

COURSE OUTLINE

(1) OVERVIEW

SCHOOL	MARITIME & INDUSTRY		
DEPARTMENT	INDUSTRIAL MANAGEMENT & TECHNOLOGY		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	TENEP01	SEMESTER	7
COURSE TITLE	ENERGY & CLIMATE POLICY		
DISCRETE TEACHING ACTIVITIES <i>In cases where ECTS credits are awarded to distinct components of the course (e.g., Lectures, Laboratory Exercises, etc.), please indicate them separately. If the credits are awarded as a whole for the entire course, please state the weekly teaching hours and the total number of credits</i>		WEEKLY TEACHING HOURS	ECTS
Lectures, Exercises, Project		4	5.5
<i>Please add additional rows if needed. A detailed description of the teaching organization and instructional methods is provided in Section (4).</i>			
COURSE TYPE <i>core (C), core elective (CE), elective (E) - background, specialization, skill development</i>	E - Specialization		
PREREQUISITE COURSES:	None.		
LANGUAGE OF TEACHING AND EXAMINATIONS:	Greek (English for ERASMUS students)		
THIS COURSE IS AVAILABLE TO ERASMUS STUDENTS	Yes		
COURSE WEBPAGE (URL)			

(2) LEARNING OUTCOMES

Learning Outcomes <i>The learning outcomes of the course are described, specifying the particular knowledge, skills, and competencies at the appropriate level that students will acquire upon successful completion of the course.</i> <i>Please refer to Appendix A</i> • Description of the Level of Learning Outcomes for each study cycle according to the Qualifications Framework of the European Higher Education Area. • Descriptive Indicators of Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B. • Concise Guide for Writing Learning Outcomes	
Integrated study of energy systems requires knowledge of their impact on the environment, and in particular on the aggravation of the greenhouse effect, which is constantly subjected to new binding decisions with a direct impact on their structure and development. These binding decisions have a significant impact on industry. Under these circumstances, industry needs to respond to appropriate technology choices, energy resource management and the use of appropriate energy and climate policy tools to maintain its competitiveness. In this context, this course analyzes the basic policy tools (tariff subsidies, application of standards, certificates, emissions trading, etc.) and examines the interactions resulting from their implementation. The objectives of the course are to develop the appropriate cognitive background in designing and implementing key energy and climate policy tools that will allow graduates to: • Understand the evolution of the wider energy and climate policy framework at national, European and international level. • Understand the design features and the operation of key energy and climate policy tools. • Evaluate the available policy tools in terms of effectiveness, efficiency and the potential for their exploitation by businesses and organizations.	
General Competences <i>Taking into account the general competences that a graduate should have acquired (as listed in the Diploma Supplement and outlined below), which of these competences does the course aim to develop?</i>	
<i>Searching, analyzing, and synthesizing data and information, using the necessary technologies</i> <i>Adaptation to new situations</i> <i>Decision making</i>	<i>Project design and management</i> <i>Respect for diversity and multiculturalism</i> <i>Respect for the natural environment</i> <i>Demonstration of social, professional, and ethical responsibility and sensitivity to</i>

<i>Autonomous work</i>	<i>gender issues</i>
<i>Teamwork</i>	<i>Exercising critical and self-critical thinking</i>
<i>Working in an international environment</i>	<i>Promotion of free, creative, and inductive thinking</i>
<i>Working in an interdisciplinary environment</i>	<i>...</i>
<i>Generation of new research ideas</i>	<i>Other competences: ...</i>

• Searching, analyzing, and synthesizing data and information, using the necessary technologies • Adaptation to new situations • Decision making • Autonomous work • Teamwork • Generation of new research ideas • Project design and management • Respect for diversity and multiculturalism • Respect for the natural environment • Demonstration of social, professional, and ethical responsibility and sensitivity to gender issues • Exercising critical and self-critical thinking • Promotion of free, creative, and inductive thinking
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(3) COURSE CONTENT

The course covers the following topics:	
Week	Topic
1	Introduction and development of the framework: The three-fold objective of the European energy and climate policy - Types of energy and climate policy tools and description of the operation of their key mechanisms (from theory to practice) - Key elements of energy and climate policy (case study: Greece).
2	Policy tools: Analysis of the terms "Policy, Policy Tool" - Types of energy and climate policy (categorization) - Key policy examples and use - Implementation in Europe by category (why certain policies are more common) - Policies evaluation principles - Policy effectiveness (How it is defined) - Cost effectiveness of policy benefits (How it is defined and calculated: for business, consumer, the state).
3	Regulations: Regulations in different energy sectors - Energy efficiency of buildings - Stakeholders - Policy effectiveness - Positive / Negative impacts - Building sector work, savings and final greenhouse gas emissions.
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5	Policy & Subsidy financial tools: Energy savings subsidies - Supply (fixed tariffs) for renewable energies - Positive / Negative impacts - Case study.
6	Policy financial tools & taxes: Energy and environmental taxes - Examples of taxes and differences per Member State - Carbon tax - Positive / Negative impacts - Case study.
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8	Market Policies & Greenhouse Gas Licensing System: Emissions Trading Scheme - Domains Concerned - National Emissions Distribution Scheme (NAP) - Positive / Negative Impact - Case Study.
9	Market Policies & Certificates: White Certificates for Energy Saving - Positive / Negative Impacts - Case Study.
10	Market Policies & Certificates: Green Certificates - Applications in the European Union - Positive / Negative Impact - Case Study.
11	Voluntary partnerships: Forms of agreements - Voluntary agreements on energy savings - Examples of agreements and impact analysis - Case study.

12	Policy Comparison and Interactions: Comparison of Policies and Impact Analysis - Interactive Policies - Utilization by Businesses and Organizations - Case Study.
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Students are also presented with case studies from the international bibliography, whereas they participate in team projects involving a written essay and consultation simulation. Furthermore, articles, audiovisual lecture material, web links to useful resources, exercises, and software are uploaded in electronic format on the eClass platform.

(4) TEACHING and LEARNING METHODS - ASSESSMENT

TEACHING MODE <i>Face-to-face, in-class lecturing, distance teaching and distance learning etc.</i>	• Face-to-face in a classroom • Distance teaching & learning (if required)														
USE OF INFORMATION AND COMMUNICATION TECHNOLOGY <i>Use of ICT in Teaching, Laboratory Education, Communication with students</i>	Teaching: Lectures using modern audiovisual equipment, learning support through the eClass electronic platform, synchronous distance teaching via MS Teams. Communication with students: face-to-face during office hours, email, eClass platform, MS Teams tools														
Organization of Teaching <i>A detailed description of the teaching methods and approach is provided.</i> <i>Lectures, seminars, laboratory exercises, fieldwork, study and analysis of literature, tutorials, internships (placements), clinical practice, artistic workshops, interactive teaching, educational visits, project work, writing assignments, artistic creation, etc.</i> <i>The student's study hours for each learning activity, as well as the hours of independent study, are specified in accordance with the principles of ECTS</i>	<table> <tr> <th>Activity</th><th>Semester Workload</th></tr> <tr> <td>Lectures</td><td>52</td></tr> <tr> <td>Project (essay & consultation simulation)</td><td>55</td></tr> <tr> <td>Self-study of lecture material and case studies</td><td>28</td></tr> <tr> <td>Consultation Support</td><td>0.5</td></tr> <tr> <td>Exams (written)</td><td>2</td></tr> <tr> <td>Course Total</td><td>137.5</td></tr> </table>	Activity	Semester Workload	Lectures	52	Project (essay & consultation simulation)	55	Self-study of lecture material and case studies	28	Consultation Support	0.5	Exams (written)	2	Course Total	137.5
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Consultation Support	0.5														
Exams (written)	2														
Course Total	137.5														
STUDENT ASSESSMENT <i>Description of the assessment process</i> <i>Language of assessment, assessment methods, formative or summative evaluation, multiple-choice tests, short-answer questions, essay questions, problem-solving, written assignments, reports, oral examinations, public presentations, laboratory work, clinical patient examination, artistic interpretation, other(s)</i> <i>Explicitly state assessment criteria and information on whether and where these criteria are accessible to students are included.</i>	Language of Assessment: Greek (English for ERASMUS students) Assessment Mode: Face-to-face and/or distance learning (if required) Assessment Methods: The final course grade is formed as follows: • 10% from the participation of students in class activities • 40% from the project (participation in the project and simulation of public consultation) • 50% from the written exams (50%) taken in the examination period of the winter semester and, in case of failure, in the September resits The written exam short-answer and essay questions. It is conducted closed-book. Students with Learning Difficulties: Students with certified learning difficulties in reading and writing (as recognized by the competent authority) are assessed according to the procedures established by the Department. Disclosure of Assessment Criteria: The assessment criteria are communicated during the first class and are clearly stated on the course website and the eClass platform. The exam syllabus is announced on eClass following the final lecture of the semester. The exam answers are posted on eClass after the examinations take place. Students have the right to review their graded exams and receive explanations regarding their grades. In cases of further requests, the procedures outlined in the current Study Regulations apply.														

(5) SUGGESTED BIBLIOGRAPHY

- Books: • Masters, G.M. (2016). Electric Power Generation Systems from Renewable Energy Sources, Pedio Publications, ISBN: 9789605467432 [59385727] – in Greek

- Journals:

- Economics, Planning and Policy
- Energies Journal
- International Journal of Sustainable Energy
- Mitigation and Adaptation of Strategies for Global Change

- Other educational material:

- Lecture Notes and Supporting Material provided by the Instructor