University of Nicosia, Cyprus
ARCH-513 Ecological Design within the built environment

Course Code	**Course Title**	**Credits (ECTS)**
ARCH-513	Ecological Design within the built environment	10
Department	**Semester**	**Prerequisites**
Architecture	Spring	none
Type of Course	**Field**	**Language of Instruction**
Required	MA Architecture	English
Level of Course	**Year of Study**	**Lecturer**
2nd cycle	1st	Petros Lapithis
Mode of Delivery	**Work Placement**	**Co-requisites**
face-to-face	N/A	None

Objectives of the Course:

- An understanding of the geologic, hydrologic, and ecosystem processes, as well as regional climate, and site-specific microclimates
- advanced concepts of ecology are examined
- study of human perceptions of ecology through literature and practical applications.
- Familiarize students with contemporary ecological design and methodology
- Establish a broad basis of debate on issues confronting contemporary ecological design within the built environment
- Provide students with an awareness of ecological design and the built environment, their complexity and their impact on the environment, the economy and the health and the quality of life of the citizens.
- To continue enhancing the critical thinking ability of the students: to develop the students' ability to identify from the beginning the major issues of any given project assignment, to analyse the primary conditions, on which they will also use their critical thinking approach.
- To develop the students' ability to gradually create their own methodology of assembling various critical or analytical issues or conditions that can innovatively direct proposals.
- To further strengthen the students' consideration/ sensitivity towards the site conditions, social circumstances, sustainability etc: not only by analysing the existing conditions, but also by directing the proposed conditions into supporting/ enhancing the considered conditions.
- To study the human and social impact of the built environment upon the inhabitants of that environment: physically, emotionally and psychologically.
- To explore the motivation for ecological design on an international, national and individual basis is discussed.

- To present the core theories underpinning ecological design
- To reconsider the question of what qualifies as ecological design
- To explore related issues such as responsibility in ecological design, pace of change (energy efficiency, recyclability), appearance, geography (local and global conditions).
- To emphasize the importance of ecological design on an international, national and individual basis.
- Describe the contemporary development of ecological design and its main issues

Learning Outcomes:

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

- Have an understanding of the geologic, hydrologic, and ecosystem processes, as well as regional climate, and site-specific microclimates
- advanced concepts of ecology are examined
- Study of human perceptions of ecology through literature and practical applications.
- Extract and apply information from historical and contemporary references in analysis and design of a ecological design.
- Understand the role of landscape in ecological design its response to the social and historical context, its concept and its relation to the built environment.
- Critically comment on the built environment in terms of its impact on the environment at a larger scale.
- Analyze and critically comment on contemporary ecological design approaches
- Describe and critically comment on contemporary ecological design and future tendencies
- Apply professional skills analyzing and synthesizing research and survey data
- Identify problems and chances for future development within a built environment
- Show insight and skillfulness in involving the relationship between man and space in the design process through attuning the design to human needs and standards and with regard to environmental ethics and ecological design;
- Understand the relationship between people and the buildings and the environment, and of the need to relate buildings and the spaces between them to human needs and scale;
- Synthesize social, cultural and political needs and requirements
- To study the human and social impact of the built environment upon the inhabitants of that environment: physically, emotionally and psychologically.
- To explore related issues such as responsibility in ecological design, pace of change (energy efficiency, recyclability), appearance, geography (local and global conditions).

Course Contents:

- Introduction to ecological design
- geologic, hydrologic, and ecosystem processes
- regional climate, and site-specific microclimates
- advanced concepts of ecology
- human perceptions of ecology
- Examination of ecological design in relation to buildings and public spaces.
- Analysis of the physical landscape, relating to ecological design and the built

environment
- Introduction to the methodology of ecological design analysis and its graphic communication as a basis for an ecological design responding to the economic, social, political, aesthetical and ecological context.
- Lectures and Readings
- Policies and Strategies
- Climate change
- Global and Regional ecological design

Learning activities and Teaching Methods:

- practical mappings /field studies/ drawn and written assignments
- discussions with class participation
- assignments
- Lectures
- Site visits

Assessment Methods:

- Problem analysis
- research
- conceptual development,
- project development
- Mid-Term
- final exam

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Ann Thorpe	The Designer's Atlas of Sustainability	Island Press	2007	1597261009
William McDonough	Cradle to Cradle	North point press	2002	0865475873
Peter Jennings	Cities as Sustainable Ecosystems	Island press	2008	1597261882