II SEMESTER	L	T	P	C
	2	0	2	3
19ME2T03 - COMPUTER AIDED ENGINEERING DRAWING				

COURSE OBJECTIVE:

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

COURSE OUTCOMES: Students will be able to

CO1: Draw the projections solids by auxiliary views and development of surfaces of regular solids. (K3)
CO2: Draw the isometric and perspective projections of planes and solids. (K2)
CO3: Draw the geometric entities and to create 2D and 3D wire frame modeling. (K3)
CO4: Identify the view points and view ports. (K2)
CO5: Create different Machines and Machine parts using CAD software. (K3)

UNIT – I

Projections of Solids: Projection of regular solids inclined to both the planes using auxiliary views and sectional views of regular solids.

Development of Surfaces of Right Regular Solids: Prisms, Cylinders, Pyramids and Cone.

UNIT –II

Isometric Projections and Orthographic Projections: Compound solids, isometric projections of objects having non-isometric lines and spherical parts.

Perspective Projections: perspective view of points, lines, plane figures and simple solids- vanishing point method (General method only)

UNIT-III

Introduction to Computer Aided Drafting: Generation of points, lines, curves, polygons, dimensioning. Object selection commands, edit, zoom, crosshatching, pattern filling, utility commands, 2D wire frame modeling, 3D wire frame modeling

UNIT-IV

View Points and View Ports: View point coordinates and views displayed, examples to exercise different options like save, restore, delete, joint, single option.

UNIT-V

Computer Aided Solid Modeling: Modeling of simple solids and modeling of different Machines and Machine parts

TEXT BOOKS:

1. Engineering Drawing by N.D.Bhatt , Charotar publications 2016
2. Engineering Drawing + AutoCad – K Venugopal, V. Prabhu Raja, New Age2010

REFERENCE BOOKS:

1. Engineering Drawing - K.L.Narayana, P.Kannaiah, and K.Venkata Reddy, New Age International Publishers. 2016
2. Text book of Engineering Drawing with AutoCAD - K.Venkata reddy, B.S.Publications 2017
3. Engineering Drawing - R.K. Dhawan,S.Chand 2012

The syllabus in respect of the subject "Computer Aided Engineering Drawing Practice" consists of two major portions

1. Unit I to II - conventional drawing pattern.
2. Unit III to V - computer lab pattern using any drafting package.

Max Marks – 100.

Internal Marks: 30 & External Marks: 70

The examination in respect of the above may conducted on par with lab with the following pattern:

Mid Exam:

I Mid Exam from first Two Units- Conventional Drawing

II Mid Exam from Last three Units - Computer Lab

END SEMESTER EXAM:

Part - A - Conventional Drawing test in Drawing Hall from first Two Units - 2 hrs duration.

Part - B - Exam in Computer Lab using any drafting package - 2 hrs duration.

End Exam duration - 4 hrs