

Course Title	Engineering Drawing and Design			Course Code	BST 32393		
Year	3	Semester	2	Credits	02	Theory (hr)	15
						Practical (hr)	30
						Independent Learning (hr)	

**Aim of the Course:**

To provide the knowledge and skills required to construct and interpret a standard engineering drawing of a given object

**Intended Learning Outcomes:**

*After completion of this course, the learner should be able to:*

- Explain the meaning of sections and cutting plane lines.
- Draw the sectional views.
- Define size and shape accurately on an engineering drawing using the conventional dimensioning techniques.
- Produce a CAD drawing using the basic drawing commands.

**Course Capsule:**

Theory
Importance of engineering drawing as graphic communication, Link between engineering drawing and other subjects of study; Lettering, Numbering and Dimensioning: Necessity of dimensioning, Principles and method of dimensioning and dimensioning practice as per I.S.I. code; Conic section: Concept of drawing and conic section; Orthographic projections: Concept of horizontal, vertical and auxiliary planes, 1 <sup>st</sup> angle and 3 <sup>rd</sup> angle projection; Section views and Auxiliary views: Concept of sectioning and drawing section lines, Need for drawing sectional views; Isometric, Pictorial and Oblique drawing: Pictorial drawing. Different types of pictorial drawing viz. Isometric, oblique and perspective and their applications; Isometric views. Isometric projection and Isometric scale; Development of surfaces; Introduction to AUTOCAD and drawing

Practical
Use of drawing instruments and materials; Basic tools and selection of scales; Centre line, Section line, Dimensioning lines etc., Drawing of plain and diagonal scales and dimensioning practice; ellipse, parabola and hyperbola and drawing of tangent and normal; Projection of points / lines on horizontal, vertical and auxiliary planes and its implication; Section of simple geometrical solids-cases involving different types of cutting planes. Conventional representation of materials as per I.S. Code; Isometric projection of simple solids, frustum of solids, truncated solids and sets of simple solids, Simple drawing of oblique views; Development of surfaces of cylinders, prisms, pyramids, cones and their frustum and truncated objects; AUTOCAD and drawing

**Assessment:**

Continuous assessment: 60%  
 End semester assessment: 40%