II B. Tech – I Semester

(20ME3102) COMPUTER AIDED ENGINEERING DRAWING LAB

Int. Marks	Ext. Marks	Total Marks	L	T	P	C
15	35	50	-	-	3	1.5

Pre-Requisites: Knowledge in dimensions and units, Usage of geometrical instruments and analytic salability, Operating system

Course objectives:

- To make the student well versed with advanced concepts in engineering drawing.
- To impart knowledge about standard principles of orthographic projection of objects.
- To make the student capable of drawing sectional views and pictorial views of solids.
- To enhance the student's knowledge and skills in engineering drawing and to introduces drafting packages and commands for computer aided drawing and modeling

Module: 1

(To be drawn on the drawing sheet)

1. Curves: Cycloid, Epicycloid, Hypocycloid, Involute.
2. Sections of solids: Sections and Sectional views of Right Regular Solids Prism, Cylinder, Pyramid, Cone Auxiliary views.
3. Development of solids: Development of Surfaces of Right Regular Solids Prism, Cylinder, Pyramid, Cone and their parts.

Module: 2

(To be drawn using the Computer)

1. Conversion of Isometric Views to Orthographic Views
2. Conversion of Orthographic Views to Isometric Views
3. Sectional Views: Conversion of pictorial views into orthographic projections, of simple machine parts with section.

Course Outcomes:

A student who successfully fulfills this course requirement will be able to:

S. No	Course Outcome	BTL
CO1	Understand the concept of sectioning, development and their application	L4
CO2	Apply the off curves to applicable engineering problems.	L4
CO3	Prepare working drawings to communicate the ideas and information.	L4
CO4	Read, understand and interpret and draw engineering drawings using AutoCAD.	L4

Correlation of Cos with POs & PSOs:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	2	3	0	0	3	1	0	3	3	3	3	3	2
CO2	3	2	3	0	0	3	1	0	3	3	3	3	2	2
CO3	3	2	3	0	0	3	1	0	3	3	3	3	3	2
CO4	3	2	3	0	0	3	1	0	3	3	3	3	3	2

Text books:

1. Engineering Drawing N.D. Bhatt / Charotar
2. Engineering Drawing / N. S. Parthasarathy and Vela Murali/ Oxford

Reference books:

1. Engineering Drawing / Basant Agrawal and Mc Agrawal/ McGraw Hill
2. Engineering Drawing/ M. B. Shah, B.C. Rane / Pearson.
3. Computer Aided Engineering Drawing – K Balaveera Reddy et al – CBS Publishers

Virtual Lab Links:

- http://vlabs.iitb.ac.in/vlabs-dev/labs/mit_bootcamp/egraphics_lab/labs/exp1/index.php
- https://www.autodesk.in/products/autocad-web-app/overview