



## Course Syllabus

<b>Course Code</b>	<b>Course Title</b>	<b>ECTS Credits</b>
OGAS-310	Economics of the Oil and Gas Industry	6
<b>Prerequisites</b>	<b>Department</b>	<b>Semester</b>
None	Management and MIS	Fall
<b>Type of Course</b>	<b>Field</b>	<b>Language of Instruction</b>
Required	Oil, Gas and Energy Management	English
<b>Level of Course</b>	<b>Lecturer(s)</b>	<b>Year of Study</b>
1 <sup>st</sup> Cycle	Dr. Theodoros Tsakiris	3 <sup>d</sup>
<b>Mode of Delivery</b>	<b>Work Placement</b>	<b>Core-requisites</b>
Face to Face	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. To 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 by week 5 and natural gas by week 7
2. To compare the importance of the different political and economic parameters of oil by week 8 and natural gas price formation by week 10
3. To debate on the cartelization dynamics of the global hydrocarbons industry with regards to

- oil by week 9 and for natural gas by week 11
4. To assess the importance and characteristics of different oil and gas trading contracts by week 11
  5. To evaluate the effectiveness of the various mechanisms and institutions in place to avert and manage potential supply crises by week 12

**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. The strategic role of technological innovation in the oil and gas industry
  3. The economics of Upstream Oil: Costs, Permits, Processes
  4. Global oil supply and demand
  5. The economics of Upstream Natural Gas: Costs, Permits, Processes
  6. Global natural gas supply and demand
  7. Oil pricing fundamentals
  8. Natural Gas pricing fundamentals
  9. Field Trip
  10. Oil & Gas Trading Fundamentals
  11. Assignment Presentation
  12. Strategies and Institutions for the prevention and management of major supply crises / Open Book Test

**Learning Activities and Teaching Methods:**

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

**Assessment Methods:**

Final Exam, Midterm Exam, Assignment, Critical Thinking Open Books Test, Class Participation

**Required Textbooks / Readings:**

Title	Author(s)	Publisher	Year	ISBN
Hydrocarbon exploration and production	Jahn F., Cook M., & Graham M.	Elsevier ebook, 2d edition	2008	9780444532367
A Profile of the Oil and Gas Industry:	Herkenhoff L.	Business Expert	2014	9781606495001

Resources, Market Forces, Geopolitics & Technology		Press		
The Future of Natural Gas: Market & Geopolitics	Colombo, S., el Harrak, M. & Sartori, N.	Instituto Affari Internazionali & Lenthe Press	2016	9789075458824

### Recommended Textbooks / Readings:

#### Recommended Textbooks:

International Energy Agency (IEA), *Resources to Reserves: Oil, Gas and Coal Technologies for the Energy Markets of the Future*, Paris, (OECD: 2013)

J. Stern & H. Rogers, *The Dynamics of a Liberalized European Gas Market: Key determinants of hub prices, and roles and risks of major players*, (Oxford Institute for Energy Studies: 2014)

IEA, *Energy Supply Security: Emergency Response of IEA Countries*, 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>