UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
CEE-442	Wastewater Treatment	5
Prerequisites	**Department**	**Semester**
CHEM-121	Engineering	Fall
Type of Course	**Field**	**Language of Instruction**
Required	Civil & Environmental Engineering	English
Level of Course	**Lecturer(s)**	**Year of Study**
1st Cycle	Dr Nicholas Kathijotes	3rd Year
Mode of Delivery	**Work Placement**	**Corequisites**
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce the need for water quality control in a scientific context.
- Investigate the various constituents in wastewater.
- Expose students to the various chemical and biological treatment techniques employed to treat wastewater for various uses.
- Provide an analysis of the characteristics of wastewater treatment processes and reuse.

Learning Outcomes:

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

- Acquire the knowledge about the need for water quality and how to achieve it.
- Name and categorize the various processes used in wastewater treatment.
- Differentiate between the processes of treatment.
- Determine the characteristics and the effects of the treatment processes
- Understand the values of Sustainability and Energy.

Course Content:

- Intro to wastewater collection and management.
- Wastewater characteristics: Physical, chemical and microbiological characterization of water and wastewater.
- Designing Preliminary, Primary, Secondary and Tertiary treatment processes.
- Wastewater Reuse, Nutrient recovery and Energy Issues.
- Wastewater biosolids treatment and application to agricultural land.
- Wetlands: principles and design criteria.

Learning Activities and Teaching Methods:

Lectures, tutorials, in-class examples and discussion

Assessment Methods:

Mid-term and final exams, homework assignments and project assignment

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Wastewater Engineering: Treatment and Reuse (5th Ed.)	George Tchobanoglous, Franklin L. Burton, H. David Stensel	McGraw-Hill	2014	978-0-07-340118-8

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Environmental Engineering: Fundamentals, Sustainability, Design	James R. Mihelcic , Julie B. Zimmerman	Wiley	2009	978-0470165058
Water Treatment: Principles and Design	MWH	Wiley	2005	978-0471110187

Theory and Practice of Water and Wastewater Treatment (2nd Ed.)	R. L. Droste, R. L. Gehr	Wiley	2018	978-1-119-31236-9