



<b>Course Code</b> OGEE-540	<b>Course Title</b> Energy Market and Economics	<b>ECTS Credits</b> 7.5
<b>Prerequisites</b> None	<b>Department</b> Engineering	<b>Semester</b> Fall, Spring
<b>Type of Course</b> Elective	<b>Field</b> Oil, Gas and Energy Engineering	<b>Language of Instruction</b> English
<b>Level of Course</b> 2 <sup>nd</sup> Cycle	<b>Lecturer(s)</b> Dr Theodoros Tsakiris	<b>Year of Study</b> 1 <sup>st</sup>
<b>Mode of Delivery</b> Face-to-face	<b>Work Placement</b> N/A	<b>Co-requisites</b> None

### Objectives of the Course:

The main objectives of the course are to:

- provide the student with a comprehensive understanding of the economic parameters of oil & gas exploration, production, refining, distribution and transportation as well as the structure of the international oil & gas system

### Learning Outcomes:

After completion of the course students are expected to be able to:

1. Understand the process through which hydrocarbon resources are transformed to reserves and differentiate between the different types of reserves as well as their worldwide distribution
2. Evaluate the impact of technological innovation on the exploration, production, refining, distribution and transportation of petroleum and natural gas
3. Analyze the significance of hydrocarbons for the world economy and the global energy mix
4. Identify the major players of the oil & gas industries while critically assessing the different priorities, characteristics and co-dependencies between corporate and state actors
5. Comprehend the basic dynamics of price formation for the international oil market and the regional gas markets while analyzing the fundamental differences and similarities between the structure of the oil and natural gas systems

### Course Contents:

- The impact of technology on the transformation of resources to reserves
- Types of Conventional and Unconventional Reserves and their worldwide distribution
- The Economic Fundamentals of Oil & Gas Exploration and Production
- The role of hydrocarbons in the global energy supply/demand mix: Differences and Similarities Across the OECD states and the Developing World
- The Structure of the Oil & Gas Markets: The Midstream and Downstream Sector

- The Structure of the Oil & Gas Markets: Price Formation and Cartelization Dynamic
- The Oil & Gas Policies of the Major Exporting and Importing States
- The role of OPEC and the GECF
- The Role of the Multinational Oil & Gas Companies

**Learning Activities and Teaching Methods:**

Lectures, In-class exercises, In-class discussions and homework

**Assessment Methods:**

Assignments, mid-term exam, final exam

**Required Textbooks / Reading:**

Title	Author(s)	Publisher	Year	ISBN
Perspectives of Oil & Gas: The Road to Interdependence	Marcello Colitti & Claudio Simeoni	Springer	1996	

**Recommended Textbooks / Reading:**

Title	Author(s)	Publisher	Year	ISBN
Energy Trading and Investing: Trading, Risk Management and Structuring Deals in the Energy Market	Davis W. Edwards	McGraw-Hill	2009	
An Introduction to Oil & Gas Production	Havard Devold	ABB Oil & Gas	2009	
Resources to Reserves: Oil & Gas Technologies for the Energy Markets of the Future	International Energy Agency	OECD	2006	
Oil Politics: A Modern History of Petroleum	Francisco Parra	I.B.Tauris	2004	
Prize: The Epic Quest for Oil, Money and Power	Daniel Yergin	Touchstone	1992	
<a href="http://www.iea.org">http://www.iea.org</a>	International Energy Agency			

<a href="http://www.iea.org">http://www.iea.org</a>	Organization of Petroleum Exporting Countries			
<a href="http://ec.europa.eu/energy/index_en.htm">http://ec.europa.eu/energy/index_en.htm</a>	European Commission, Directorate for Energy			
<a href="http://www.eia.doe.gov">http://www.eia.doe.gov</a>	U.S. Department of Energy, Energy Information Administration			