UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
CEE-463	Sustainable Buildings and Infrastructure	5
Prerequisites	**Department**	**Semester**
CEE-151, CEE-260	Engineering	Fall, Spring
Type of Course	**Field**	**Language of Instruction**
Elective	Civil & Environmental Engineering	English
Level of Course	**Lecturer(s)**	**Year of Study**
1st Cycle	Dr Paris Pittakaras	4th
Mode of Delivery	**Work Placement**	**Corequisites**
Face-to-face	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce students to the green building concept.
- Provide technical information on the design process and construction of sustainable buildings.
- Identify and describe building materials and products used in the construction of green and ecological building designs.
- Identify energy production systems and hydrologic systems used in sustainable buildings.
- Identify construction operations and commissioning of sustainable buildings.
- Provide the tools for comparative economic analysis between conventional and green buildings.

Learning Outcomes:

After completion of the course students are expected to:

- Explain basic concepts related to sustainability and environmental concerns.
- Apply assessment techniques for green building delivery systems.
- Identify the benefits associated with sustainable buildings as oppose to conventional buildings.
- Apply suitable construction materials, energy generation systems, and hydrologic systems for the delivery of sustainable buildings and infrastructures.
- Perform economic analysis for comparative study between conventional and sustainable buildings.
- Evaluate sustainable sites and landscapes.
- Identify and describe major characteristics of sustainable buildings and infrastructures.
- Identify major steps involved in the construction and commissioning of sustainable buildings.

Course Content:

- Ethics and sustainability
- The green building concepts
- Environmental and resource concerns
- Green building assessment
- Conventional versus green building delivery systems
- Green building process
- Ecological design
- Sustainable sites and landscaping
- Energy issues and atmosphere
- The building hydrologic system
- Building materials and products
- Construction operations
- Building commissioning
- Economic analysis of green buildings

Learning Activities and Teaching Methods:

Lectures, Projects, Experiments, in-class assignments, discussion.

Assessment Methods:

Homework, Project, mid-term exam, final exam.

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Sustainable Construction: Green Building Design and Delivery	Charles J. Kibert	John Wiley & Sons; 4th edition	2016	978-1119055174

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Sustainable Construction	Sandy Halliday	Routledge; 2 edition	2018	978-1138200289