UNIVERSITY OF NICOSIA
ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code	**Course Title**	**ECTS Credits**
CEE-260	Principles of Environmental Engineering	5
Department	**Semester**	**Prerequisites**
Engineering	Fall, Spring	None
Type of Course	**Field**	**Language of Instruction**
Required	Civil and Environmental Engineering	English
Level of Course	**Year of Study**	**Lecturer(s)**
1st Cycle	2nd Year	Dr Paris Pittakaras
Mode of Delivery	**Work Placement**	**Co-requisites**
Face-to-face	N/A	None

Objectives of the Course:

The main objectives of the course are to:

- Introduce population, economic growth, industrialization, urbanization and energy-use, as causes of environmental pollution
- Provide students with standards and guidelines for sustainable development
- Teach students to relate environmental principles to the characteristics of particles, chemistry of solutions and gases, material balances, reaction kinetics, microbiology and ecology
- Provide students experiences with the collection and analysis of environmental data
- Improve students' knowledge of environmental quality objectives, and standards.

Learning Outcomes:

After completion of the course students are expected to:

- Understand the principles of sustainable environmental engineering.
- Identify, formulate, and solve environmental engineering problems.
- Understand the impact of environmental engineering solutions in a global and societal context.
- Develop skills, and knowledge needed for water resource management, water and wastewater treatment, air pollution control, solid waste management, environmental impact assessment, and environmental ethics.

Course Contents:

- Population, economic growth, industrialization, urbanization and energy-use, as causes of environmental pollution
- Mass and energy balance for environmental engineering systems under steady

state and unsteady state conditions.

- Contaminant partitioning and transport in air, water and solids.
- Characteristics of particles, chemistry of solutions and gases, material balances, reaction kinetics, microbiology and ecology
- Application of environmental principles to: water resource management, water and wastewater treatment, air pollution control, solid waste management, environmental impact assessment, and environmental ethics.
- Thermal pollution, noise pollution, greenhouse effect, acid precipitation, ozone depletion, air toxics, and ground-level ozone and fine particulates (photochemical smog).
- Sustainable development, life cycle analysis, and principles of environmental quality objectives, standards and guidelines.

Learning Activities and Teaching Methods:

Lectures, Projects, Discussion

Assessment Methods:

Homework, Project assignments, exams, final exam.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Kiely G.	Environmental Engineering	McGraw Hill	1996	007091272

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN