



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

- 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
- Evaluate the impact of technological innovation on the exploration, production, refining, distribution and transportation of petroleum and natural gas
- Analyze the significance of hydrocarbons for the world economy and the global energy mix
- Identify the major players of the oil & gas industries while critically assessing the different priorities, characteristics and co-dependencies between corporate and state actors
- 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, Online Questions, Projects, Discussion

Assessment Methods:

Assignments, Online Exercises, Final Exam

Required Textbooks/Reading:

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

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Davis W. Edwards	Energy Trading and Investing: Trading, Risk Management and Structuring Deals in the Energy Market	McGraw-Hill	2009	
Havard Devold	An Introduction to Oil & Gas Production	ABB Oil & Gas	2009	
International Energy Agency	Resources to Reserves: Oil & Gas Technologies for the Energy Markets of the Future	OECD	2006	
Francisco Parra	Oil Politics: A Modern History of Petroleum	I.B.Tauris	2004	
Daniel Yergin	Prize: The Epic Quest for Oil, Money and Power	Touchstone	1992	
International Energy Agency	http://www.iea.org			
Organization of Petroleum Exporting Countries	http://www.iea.org			
European Commission, Directorate for Energy	http://ec.europa.eu/energy/index_en.htm			
U.S. Department of Energy, Energy Information Administration	http://www.eia.doe.gov			