UNIVERSITY of NICOSIA

Course Code	Course Title	ECTS Credits
MENG-110	Computer Aided Design	6
Department	**Semester**	**Prerequisites**
Engineering	Fall, Spring	None
Type of Course	**Field**	**Language of Instruction**
Required	Engineering	English
Level of Course	**Year of Study**	**Lecturer(s)**
1st Cycle	1st	Dr Sarris Ernestos
Mode of Delivery	**Work Placement**	**Co-requisites**
Face-to-face	N/A	None

Objectives of the Course:

The main objective of the course is to explain to the student's how mechanical engineering drawings and designs are created. Reading and understanding of engineering drawings is a working tool for the mechanical engineer. The drawings and designs will be created with 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 suitable for mechanical engineers (i.e SolidWorks).

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 mechanical engineering applications.

This course will also encourage students to incorporate these computer-based design tools in subsequent mechanical courses. Finally, an introduction to the design and modeling of 3D mechanical parts will be made.

Learning Outcomes:

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

- Read and interpret mechanical 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 mechanical drawings using computer aided drafting technology.

Course Contents:

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

- Design and working drawings with solidworks.
- Introduction to 3D modeling of mechanical parts
- Introduction to the design of multi-body techniques.
- Introduction to mechanical engineering modeling.

Learning Activities and Teaching Methods:

Lectures, Computer Lab sessions, daily/weekly projects (homework), final project.
The course format is 2 h lectures and 1 h laboratory tutorial session per week.

Assessment Methods:

Homework, class assignments in CAD software, final project

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Bethune D. James	Engineering Design and Graphics with Solidworks	Prentice Hall	2009	978-0135024294

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Matt Lombard	SolidWorks Bible	Wiley	2013	978-0470258255
Howard William & Musto Joseph	Introduction to Solid Modelling Using SolidWorks 10th Edition	McGraw-Hill Education	2014	978-0078021244