Engineering Drawing

CEME 105 S1
CEME 105 S2

	L	T	P	Credit
Scheme	**2**	**0**	**4**	**04**

- **INTRODUCTION** **(01 Hours)**
  Importance of Engineering Drawing, Drawing instruments and materials, B.I.S. and ISOConventions, First angle and third angle projection method.

- **ENGINEERING CURVES** **(03 Hours)**
  Classification of engineering curves, construction of conics, cycloidal curves, Involutes and spirals.

- **PROJECTION OF POINTS, LINES AND PLANES** **(04 Hours)**
  Introduction to principal planes of projection, Projections of the points located in same and different quadrant, projection of lines with its inclination to the reference planes, true length of the lines and its inclination with reference planes, projection of planes with its inclination with two reference planes, concept of auxiliary plane method for projection of planes.

- **PROJECTION AND SECTION OF SOLIDS** **(03 Hours)**
  Classification of the solids, projections of the solids like cylinder, cone, pyramid and prism with its inclination to two reference planes, Section of such solids and true shape of the section

- **PENETRATION CURVE** **(03 Hours)**
  Classification, line of interaction, line/generator method and section plane method;intersection of two prisms, two cylinders, interaction of cone and cylinder, pyramid with prism.

- **DEVELOPMENT OF THE LATERAL SURFACES** **(02 Hours)**
  Method of development, parallel line development, radial line development, developments of cylinder, cone, prism, pyramid, true length of edges – oblique surface.

- **ORTHOGRAPHIC PROJECTIONS** **(04 Hours)**
  Projections from pictorial view of the object on the principle planes for view from front, top and side using first and third angle of projection method

- **ISOMETRIC PROJECTIONS** **(04 Hours)**
  Terminology, isometric scale, isometric view and isometric projection, isometric axes and lines

- **INTRODUCTION TO COMPUTER AIDED DRAFTING** **(04 Hours)**
  Introduction of the drafting and modeling tools and demonstration of its application in latest machines.

(Total Lecture Hours: 42)

PRACTICALS: Practice with drawing sheets

1. Orthographic views
2. Isometric views
3. Engineering curves.
4. Projection of points and planes
5. Projection of solids.
6. Section of solids
7. Penetration curve and surface development
8. Demonstration of computer aided drafting and demonstration of its application in latest machines.

BOOKS RECOMMENDED:

1. Bhatt N. D., Engineering drawing, Charotar publishing house, 2014
2. Shah P. J., Engineering Graphics, S. Chand and Company, 2013