



UNIVERSITY OF NICOSIA

ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code ARCH-411	Course Title Sustainable Design	ECTS Credits 4
Department Architecture	Semester fall	Prerequisites ARCH-232
Type of Course Major Requirement	Field Architecture	Language of Instruction English
Level of Course 1 st cycle	Year of Study 4th	Lecturer(s) Dr Petros Lapithis
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites none

Objectives of the Course:

- To study the human and social impact of the built environment upon the inhabitants of that environment: physically, emotionally and psychologically.
- To examine contemporary perspectives on the relationship between human behaviour, designed environments and energy efficiency.
- To expose students to design factors affecting indoor comfort and explore concepts, structures and techniques that lie behind the realization of energy conscious design.
- To provide a practical and scientific assessment of the impact of climate on building design and the use of energy efficient building design principles for building design and energy rating.
- This scope brings architecture into contact with other disciplines concerned with buildings and cities, such as engineering, construction, urban planning, landscape architecture, environmental science, art history, and sociology.
- To explore the motivation for energy efficiency on an international, national and individual basis is discussed.
- To encourage students to develop their own direction and solutions, imaginatively and creatively, through set studio design projects, supported by full-time studio tutors and leading practitioners.

Learning Outcomes:

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

- Ability to assess the environmental impact of materials
- Ability to create architectural designs that satisfy both aesthetic and technical requirements.
- Awareness of the relationship between people and buildings and the environment, and of the need to relate buildings and the spaces between them to human needs and scale;
- Awareness of the structural design, constructional and engineering problems associated with building design;
- Demonstrate adequate knowledge of the physical problems and technologies and of the function of buildings so as to provide them with internal conditions of comfort and protection against the climate;
- Get the necessary design skills to meet building users' requirements within the constraints imposed by cost factors and building regulations;
- Adequate knowledge of the industries, organisations, regulations and procedures involved in translating design concepts into buildings and integrating plans into overall planning.

Course Contents:

- Shows a practical and scientific awareness of the impact of climate on building design and the use of energy efficient building design principles and software for building design and energy rating.
- Interlink with other disciplines concerned with buildings and cities
- Climate Sensible Home Design
- Solar Architecture and Health in Buildings
- Advanced problems in design dealing with complex and environmental problems emphasizing the planning of large scale institutional and public buildings.
- Luminous and acoustic aspects of design can be manipulated to facilitate the activities to be sheltered and explores how they can control objective mood and convey symbolic values.
- Energy and the thermal environment

Learning Activities and Teaching Methods:

Lectures, Studio Presentations, Studio Tutorials, Practical Exercises and Assignments, Projects

Assessment Methods:

Assignments, Diagrams, Models, Presentations, Sketchbook, Homework, Project, Mid-Term, Final Project

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Berge, B	The Ecology of Building Materials	Architectural Press UK	2009	1856175375
Cotton-Winslow,	Environmental design: Architecture and technology	PBC International NY	1996	0866364307
The European Commission	A Green Vitruvius	James & James	2001	187393694X