ENGINERING DRAWING

(Common for all branches)

Course Code - Category: CSE 125 - ES **Credits:3.5**

L	**T**	**P**	**E**	**O**
2	**0**	**3**	**1**	**4**

Sessional Marks:40

End Exam: 3 Hours End Exam Marks:60

Course Objectives

- The course is designed to introduce fundamentals of engineering drawing and apply the principles to draw engineering curves, orthographic projections and isometric projections.

Course Outcomes:

By the end of the course, the student will be able to:	
CO 1	Draw conic sections by different methods and construct cycloidal and involute curves.
CO 2	Project orthographically the points and lines in various positions.
CO 3	Produce orthographic projections of plane surfaces
CO 4	Draw orthographic projections of solids in various orientations.
CO 5	Construct isometric views and isometric projections of simple solids.

SYLLABUS

UNIT I

Introduction to Engineering drawing & basics of geometrical construction. General Construction of conic sections, Ellipse - concentric circle and arcs of circle method, Parabola- rectangle and tangential method Hyperbola - Rectangle hyperbola, Construction of cycloidal curves (cycloid, epicycloid, and hypocycloid), Involute(thread length equal to circumference/ perimeter) - circle and regular polygon.

UNIT II

Orthographic projections – projections of points – projections of straight lines (lines parallel to both HP&VP, lines parallel to one and inclined to other, lines inclined to both the planes)

UNIT III

Projections of regular polygon planes – inclined to one plane, inclined to both the planes.

UNIT IV

Projection of solids: Prisms – Cylinder– Pyramids &Cones –simple positions & axis inclined to one plane, inclined to both the planes.

UNIT V

Isometric projections –Isometric scale, Isometric view & projection of prisms, pyramids, cone, cylinder, sphere, and their combination.

TEXT BOOK:

1. **N. D. Bhatt** "*Engineering Drawing"* Charotar Publishing House Pvt.Ltd, 53rd Edition : 2014

REFERENCE BOOKS:

1. **K. L. Narayana& P. Kanniah** "*Engineering Drawing"*

2. **R. B. Choudary** "*Engineering Graphics* with Auto CAD"

3. **TrymbakaMurty** "*Computer Aided Engineering Drawing"*