



## Course Syllabus

<b>Course Code</b>	<b>Course Title</b>	<b>ECTS Credits</b>
MBAN-761DE	Hydrocarbon (HCB) Markets & Economics	6
<b>Prerequisites</b>	<b>Department</b>	<b>Semester</b>
None	School of Business	Fall, Spring
<b>Type of Course</b>	<b>Field</b>	<b>Language of Instruction</b>
Concentration	Energy, Oil & Natural Gas	English
<b>Level of Course</b>	<b>Lecturer(s)</b>	<b>Year of Study</b>
2 <sup>nd</sup> Cycle	Dr. Theodoros Tsakiris	1 <sup>st</sup> or 2 <sup>nd</sup>
<b>Mode of Delivery</b>	<b>Work Placement</b>	<b>Prerequisites</b>
Distance Learning	N/A	None

### Course Objectives:

The main objectives of the course are to

- Comparatively assess the different types of reserves of oil and gas and the variant costs of their exploration and development that result from the geological characteristics of their formation
- Evaluate the importance the economic parameters affecting the “life cycle” of oil & gas investment
- Reflect on the relative significance of taxation, financing, contracting and regulation in the oil and gas industry and its decision-making process
- Measure the relative gravity of the different parameters affecting oil and gas price formation and the functioning of hydrocarbon markets on a global and regional basis

### Learning Outcomes:

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

1. critically review the relative significance of the economic, geological, technological, environmental and regulatory/political factors shaping the exploration, exploitation, development, production, refining, transportation and consumption of oil and natural gas
2. compare the importance of the different political and economic parameters of oil and natural gas price formation
3. debate on the cartelization dynamics of the global hydrocarbons industry with regards to oil and for natural gas
4. assess the importance and characteristics of different oil and gas trading contracts

5. evaluate the effectiveness of the various mechanisms and institutions in place to avert and manage potential oil and natural gas supply crises

**“Details on the contribution of the course’s learning outcomes towards the learning goals / competencies and learning objectives of the programme are included in the curriculum map of each programme”.**

### **Course Content:**

The Course outline is developed over 12 weeks by focusing each week on the following topics:

1. Understanding and classifying conventional and unconventional oil and natural gas reserves
2. A Critical evaluation of Peak Oil theories: The strategic role of technological innovation
3. The economics of Upstream Oil: Costs, Permits, Processes
4. The dynamics of global oil supply and demand
5. The economics of Upstream Natural Gas: Costs, Permits, Processes
6. The dynamics of global natural gas supply and demand
7. Oil pricing fundamentals and the structure of petroleum markets
8. Oil Trading
9. Natural Gas pricing fundamental and the structure of natural gas markets
10. Research/Case Study Assignment Presentation
11. Natural Gas Trading
12. Strategies and Institutions for the prevention and management of major supply crises/Open Book Test

### **Learning Activities and Teaching Methods:**

Module is delivered online by lectures and seminars, case studies, interactive multimedia resources, innovative group work and directed self-study.

### **Assessment Methods:**

Final Exam, Assignment(s), Critical Thinking Open Book Test, Online Forum Participation

**Required Textbooks / Readings:**

<b>Title</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Hydrocarbon exploration and production	Jahn F., Cook M., & Graham M.	Elsevier ebook, 2d edition	2008	9780444532367
A Profile of the Oil and Gas Industry: Resources, Market Forces, Geopolitics & Technology	Herkenhoff L.	Business Expert Press	2014	9781606495001
The Future of Natural Gas: Market & Geopolitics	Colombo, S., el Harrak, M. & Sartori, N.	Instituto Affari Internazionali & Lenthe Press	2016	9789075458824

**Recommended Textbooks / Readings:**

<b>Title</b>	<b>Author(s)</b>	<b>Publisher</b>	<b>Year</b>	<b>ISBN</b>
Oil, Gas and Coal Technologies for Energy Markets of the Future, Paris	International Energy Agency (IEA)	OECD	2013	
Oil Policy and the Evolution of the Energy Sector	B. Fatouh & A. Sen Saudi Arabia's Vision 2030	Oxford Institute for Energy Studies	2016	
World Energy Outlook Special Report on Unconventional Gas, Paris	IEA	OCED	2012	
The US shale gas revolution and its impact on Qatar's position in gas markets, Center on Global Energy Policy	B. Fattouh, H. Rogers & P. Stewart	Columbia University Press	2015	
Oil Trading Markets 2003-2010: Analysis of Market Behavior and possible policy responses	A. Turner, J Farrimond & J. Hill	Oxford Institute for Energy Studies	2011	

Title	Author(s)	Publisher	Year	ISBN
The Dynamics of Liberalized European Gas Market: Key determinants of hub prices and roles and risks of major players	J. Stern & H. Rogers	Oxford Institute for Energy Studies	2014	
Energy Supply Security: Emergency Response of IEA Countries	IEA	OECD	2014	

#### Journals:

*Energy Journal, Oil & Gas Journal, Economics of Energy & Environmental Policy, Energy Sources Part B: Economics, Planning and Policy, The Journal of Energy & Development*

#### Databases of International Energy Organizations:

- OPEC: Organization of the Petroleum Exporting Countries, [http://www.opec.org/opec\\_web/en/](http://www.opec.org/opec_web/en/)
- GECF: Gas Exporting Countries Forum organization\_ <https://www.gecf.org/about/overview.aspx>
- US Department of Energy, Energy Information Administration, <http://www.eia.doe.gov/international>
- IEA (International Energy Agency): <http://www.iea.org/>
- European Commission\_ Eurostat Energy data\_ <http://ec.europa.eu/eurostat/statistics-explained/index.php/Energy>
- European Commission\_ Directorate General for Energy\_ <https://ec.europa.eu/energy/en/home>