

McEng 2112– Computer Aided Drafting

Course Number: McEng 2112	Credit Hours: 3
Course Title: Computer Aided Drafting	Contact Hours: 1 Lecture hr and 6 Tutorial hrs
Course Objectives: <ul style="list-style-type: none">• Upon completion of the course the students will be able to draw two dimensional and three dimensional mechanical drawings using CAD software.	
Course Description: <p>Introduction to representing of drawing primitives on a computer; CAD hardware and software; Basic commands of drawing and drawing settings, editing, dimensioning, text annotations of a CAD software; Project work of two-dimensional mechanical drawing with CAD software; Introduction to three dimensional drawing and parametric design.</p>	
Course Outline <ol style="list-style-type: none">1. Introduction to Basic CAD software: CAD window; Setting up of a new drawing; Working with an existing CAD files; Hardware and Software tips2. Basic Drawing & Editing Commands: Drawing Lines; Drawing circles and circular arcs; Drawing ellipse and elliptical arcs; Drawing polygons; Drawing Curves (Sketch); Creating regions; Hatching areas3. Drawing Precision in CAD: Using Object Snap; Making changes in a drawing; Advanced editing commands; Changing an object's length; Blocks; Attributes.4. Text Annotation and Dimensioning: Adding text to drawing; Adding Dimensions5. Introduction to 3D Drawings: Working in 3D; Solid modeling; Visualization techniques (Rendering Concepts)	

6. Introduction to parametric design (Pro Engineer)	
Pre-requisites: McEng-2111- Machine Drawing	
Co-requisite:	
Textbook:	
References: Omura George, <i>Mastering AutoCAD 2000 for Mechanical Engineers</i>	
Teaching Methods: <ul style="list-style-type: none"> • Lectures supported by tutorials, and • Projects and computer laboratory work. 	
Project: <ol style="list-style-type: none"> 1. 2D assembly drawing 2. 3D drawing 	
Attendance Requirement: <ul style="list-style-type: none"> • Minimum of 75% attendance during lecture hours; and • 100% attendance during practical work sessions, except for some unprecedented mishaps. 	
Evaluation: <ul style="list-style-type: none"> • Project I 20%, • Project II 30%, and • Final Examination 50%. 	
Hours per-semester: 64	