UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
ARCH-261	Computer Aided Design	4
Prerequisites	**Department**	**Semester**
ARCH-162	Architecture	Fall
Type of Course	**Field**	**Language of Instruction**
Required	Architecture	English
Level of Course	**Lecturer**	**Year of Study**
1st Cycle	Michail Georgiou	2nd
Mode of Delivery	**Work Placement**	**Corequisites**
Face to Face	N/A	N/A

Course Objectives:

The main objectives of the course are to:

- Present to participants the fundamental capabilities of computer aided architectural design (CAAD) and the various sub-domains of the field through lectures, presentations, assignments and readings.
- Introduce participants to a series of software packages to promote digital thinking, while developing representation skills through hands-on applications and examples.
- Practice and develop skills in post-production, presentation, basic 2D digital drafting, 3D modeling, visualization and digital fabrication, through hands-on applications and homework assignments.
- Create custom design workflows involving various digital tools to produce output from concept through to the final product for presentation or printing.

Learning Outcomes:

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

1. Classify the sub-domains of Computer Aided Design and Digital Fabrication
2. Identify the relation between technology and design
3. Compose digital Presentations that satisfy technical and aesthetical requirements
4. Illustrate design concepts using various representation techniques.
5. Use basic digital Fabrication machinery and recognize their applications for design.
6. Create basic 2d and 3d models using CAD software.
7. Explain elementary digital design workflows

Course Content:

- Introduction to Digital Design Thinking
- Introduction to Image Post-Processing and representation techniques
- Introduction to Desktop Publication
- Introduction to 2D drafting techniques
- Drawing setup, precision drafting, plotting
- Introduction to 3D modeling, navigating in a 3D environment and utilizing construction planes
- Transiting from 2D to 3D models
- Identifying Creating and editing basic elements in 3D space, curves, surfaces, solids
- Transiting from 3D to 2D (elevations, plans, sections) for hatching and annotation
- Preparing and annotating Digital Layouts for Printing
- Introduction to Basic Rendering
- Introduction to Digital Fabrication
- File setup for Digital Fabrication

Learning Activities and Teaching Methods:

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

Assessment Methods:

Presentation

Coursework

Final Project

Attendance

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Rhinoceros v5.0, Level 1, Training Manual	Mary Fugier, Jerry Hambly	Robert McNeel & Associates	2018	https://www.rhino3d.com/download/rhino/6.0/Rhino5Level1Training
Lecturer's Notes / Presentations	Michail Georgiou			

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Architecture in the Digital Age: Design and Manufacturing	Kolarevic B.	Taylor and Francis	2005	041538141 X
AD: Design Through Making	Bob Sheil	John Wiley & Sons	2005	0470090936