

Computer Assisted Drawing

1. **Course number and name:** 020DAINI4 Computer Assisted Drawing
2. **Credits and contact hours:** 4 ECTS credits, 2x1:15 contact hours
3. **Name(s) of instructor(s) or course coordinator(s):** Ghassan Hachem
4. **Instructional materials:** PowerPoint slides; course handouts

5. Specific course information

a. Catalog description:

This course empowers civil engineering students with the skills to proficiently utilize Autodesk's AutoCAD software. Throughout the course, students will actively engage in hands-on exercises focused on civil drawings, structural elements, rebar placement, and the layout of apartments and building sections. The course structure is designed to progressively guide students through key concepts, beginning with an introduction to Computer-Aided Design (CAD), covering the graphical interface, and essential commands such as Line, Erase, Copy, Move, and Rotate. The aim of this course is to provide students with a solid foundation in using AutoCAD, a widely adopted software within the civil engineering community. This knowledge will empower them to contribute effectively to the field by producing accurate and professional engineering drawings.

b. Prerequisites: None

c. Required/Selected Elective/Open Elective: Required

6. Educational objectives for the course

a. Specific outcomes of instruction:

- Utilizing AutoCAD from Autodesk software to draw and create 2D structural elements.
- Create a new layout from a hard copy document.
- Learn to save, modify, insert and place dimensions and text in to an AutoCAD file.
- Create a drawing and save a clear file where information can be shared with site and office engineers and Clients.

b. PI addressed by the course:

PI	1.3	2.1	7.1
Covered	x	x	x
Assessed	x	x	x

7. Brief list of topics to be covered

- Introduction - Installing the AUTOCAD software - Creating a save (dwg) file – Unit
- Drawing execution (choice of commands – steps for elaborating a drawing)
- Adding details to the drawing (Dimensions – Text)
- Carrying modifications of drawings
- Using layers for better handling of drawings
- Printing drawings
- Exercises (Plan: Section and Elevation view of an Apartment – section and details of a steel number – section of reinforced concrete)