



Course Syllabus

Course Code	Course Title	ECTS Credits
CEE-101	Introduction to Civil and Environmental Engineering	4
Prerequisites	Department	Semester
None	Department of Engineering	Fall/Spring
Type of Course	Field	Language of Instruction
Required	Civil and Environmental Engineering	English
Level of Course	Lecturer(s)	Year of Study
1 st Cycle	Dr Panayiotis Polycarpou	1 st
Mode of Delivery	Work Placement	Co-requisites
Face to face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce the students to civil and environmental engineering and its importance to society.
- Familiarize students with the fundamental areas of civil and environmental engineering, namely, structural, materials, geotechnical, transportation, hydraulics and environmental engineering.
- Acquaint students with the regulation for public safety and protection of the environment.
- Familiarize students with the Analysis and Design procedures.
- Stress to students the importance of regulation standards in design and responsibility of engineers.

Learning Outcomes:

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

- Describe the various sub-disciplines of civil and environmental engineering.
- Provide some representative local examples projects for the major subfields.
- Recognize the contribution of the various subfields and how are being integrated in given project examples.

- Understand various career paths and aspects of the profession.
- Describe the analysis and design procedures for simple classical civil engineering and environmental engineering problems.
- State the existence and outline the importance of specialists in civil and environmental engineering with several examples.

Course Content:

- Introduction to Course & Undergraduate curriculum. Historical data, The role of civil engineer in society, Terminology, Infrastructure Systems, Basic disciplines
- Structural Engineering. Building materials, Type of structures, Loading types, Safety regulations, Analysis and design procedures. Application example(s).
- Geotechnical engineering. Soil properties, Tests, Foundations, retaining structures, underground structures, Analysis and design procedures. Application example(s).
- Surveying, Fundamentals of Geoinformatics and Field Surveying
- Construction Engineering and Project Management. Construction sites, Site equipment, machinery, project management, activity planning, safety issues.
- Transportation Engineering. Transportation Infrastructure, roads and highways, analysis, design and construction procedures.
- Environmental Engineering. Natural environment, Hydrology, Water resource management, storm water runoff, drinking-water treatment, Wastewater management, treatment plants, analysis and design procedures.
- Environmental Engineering. Air Pollution control, solid waste management and recycling, tests analysis and design.
- Coastal engineering, breakwaters, sea walls, ports, marine structures
- General issues. Sustainability, Ethics, Interrelations between disciplines.

Learning Activities and Teaching Methods:

Lectures, in-class examples and exercises, discussion

Assessment Methods:

Homework assignments, mid-term exam, final exam (comprehensive).

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
CEE-101 Lecture notes	Panayiotis Polycarpou	University of Nicosia	2016	---

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Introduction to Infrastructure: An Introduction to Civil and Environmental Engineering	M. R. Penn; P. J. Parker	John Wiley & Sons	2011	978-0-470-41191-9
Civil Engineering Practice in the Twenty-First Century	N.S. Grigg et al.	ASCE Press	2001	9780784470688
Careers in Civil Engineering	Institute for Career Research	I.C.R.	2009	9781585115020 (E-book)
Civil Engineering: A Very Short Introduction	David Muir Wood	Oxford University Press	2012	978-0199578634