



Subject Code: 09ME1104

Subject Name: Computer-Aided Mechanical Drafting

Semester – II

Objective: The course objective is to teach the students the basic commands necessary for professional 2D CAD drawing, design, and drafting using a 2D drafting tool. Even students with no previous CAD experience can progress quickly through this course which is arranged in a sequence that is easy to understand.

Credits Earned: 3 Credits

Course Outcomes: After learning the course the students should be able to:

- Draw various types of drawing on AutoCAD.
- Draw any 2D view of the object.
- Draw any 3D view of the object.
- Be able to render all type of drawings.
- Be able to draw detail drawing.
- Present drawings in a detailed and visually impressive manner.

Pre-requisite of course: NA.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE	IA	CSE	Viva	Term work	
0	0	6	3	00	30	20	25	25	100

Contents:

Sr.no	Content	Total hrs.	% weightage
1	Fundamentals of CAD CAD definition, concept & need, CAD process, Functional areas of CAD, Coordinate systems.	04	20
2	Introduction to AutoCAD Starting AutoCAD, AutoCAD Screen Components, Drawing Area, Command Window, Navigation bar, Status bar, Keyboard, Application Menu, Tool Palettes, Menu Bar, Toolbar, Shortcut Menu, AutoCAD Dialog Boxes, Starting New Drawing, Open a Drawing, Saving Your Work, Closing a Drawing, Opening an Existing Drawing.	06	10



3	Introduction to Basic 2D sketching Basic 2D commands like Line, Circle, Ellipse, Multi Line, Construction Line, Polyline, Point, Donut, Ellipse, Polygon, Rectangle, Arc, Erase, Snap, Redraw, Regenerate, Zoom, Pan, spline, table, ray.	20	20
4	Advanced 2D sketching Modify Properties of Drawing Entity, Copy, Move, Rotate, Mirror, Offset, Array, Scale, Stretch, Lengthen, Trim, Extend, Break, Chamfer, Fillet, hatching, boundary, and region.	24	20
5	Basic Dimensioning And Tolerance Dimension command – linear, aligned, arc length, radius, Diameter, Centre, Leader, Baseline and Continuous Dimensioning, tolerance, override and Dimension updates Text and DTEXT commands with Text Style	16	15
6	3D Commands of AutoCAD Use 3D commands to generate 3d view from 2D drawing, Prepare 3D Drawings using 3D Commands of AutoCAD. Plot of 2D & 3D Drawings Setup printer, plotter for printing of drawings	14	15

References:

1. AutoCAD for engineer and designer by. Tickoo, sham.
2. Engineering drawing with an introduction to AutoCAD by. Jolhe, Dhananjay A.
3. Engineering drawing and graphics using AutoCAD by. Jeyapoovan T.

List of Jobs/Experiments:

Tutorial 1 to 4 - Basic 2D sketches.

Tutorial 5 to 8 - Advanced 2D sketches.

Tutorial 9 to 10 - Basic 3D sketches.

Instructional Method:

- a. The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory.
- b. Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.