



UNIVERSITY OF NICOSIA

ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code ARCH-261	Course Title Computer Aided Design	ECTS Credits 4
Department Architecture	Semester Fall	Prerequisites ARCH-162
Type of Course Required	Field Architecture	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 2nd	Lecturer(s) Michalis Georgiou
Mode of Delivery face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- The course is designed to teach the basic knowledge of computer-aided design, through design projects and three-dimensional presentations
- To teach students the basic capabilities of computerized design
- To encourage practice in different kinds of design on the computer including: drawing on the computer fast, correcting drawing errors, revisions of the same drawing and three dimensional drawing
- To teach students to produce 2d and 3d graphic files and view perspectives of 3d drawings
- To encourage students to follow all the procedures necessary to prepare a drawing from initial design through final presentation – in particular layout, colours, textures, pictures etc

Learning Outcomes:

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

- Discuss the basic principles of Computer Aided Architectural Design
- Explain the 3rd dimension and architectural elements
- Experiment digital architecture modelling
- Analyze the relation between technology and design
- Generate 3d objects using CAD software
- Create architectural designs that satisfy technical and aesthetical requirements
- Illustrate the basic idea of the design through layout and presentation

Course Contents:

- Introduction to CAD
- Introduction to 2d design- 2d ground plans, elevation, sections using 2d commands
- Design of 3d models- architecture elements (walls, slabs, roofs, columns, stairs, openings,

- smart symbols)
- Design of 3d elements, solids, free forms, etc
- Import DWG/DXF/GDN/IFCBitmap
- Export 3DS files
- Create plans, elevations, sections from 3d models
- Create exterior and interior isometric, perspective views, etc
- Animation, define surfaces, lighting, rendering, hidden line image, wireframe
- Create layouts
- Saving and exporting images.

Learning Activities and Teaching Methods:

Lectures, Computer Demonstrations, Discussions, Presentations, Practical Exercises and Assignments

Assessment Methods:

Homework, Project, Mid-Term, Final Project, Presentation

Required Online Resources:

Authors	Title	Link
Autodesk	AutoCAD Release 2011	http://www.autodesk.com/autocad-tutorials
Robert McNeel Associates	Rhino Level 1 Training Manual	http://download.rhino3d.com/Rhino/4.0/Rhino4Training/

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Peter Szalapaj	Contemporary Architecture and the Digital Design Process	Architectural Press, Oxford U.K.	2005	0750657162
Maureen Mitton	Interior Design Visual Presentation: A Guide to Graphics, Models and Presentation Techniques 2 ND Edition	Chichester U.K.	2003	0471225525
Peter Szalapaj	CAD Principles for Architectural Design: Analytical Approaches to the Computational Representation of Architectural Form	Architectural Press, Oxford U.K.	2001	0750644362
Mirko Galli and Graudia Mühlhoff	Virtual Terragni. CAAD in Historical and Critical Research	Birkhäuser, Basel; Boston; Berlin	2000	3764361743