



Course Syllabus

Course Code	Course Title	ECTS Credits
OGEE-550	Environmental Impact Assessment	7.5
Prerequisites	Department	Semester
None	Engineering	Fall
Type of Course	Field	Language of Instruction
Elective	Engineering	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr. Yianna Samuel	1 st / 2 nd
Mode of Delivery	Work Placement	Corequisites
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Enable students to understand the nature of the Environmental Impact Assessment (EIA) process and to be able to select and use suitable techniques;
- Explain the basic concepts, approaches and technical components of an EIA;
- Record the state of the environment prior and after operations i.e., oil and gas or civil works;
- Discuss the sources of waste, environmental hazards and risks to flora and fauna;
- Describe the ways an EIA and a Strategic Environmental Assessment (SEA) are conducted within the framework of onshore and offshore exploration and production;
- Identify the environmental parameters involved throughout all stages of onshore and offshore oil and gas exploration and exploitation;
- Appreciate atmospheric, land and offshore impacts from man-made activities;
- Provide training in policies, methods and applications of EIA using case studies.

Learning Outcomes:

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

1. Be familiar with the Cypriot and European legal basis on environmental assessments;

2. Have a clear understanding of the operation of EIA and SEA within the planning process;
3. Critically review the EIA process explaining the different stages and types of activity involved;
4. Identify and analyse the environmental issues with asset development, infrastructure, and oil exploration and production (E&P);
5. Be able to conduct a baseline study and evaluate the environmental impact of E&P activities;
6. Suggest effective ways for minimising and managing solid and liquid waste and confront oil spills;
7. Discuss the role of EIA in contributing to sustainable Development;

Course Content:

- Origins and development of EIA;
- Legislative background of EIA in Cyprus and the EU;
- The EIA process and its stages;
- Impact prediction, evaluation and mitigation measures;
- Participation, presentation and review; monitoring and auditing; stakeholder involvement;
- CY and EU practice overview to date;
- Environmental impacts during prospecting (effects of airgun noise, vessel traffic and towed streamers, effluent discharges, air pollutant emissions, sea floor disturbance);
- 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;
- 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 structure removal;
- Causes of marine oil spills, impacts, causes frequency; booms, skimmers, sorbents, spill-treating agents;
- Lessons learned from onshore and offshore incidents e.g., Kuwait oil spills, Exxon Valdez, Deepwell Horizon, Canada's tar sands, gas flaring, etc.;
- Case studies of EIA in Cyprus and other countries;

Learning Activities and Teaching Methods:

Lectures, case studies, group work and self-study, videos, student participation

Assessment Methods:

Individual assignments, group project, oral presentations, mid-term exam, final exam.

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Introduction to Environmental Impact Assessment (5th edition)	Glasson, John; Therivel, Riki; and Chadwick, Andrew	Routledge	2019	978-1-138-60075-1 (e-book)

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
The International Law of Environmental Impact Assessment: Process, Substance and Integration	Craik, Neil	Cambridge University Press	2011	978-0-521-18406-9
Environmental Impact Assessment: A Guide to Best Professional Practices	Eccleston, Charles H.	CRC Press	2011	978-1-439-82874-8
Introduction to Environmental Impact Assessment: a Guide to Principles and Practice, 3rd Ed.	Noble, Bram F.	Oxford University Press	2014	978-0-199-00634-2