I Year I Semester	L	T	P	C
Code: 17ME103	3	1	0	3

ENGINEERING DRAWING
(ECE and CSE)

Objectives:
To enhance the student's knowledge and skills in engineering drawing and to introduce the drafting packages and commands for computer aided drawing and modelling.

UNIT-I
Introduction to engineering drawing: different types of lines used for representation of features in engineering drawing, dimensioning
Polygons, construction of regular polygons using given length of a side Scales- Vernier and Diagonal scales

UNIT-II
Introduction to orthographic projections; projections of points; projections of straight lines parallel to both the planes; projections of straight lines – parallel to one plane and inclined to the other plane. Projection of straight lines inclined to both the planes, determination of true lengths, angle of inclinations and traces.

UNIT-III
Projection of planes, regular planes perpendicular parallel to one plane and inclined to the other reference plane, inclined to both the reference planes.
Projections of solids – projections of regular solids inclined to both the planes using change of position method (Prisms, Pyramids, Cones and Cylinders)

UNIT-IV
Isometric Projections: Principles of Isometric projections – Isometric views of lines, plane figures, simple and compound solids.
Transformation of projections: Conversion of Isometric views to orthographic views and orthographic to isometric views.

UNIT-V
Introduction Computer aided Drafting: Generation of points, lines, curves, polygons dimensioning.
Types of modelling: object selection commands – edit, zoom, cross hatching pattern filling, utility commands, 2D wire frame modelling, 3D wire frame modelling

UNIT-VI
Computer aided solid modelling: Isometric projections, orthographic projections of isometric projections. Modelling of simple solids, Modelling of Machines and Machine parts.

Text Books:

1. Engineering Drawing – K L Narayana, P Kannaiah, Scitech Publications
2. Engineering Drawing by N D Bhatt, Charotar Publications

Reference Books:

1. Mastering Auto CAD 2013 and Auto CAD LT 2013 – George Omura, Sybex.
2. Auto CAD 2013 fundamentals – Elisemoss, SDC Publications.
3. Engineering Drawing + Auto CAD – K V Venugopal, V Prabhu Raja – New Age
4. Engineering Drawing – R K Dhawan – S.Chand Publications
5. Text Book of Engineering Drawing with auto CAD, K Venkata Reddy – BS Publications