

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF ENGINEERING		
ACADEMIC UNIT	DEPARTMENT OF MINERAL RESOURCES ENGINEERING		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	MRE923	SEMESTER	9
COURSE TITLE	Feasibility Analysis of Hydrocarbon Resources Exploitation		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	CREDITS	
LECTURES	3		
IN-CLASS EXERCISES	2		
TOTAL	5	5	
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Specialised general knowledge		
PREREQUISITE COURSES:	Energy Raw Materials (MRE605)		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.uowm.gr/courses/MRE185/		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i>
<p>The course aims to enable students to</p> <ul style="list-style-type: none"> • Know about energy systems and their fundamentals • Know about energy production and energy use systems • Know about the design, financing and implementation of investments for the exploitation of energy resources • Know about Greece's energy policy, sufficiency, reserves and the country's energy balance in general • Know about the energy system of Greece, the dependence on various energy sources and the possibilities of generating and supplying electricity • Prepare economic and technical studies on the feasibility of exploiting energy sources.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology	Project planning and management
Adapting to new situations	Respect for difference and multiculturalism
Decision-making	Respect for the natural environment
Working independently	Showing social, professional and ethical responsibility and sensitivity to gender issues
Team work	Criticism and self-criticism
Working in an international environment	Production of free, creative and inductive thinking
Working in an interdisciplinary environment
Production of new research ideas	Others...

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Teamwork
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas
Project planning and management

(3) SYLLABUS

Basic principles of energy systems, technical and energy balances, basic sizes of energy systems, systems of energy production and use, design, financing and implementation of investments, energy-economy-environment, energy policy and sufficiency, reserves-production-demand-imports of oil, natural gas and solid fuels, the Greek energy system, lignite and the future, transmission and distribution systems, development of renewable energy sources, possibility generation and supply of electricity, the Regulatory Authority for Energy, the energy exchange, the liberalisation of energy markets.
Feasibility studies on the feasibility of exploiting energy resources.

(4) TEACHING and LEARNING METHODS - EVALUATION

<p style="text-align: center;">DELIVERY</p> <p><i>Face-to-face, Distance learning, etc.</i></p>	Face to face	
<p style="text-align: center;">USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</p> <p><i>Use of ICT in teaching, laboratory education, communication with students</i></p>	Use of projection system, organization and programming of the course and communication with students through the asynchronous e-learning platform open eclass.	
<p style="text-align: center;">TEACHING METHODS</p> <p><i>The manner and methods of teaching are described in detail.</i></p> <p><i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i></p> <p><i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i></p>	Activity	Semester workload
	Lectures	42
	In-class exercises	28
	Study and exercise work	80
	Course total	150
<p style="text-align: center;">STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>Mid-term written exam (40%), final written exam (60%).</p> <p>The evaluation criteria are given on the relevant page of the course on the asynchronous e-learning platform open e-class and are analyzed to the students at the beginning of the semester.</p>	

(5) SUGGESTED BIBLIOGRAPHY

<p>- Suggested bibliography:</p> <p><i>SENTRO, 2008, Handbook for Performing Feasibility Studies of Alternative Energy Systems, 93 pages</i></p> <p><i>Simon C.A., 2006, Alternative Energy: Political, Economic, and Social Feasibility, Rowman & Littlefield, 256 pages</i></p> <p><i>Skipka, K.J., Theodore, L., 2014, Energy Resources: Availability, Management, and Environmental Impacts, CRC Press, 485 pages</i></p> <p>- Related academic journals:</p> <p><i>Journal of Energy Resources</i></p> <p><i>International Journal of Energy Research</i></p> <p><i>Journal of Energy Resources Technology</i></p>
