



Course Code CVEE-112	Course Title Technical Drawing & CAD	ECTS Credits 6
Department Engineering	Semester Fall, Spring	Prerequisites None
Type of Course Elective	Field Civil & Environmental Engineering	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 1 st	Lecturer(s) Dr Loizos Papaloizou
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objective of the course is to train the students in reading and understanding engineering and architectural drawings and the use of the computer as a drafting tool. Additionally, provide students the ability to develop and produce formal engineering drawings according to standard drafting practice using Computer Aided Design (CAD). Furthermore, the course will provide hands-on practice of CAD through the use of the specialized CAD software.

Another course objective is to improve the student's ability to visualize 3D geometrical constructions and provide them with the latest trends in computer-aided design which are used in modern civil engineering applications.

This course will also encourage students to incorporate these computer-based design tools in subsequent structural courses. Finally, an introduction to Building Information Modeling will be made.

Learning Outcomes:

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

- Read and interpret engineering drawings.
- Gain a design experience using software drawing tools and techniques.
- Execute CAD commands for drawing entities, editing, drawing setup, viewing and plotting.
- Prepare technical drawings using computer aided drafting technology.

Course Contents:

- Introduction to Computer Aided Design.
- Principles and practice of sketching.
- Theory and practice on plans, sections and Orthographic Views.
- Dimensioning.

- Design and working drawings.
- Introduction to 3D modeling.
- Introduction to Building Information Modeling

Learning Activities and Teaching Methods:

Lectures, Computer Lab sessions, daily/weekly projects (homework), final project

Assessment Methods:

Homework, class assignments in CAD software, final project

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Frederick E. Giesecke Ivan L. Hill Henry C. Spencer Alva E. Mitchell John Thomas Dygdon James E. Novak Shawna E. Lockhart Marla Goodman	Technical Drawing with Engineering Graphics (14th Edition)	Peachpit Press	2011	978-0135090497

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Randy Shih	AutoCAD 2014 Tutorial - First Level: 2D Fundamentals.	SDC Publications	2013	978-1585037872
Francis Ching	Architecture: Form, Space and Order	John Wiley & Sons		0-47-128616-8