



I Year - I Semester	L	T	P	C
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ENGINEERING DRAWING (R13109)				

Prerequisite Course: Students need to have knowledge about geometry.

Course Description and Objectives: Engineering drawing being the principal method of communication for engineers, the objective is to introduce the students, the techniques of constructing the various types of polygons, curves and scales. The objective is also to visualize and represent the 3D objects in 2D planes with proper dimensioning, scaling etc

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

CO	Course Outcomes	POs
1	Use drawing instruments to draw polygons and Engineering Curves.	3
2	Construct scales and draw Orthographic projections	2
3	Able to draw projections of points	3
4	Understand and draw projections of planes	4
5	Describe and draw projections of solids	2
6	Conversion of isometric view to orthographic view and vice versa	3

Syllabus:

UNIT I

Polygons, Construction of regular polygons using given length of a side; Ellipse, arcs of circles and Oblong methods; 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.

UNIT III

Projections of straight lines inclined to both the planes, determination of true lengths, angle of inclinations and traces.

UNIT IV

Projections of planes: regular planes perpendicular/parallel to one plane and inclined to the other reference

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R-13 Syllabus for EEE - JNTUK

plane; inclined to both the reference planes.

UNIT V

Projections of Solids – Prisms, Pyramids, Cones and Cylinders with the axis inclined to one of the planes.

UNIT VI

Conversion of isometric views to orthographic views; Conversion of orthographic views to isometric views.

TEXT BOOKS:

1. Engineering Drawing by N.D. Butt, Chariot Publications.
2. Engineering Drawing by K.L.Narayana & P. Kanniah, Scitech Publishers.
3. Engineering Graphics by PI Varghese, McGrawHill Publishers.

REFERENCE BOOKS:

1. Engineering Graphics for Degree by K.C. John, PHI Publishers.
2. Engineering Drawing by Agarwal & Agarwal, Tata McGraw Hill Publishers.
3. Engineering Drawing + AutoCad – K Venugopal, V. Prabhu Raja, New Age.