

MEDITERRANEAN UNIVERSITY OF REGGIO CALABRIA

Subject Code	1000321 - CAD
Subject Name	CAD (<i>Computer Aided Design</i>)
Professor	Prof. Franco Prampolini
Department:	Patrimonio, Architettura e Urbanistica (PAU)
Degree course:	Scienze dell'Architettura
Class:	L 17
Type of educational activity:	Ulteriori attività formative (<i>Complementary learning activities</i>)
Disciplinary Area:	Disegno e Rappresentazione (<i>Drawing and Representation</i>)
Scientific-Disciplinary Sector:	ICAR/17 – Disegno (<i>Drawing</i>)
Compulsory preliminary exams:	-
Course Year:	First
Semester:	First
ECTS:	4
Hours:	40

Synthetic description:

The course of *CAD* is aimed at providing the students attending the first year of the Degree Course in **Scienze dell'Architettura** (L-17) a general overview of the different fundamental typologies of computer aided design:

Student must reach the capacity of making fundamental customisation of the operating environment, performing the basic operation with the user interface and settle the drawing structure for the final expected results.

Acquisition of knowledge on:

The course of Computer Aided Design, integrated with the Laboratory of Representation of the first year, is meant to provide students with an overview, as wide and varied as possible, of IT tools to support survey, design and architectural representation activities. Different software are going to be introduced, considering their specificity for immediate use in the different addressed arguments.

1. SketchUp: representation of elementary geometry of 2D and 3D objects. Orthogonal and perspective view. Application of materials to surfaces. Basics of rendering and transparency. Shadows.
2. Autodesk AutoCAD: complex geometry of 2D and 3D objects: spline, meshes, NURBS. Dimensioning and parameterization.
3. Adobe Photoshop: image processing and graphic design.
4. Agisoft PhotoScan: photomodelling, photogrammetry and 3D modeling.

The course, then, is not tailored to be "an introduction" for the use of a particular software (e.g. AutoCAD), but students are gradually expected to go into the fundamentals of software, useful to the realization of the projects requested by the connected Laboratory of representation.

Students, for the achievement of the requested competence, are supposed to reach the basic knowledge of graphic interfaces and the general structure of the operating menus, as well as key concepts for configuring operating environment. It will also be evaluate the overall quality of the projects realized.

Student's independent work

In an independent way the student will be engaged in the deepening of the different topics, practicing on required applications in Cartography (AutoCAD), Descriptive geometry (SketchUp), Image design and processing (Photoshop) and Architectural surveying, trough the means of analytical photomodelling (Photoscan).

Evaluation method:

The assessment of eligibility will be performed in one with the final project of the course of the "Laboratorio di Rappresentazione" (*Laboratory of representation*). It will be preceded by the delivery of in-progress papers, from time to time indicated by the teacher.

Students that need to perform the evaluation immediately after the conclusion of the semester are supposed to contact the teacher to settle a specific project for the examination.

Resources and main references:

Operating user manuals of the different software.

Along the year, different on line and printed tutorial are going to be made available