



Course Syllabus

Course Code	Course Title	ECTS Credits
OGEN-460	Environmental Impact Assessment for the Energy and Oil and Gas Industry	6
Prerequisites	Department	Semester
None	Management	Fall
Type of Course	Field	Language of Instruction
Required	Hydrocarbons & Energy Management	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr. Andreas Sousanis	4 th
Mode of Delivery	Work Placement	Core-requisites
Face to Face	N/A	None

Course Objectives:

- To enable students to understand the nature of the Environmental Impact Assessment (EIA) process and to be able to select and use suitable techniques, tailored to the energy, and in particular, the oil & gas industry.
- Provide the students the basic knowledge on how to undertake baseline surveys, use of prediction methods, how to use significance criteria, application of mitigation measures and monitoring regimes tailored to the energy, and in particular, the oil & gas industry.
- To provide training in policies, methods and applications of EIA using case studies from the energy, oil and gas industry.
- Critically assess the application of environmental management systems in Environmental Impact Assessment and Strategic Environmental Assessment (SEA).
- Provide the students with a detailed understanding of how to assess the quality of other EIA's.

Learning Outcomes:

On completion of this module, students are expected to be able to:

1. Be familiar with the European, UK, and Cyprus legal basis on environmental assessment focused on the oil and gas industry.
2. Have a clear understanding of the operation of EIA and SEA within the planning process related to the energy, oil and gas industry
3. Critically review the EIA process explaining the different stages and types of

activity involved.

4. Discuss the role of EIA in contributing to sustainable Development
5. To assess the importance of the EIA in the oil and gas industry

Course Content:

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

1. Origins and development of EIA
2. Legislative background of EIA and SEA in the EU
3. The EIA process and stages in process
4. Impact prediction, evaluation and mitigation measures
5. Participation, presentation and review; monitoring and auditing; stakeholder involvement
6. Environmental impacts during prospecting (effects of airgun noise, vessel traffic and towed streamers, effluent discharges, air pollutant emissions, sea floor disturbance)
7. Environmental impacts during exploration: effects of drilling installation and removal, of drilling rig presence, of drilling discharges, of effluent discharges, of marine debris, of air pollutant emissions, of well testing, and of support activities
8. Environmental impacts during exploitation (development and production): effects of facility installation, of the presence of structures, of drilling discharges, of operational discharges, of marine debris, of air pollutant emissions, of support activities and of structural removal
9. Causes of marine oil spills, impacts causes frequency; equipment used such as booms, skimmers, sorbents, spill-treating agents
10. Lessons learned from onshore and offshore incidents e.g. Kuwait oil spills, Exxon Valdez, Deepwell Horizon, Canada's tar sands, gas flaring, etc
11. Case studies of SEA in practice with examples from the energy, oil & gas industry
12. Case studies of EIA in practice with examples from the energy, oil & gas industry

Learning Activities and Teaching Methods:

Course is delivered by lectures and seminars, power point presentations, case studies, interactive group work, in-class exercises and in-class discussions

Assessment Methods:

Assignments, weekly exercises, final exam

Required Textbooks / Readings:

Routledge Handbook of Environmental Impact Assessment	Kevin S. Hanna (ed.)	Routledge	2022	9781032130019
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Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Introduction to Environmental Impact Assessment (3 rd edition)	John Glasson, Riki Therivel, and Andrew Chadwick	Routledge	2005	978-0-415-33836-3
Environmental, Health and Safety Guidelines: Offshore Oil and Gas Development	International Finance Corporation, World Bank Group	World Bank Group	2007	
Environmental Technology in the Oil Industry	Orszulik T. Stefan (ed)	Springer	2008	978-1-4020-5472-3
<i>Lecture Notes</i>				