



# FREDERICK UNIVERSITY CYPRUS

## DEPARTMENT OF MECHANICAL ENGINEERING

<b>Subject:</b>	Computer Aided Design– AMEG 202
<b>Academic Year:</b>	-
<b>Lecturer:</b>	Dr. Antonios Lontos
<b>Number of periods per week:</b>	1+3 (Laboratory hours)
<b>Number of total weeks:</b>	14

### Course Outline:

- Databases of CAD systems and Neutral File Standards (IGES, STEP, DXF)
- Designing principles of mechanical drawings, Basic principles of CAD systems
- Geometry and Line generation, Planes and coordinates, Projections, Points and lines, Line segments, Curves
- Display devices, The Design File and Element Creation
- AutoCAD and SolidWorks File Creation, Attaching Menus, Design File Concepts, The AutoCAD and SolidWorks Screen, Activating Drawing Commands, The Main Palette, Window Controls, Symbology and Toolbars
- Plotting Manager, Dimensioning placement, Miscellaneous dimensioning, Linear dimensioning, Angular Dimensioning, Radial dimensioning, Plotting, Other AutoCAD and SolidWorks manager utilities
- Creation and designing of mechanical part and elements in 2D dimension
- Definition of 3D Surfaces using the CAD systems
- Construction of mechanical parts in 3D dimension, Sections and views
- Drawing and construction of assembled mechanical parts
- Searching for new techniques and methods for the designing of complicated mechanical parts

### Assessment:

Final exam	60%
Coursework	40%

*The passing mark is 50%. To pass the course you must get a 35% grade in both final exams and coursework.*

### Coursework:

- Test 1: Construction of mechanical parts in 2D dimension  
Test 2: Construction of mechanical parts in 3D dimension

### Grading system:

Tests	100%
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### Textbooks:

- Book for AutoCAD leaning
- Graphics Concepts with SolidWorks, Richard M. Lueptow, Michael Minbiole Prentice Hall

### References:

- Instant AUTOCAD: Essentials Using AutoCAD 2002, Stephen J. Ethier and Christine A. Ethier, Prentice Hall
- Engineering Drawing and Design, Jay D. Helsel, Dennis R. Short, Cecil Howard Jensen, Glencoe McGraw Hill, 6th Bk&cdr, 2002.
- Design Dimensioning and Tolerancing, Bruce A. Wilson, Goodheart-Willox, 2001
- Engineering Drawing & Design by David A. Madsen (Editor), Delmar Learning, 3<sup>rd</sup> edition, 2001.
- Principles of Computer Aided Design and Manufacturing, Farid M. Amirouche, Prentice Hall, 2004
- Engineering Design Graphics, James H. Earle, Prentice Hall, 2004
- Engineering Graphics, Frederick E. Giesecke, Alva Mitchell, Prentice Hall, 2004

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