



# UNIVERSITY OF PIRAEUS

FACULTY/SCHOOL	School of Economics, Business and International Studies																
DEPARTMENT	Department of Economics																
LEVEL OF STUDY	Undergraduate																
COURSE UNIT CODE	ΟΚΕΦΠ01	SEMESTER	4														
COURSE TITLE	ENERGY ECONOMICS AND NATURAL RESOURCES																
WEEKLY TEACHNG HOURS	4	CREDITS (ECTS)	5														
COURSE TYPE	Scientific expertise																
PREREQUISITE COURSES																	
INSTRUCTION LANGUAGE	Greek	ASSESSMENT LANGUAGE	Greek														
OPEN TO ERASMUS	Yes																
LEARNING OUTCOMES	The main aim of the course Economics of Energy 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	<ul style="list-style-type: none"><li>• Decision-making</li><li>• Individual/Independent work</li><li>• Adapting to new situations</li><li>• Project planning and management</li><li>• Introduction of innovative research</li></ul>																
COURSE CONTENT	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																
USE OF ICT IN TEACHING	Use of ICT in lectures and in the communication with students.																
COURSE DESIGN		<table><tr><th>Activity/Method</th><th>Semester workload</th></tr><tr><td>Lectures</td><td>52</td></tr><tr><td>Essay writing</td><td>20</td></tr><tr><td>Case studies</td><td>30</td></tr><tr><td>Self-directed study</td><td>21</td></tr><tr><td>Final Exam</td><td>2</td></tr><tr><td>Total</td><td>125</td></tr></table>	Activity/Method	Semester workload	Lectures	52	Essay writing	20	Case studies	30	Self-directed study	21	Final Exam	2	Total	125	
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COURSE ASSESSMENT	Language of evaluation: Greek (English is used in cases of Erasmus+ students)  Evaluation method: written essays and final examination (theory evaluation)																
SUGGESTED BIBLIOGRAPHY	1) Karkalakos S. and M. Polemis. Sustainable Development, Environment and Energy, Publisher Tsotras Athanasios, 2015 2) Halkos G. Natural Resources Economics and Environment, Publisher Disigma, 2016																

	<p>3) Tietenberg Tom, Lewis Lynne, Environmental Economics and Natural Resources, Publisher: G and K Dardanos, 2010</p> <p>- Related scientific journals:</p> <p>THE ENERGY JOURNAL</p> <p>ENERGY ECONOMICS</p> <p>RESOURCE AND ENERGY ECONOMICS</p> <p>ENERGY POLICY</p> <p>JOURNAL OF ENVIRONMENTAL ECONOMICS AND MANAGEMENT</p>
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