| Course Code            | Course Title                 | ECTS Credits            |  |
|------------------------|------------------------------|-------------------------|--|
| OGEN-410               | Ecosystems and               | 6                       |  |
|                        | <b>Environmental Quality</b> |                         |  |
| Department             | Semester                     | Prerequisites           |  |
| Management & MIS       | Fall / Spring                | None                    |  |
| Type of Course         | Field                        | Language of Instruction |  |
| Major Elective         | Energy, Oil and Gas          | English                 |  |
|                        | Management                   |                         |  |
| <b>Level of Course</b> | Year of Study                | Lecturer(s)             |  |
| Undergraduate          | 4 <sup>th</sup>              | Dr Iris Charalambidou   |  |
| Mode of Delivery       | Work Placement               | Co-requisites           |  |
| face-to-face           | N/A                          | None                    |  |

## **Objectives of the Course:**

- Understand the basic structure and functioning of ecosystems;
- Understand the impacts of selected anthropogenic activities on ecosystems;

## **Learning Outcomes:**

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

- 1. Understand the major structural and functional aspects of selected ecosystems.
- 2. Understand the role of the major biogeochemical cycles.
- 3. Understand the ways in which ecosystems respond to natural and human-induced environmental change.
- 4. Understands the aspect of environmental quality in terrestrial environments

# **Course Content:**

- biogeography, climate/vegetation patterns and ecological processes
- structure and functioning of major ecosystem types such as woodlands, Mediterranean scrub land, agro-ecosystems, aquatic ecosystems.
- human influences on ecosystems, including examples of management

- climate change and air pollutants: impacts on ecosystems
- handling of ecological data, descriptive statistics.

# **Teaching Methods:**

Lectures, In-class exercises, In-class discussions and homework

## **Assessment Methods:**

Assignments, mid-term exam, final exam

## **Required Textbooks:**

| Authors      | Title      | Publisher | Year | ISBN |
|--------------|------------|-----------|------|------|
| Gordon       | Ecosystems | Routledge | 2009 |      |
| Dickinson    |            |           |      |      |
| Kevin Murphy |            |           |      |      |

## **Recommended Textbooks / Reading:**

- 1. Barnes, R. & Mann, K. (1991). Fundamentals of aquatic ecology (2nd Ed)
- 2. Beeby, A. & Brennan, A. (2008). First ecology (3<sup>rd</sup> edition). OUP.
- 3. Begon, M., Harper J. & Townsend C. (2005). *Ecology: from individuals to ecosystems*. Blackwell Scientific.
- 4. Dobson, M. & Frid, C. (1998). *Ecology of aquatic systems*. Longman