

## **11-ES104 Engineering Graphics with CAD**

### **SYLLABUS**

**Introduction to Computer Aided Drafting**, AutoCAD Commands, Types of lines, Dimensioning, Theory of Projection – Elements of projection, planes of projection, methods of projection.

**Projection of Points and Straight Lines** – Projection of points, projections of straight lines, various positions of straight lines w.r.t. reference planes, traces of lines.

**Projection of Planes** – Types of planes, projection of planes, various positions of planes w.r.t reference planes (Use First angle method of projection)

**Projection of Solids** – Types of solids, projection of solids in simple position, projection of solids with axis inclined to one reference plane and parallel to other. (Use First angle method of projection)

**Orthographic Projection** – Introduction to Orthographic projections, types of surfaces, invisible lines, precedence of lines, steps to draw orthographic views, orthographic projection of different objects. (Use First angle method of projection)

**Isometric projection** – Theory of isometric projection, isometric view, isometric views from orthographic views for simple objects. (Use First angle method of projection)

### **BOOKS:**

Notes will be made available

### **REFERENCE BOOKS**

1. Engineering Drawing by N.D.Bhatt
2. Engineering Drawing with an introduction to AutoCAD by Dhananjay A. Jolhe, Tata McGraw-Hill Publishing company limited
3. Engineering Graphics with AutoCAD by D. M. Kulkarni, A. P. Rastogi and A.K. Sarkar; PHI Learning Private Limited, New Delhi, 2009.