legal Framework
7. Regulatory and competition policies in the energy markets.
8. Energy and Climate Change, Market Based Instruments, Taxation and Tradable Permits.
9. Renewable Energy Sources.

10. Econometric assessment of energy and environmental models.

11. Energy Efficiency Policies and Strategies

4) TEACHING and LEARNING METHODS

DELIVERY

In-class lecturing

USE OF INFORMATION AND COMMUNICATION TECHNOLOGY

- Use of ICT in lectures
- USE of ICT in Communication with students

TEACHING METHODS

Activity	Semester workload
Lectures	52
Essay writing	20
Case Studies	30
Self-Directed Study	21
Final Exam	2
Total	125

STUDENT PERFORMANCE EVALUATION

Language of evaluation: Greek (English is used in cases of Erasmus+ students)
Evaluation method: written essay (40%) and final examination -60% (theory questions, exercises)

ATTACHED BIBLIOGRAPHY

- 1) Karkalakos S. and M. Polemis. Sustainable Development, Environment and Energy, Publisher Tsotras Athanasios, 2022
 - 2) Halkos G. Natural Resources Economics and Environment, Publisher Disigma, 2016
 - 3) Tietenberg Tom, Lewis Lynne, Environmental Economics and Natural Resources, Publisher: G and K Dardanos, 2010
- Related scientific journals:
THE ENERGY JOURNAL
ENERGY ECONOMICS
RESOURCE AND ENERGY ECONOMICS
ENERGY POLICY
JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT