

DEPARTMENT OF BUSINESS AND ECONOMICS  
COURSE SYLLABUS

Course Details				
Code		Academic Year		Semester
BE049		2021-2022		
Title		T	A	L
Selected Topics on Energy and Environmental Economics		3	1	0
ECTS		10		
Language	English			
Level	Master		Doctorate	X
Department / Program	PhD in Business and Economics			
Forms of Teaching and Learning	Face-to-Face			
Course Type	Compulsory		Elective	X
Objectives	The course will focus on the following topics: aggregate and disaggregate energy modeling, relationship between energy demand and economic activity, impacts of alternative utility investment strategies, energy, pollution and employment policy, externalities, energy demand and supply projections, economics of energy transportation, energy conservation. This course will also provide an advanced overview on the reasons and possible ways of solving the problems of the degradation of the environment and the depletion of non-renewable resources.			
Content	Market interactions, pricing and regulation in oil, gas, coal and electricity markets, fracking revolution in oil and gas, energy security.			
Prerequisites				
Coordinator				
Lecturer(s)				
Assistant(s)				
Work Placement				
Recommended or Required Reading				
Books / Lecture Notes	Subhes C. Bhattacharyya, 2011. "Energy Economics. Concepts, Issues, Markets and Governance"			
Other Sources				
Additional Course Material				
Documents	Lecture Notes and Books			
Assignments	Assignments			
Exams	Midterm and Final			
Course Composition				
Social Sciences				%100
Educational Sciences				%

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COURSE SYLLABUS

Natural Sciences		%
Health Sciences		%
Expert Knowledge		%

**Assessment**

Activity	Count	Percentage (%)
Midterm Exam		30
Quiz		
Assignments		30
Attendance		
Recitations		
Projects		
Final Exam		40
<b>Total</b>		<b>100</b>

**ECTS Points and Work Load**

Activity	Count	Duration	Work Load (Hours)
Lectures	14	3	42
Self-Study	14	2	28
Assignments	12	5	60
Presentation / Seminar Preparation			
Midterm Exam	1	60	60
Recitations			
Laboratory			
Projects			
Final Exam	1	90	90
<b>Total Work Load</b>			<b>280</b>
<b>ECTS Points (Total Work Load / 28)</b>			<b>10</b>

**Course Learning Outcomes**

1	Describe and analyze the key issues in functioning of electricity, oil and gas markets, and their influence on the market outcomes for consumers and producers
2	Describe and analyze the environmental aspects of energy; Assess advantages and disadvantages of currently used and proposed energy- and environment-related policies and regulations
3	Analyze and explain the interrelation between resources, institutional and economic development, and growth
4	Discuss and conceptualize topical issues within the field of energy and environmental economics with a group of peers
5	Use instruments such as tables, graphs, basic game-theoretical models and analytical tools to analyze the issues of energy and environmental economics

**Weekly Content**

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1	Energy and environmental economics: Basics of game theory
2	Oil market. Properties of crude oil. Oil supply and demand
3	Market structure. Oil pricing. OPEC
4	Fracking and shale revolution in the oil context
5	Case discussion
6	Gas market. Gas supply and demand
7	Exploration and Drilling. Sequential markets. Convergence and Divergence of prices
8	Electricity market. Experimental game. Electricity supply and demand
9	Midterm
10	Environmental Issues. Experimental game. Institutional context
11	Externalities. Carbon pricing. Emission trading. Support schemes for renewables
12	Energy security
13	Natural resources and economic development
14	Oil and democracy
15	Overview

**Contribution of Learning Outcomes to Program Objectives (1-5)**

CLO	P1	P2	P3
1	5	1	5
2	5	1	5
3	5	1	5
4	4	3	4
5	5	2	3

**Contribution Level** 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

**Compiled by:**

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