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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>ECTS Credits</th>
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<tr>
<td>OGEE-550</td>
<td>Environmental Impact Assessment</td>
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**Prerequisites**
- None

**Department**
- Engineering

**Semester**
- Fall, Spring

**Type of Course**
- Elective

**Field**
- Oil, Gas and Energy Engineering

**Language of Instruction**
- English

**Level of Course**
- 2nd Cycle

**Lecturer(s)**
- Dr Costas Papastavros

**Year of Study**
- 1st/2nd

**Mode of Delivery**
- Face-to-face

**Work Placement**
- N/A

**Co-requisites**
- None

**Objectives of the Course:**

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;
- Outline strategies for tackling solid and liquid waste, oil spills and containment of hazardous substances;
- 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 European, UK, and Cyprus legal basis on environmental assessment;
2. Describe all the activities that take place during prospecting, exploration and exploitation;
3. Identify and analyse the environmental issues with asset development, infrastructure, and oil exploration and production (E&P);
4. Be able to conduct a baseline study and evaluate the environmental impact of E&P activities;
5. Have a clear understanding of the operation of EIA and SEA within the planning process;
6. Critically review the EIA process explaining the different stages and types of activity involved;
7. Suggest effective ways for minimising and managing solid and liquid waste and confront oil spills;
8. Discuss the role of EIA in contributing to sustainable Development.
Course Contents:

- Origins and development of EIA;
- Legislative background of EIA in the EU, UK, Cyprus;
- The EIA process and its stages;
- Impact prediction, evaluation and mitigation measures;
- Participation, presentation and review; monitoring and auditing; stakeholder involvement;
- 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:

Course is delivered by lectures and seminars and power point presentations, case studies, interactive group work and supervised self-study.

Assessment Methods:

Weekly exercises, assignment, final exam.

Required Textbooks / Reading:

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<th>Title</th>
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