ME111   **ENGINEERING GRAPHICS**   **2-0-4**

COURSE OBJECTIVE:

1. To familiarize with the construction of geometrical figures
2. To familiarize with the projection of 1D, 2D and 3D elements
3. To familiarize with the sectioning of solids and development of surfaces
4. To familiarize with the Preparation and interpretation of building drawing

COURSE CONTENT:

Projections of Points, Straight Lines and Planes: Types and use of Lines, Lettering & Dimensioning, Various types of projection System, Projection of Points in different quadrants, projections of lines and planes for parallel, perpendicular & inclined to horizontal and vertical reference planes.

Projections Solids and Development of Surfaces: Cylinder, Cone, Pyramid, & Sphere with axes parallel, perpendicular & inclined to both reference planes. Development of surfaces of various solids. Sections of Solids Section planes, Sectional views, True shape of Sections for Prism, Cylinder, Pyramid, and Cone & Sphere. Orthographic Projections of Simple objects and Machine Components like Bolts and Screw.

Isometric projections: Isometric scales, isometric views of Simple objects.

Introduction to computer-aided drafting (CAD): Cartesian and Polar Co-ordinate system, Absolute and Relative Co-ordinates systems; Basic drawing commands: Line, Point, Rectangle, Polygon, Circle, Arc, Ellipse, Polyline; Basic editing Commands: Basic Object Selection Methods, Window and Crossing Window, Erase, Move, Copy, Offset, Fillet, Chamfer, Trim, Extend, Mirror. Display Commands: Zoom, Pan, Redraw, and Regenerate; Simple dimensioning and text, Simple exercises.

Solid modelling: Basics of 2-D solid modelling

LABORATORY
Drawing for topics covered in the theory as suggested by the course coordinator.

EVALUATION

Evaluation will be continuous an integral part of the class as well through external assessment.

REFERENCES
N.D. Bhatt and V.M.Panchal, Engineering Drawing Plane and Solid Geometry, Charotar Publishing House.
James leach, AutoCAD 2015 Instructor, SDC Publications