

Lesson Plan

Name of the Faculty :

Discipline : Civil Engineering

Year/Semester : 1st Sem

Subject : ENGINEERING GRAPHICS

Lesson Plan duration : 16 weeks

Work load per week : Lecture – 00, Practical – 06

Week	Practical	
	Practical Day	Topic
1 st	1 st	Unit:-1 Introduction to Engineering Drawing Definition of Engineering Drawing, Introduction to drawing instruments, materials, layout and sizes of drawing sheets and drawing boards, engineering graph book, different grades of pencils to be used. Different types of lines in engineering drawing as per BIS specifications Practice of vertical, horizontal and inclined lines Principles of dimensioning: Types, elements, placing, different methods of dimensioning
2 nd	2 nd	1.5 Practice of geometrical figures such as –triangles, rectangles, circles, ellipses and parabola, hexagonal, pentagon with the help of drawing instruments.
3 rd	3 rd	Definition and classification of lettering, single stroke vertical and inclined lettering at 75o (alphabet and numerals) Freehand letter writing and sketches of various kind of objects in graph Sketch book/graph paper.
4 th	4 th	Unit:- 2 Graphics using CAD Meaning, requirement of computer graphics, CAD, screen structure and toolbars in AutoCAD, coordinate system, Drawing Limits, Units. Practice of LINE command, coordinates-Absolute, incremental, polar. POLYLINE, CIRCLE(3P,2P, TTR), ARC, ELLIPSE
5 th	5 th	Using above geometrical commands for making figure e.g. triangle, rectangle, hexagon, pentagon, parabola. 2.4 Editing commands-Scale, erase, copy, stretch, lengthen and explode
6 th	6 th	Use of SNAP, GRID and ORTHO mode for selection of points quickly. Use of these modes while picking points in LINE, CIRCLE, PLINE, ARC, ELLIPSE etc commands.

7 th	7 th	Unit:-3 Scales 3.1 Scales-their needs and importance (theoretical instructions), types of scales, definition of Representative Fraction(R.F.) and length of scale.
8 th	8 th	3.2 Construction of Plain and diagonal scale.
9 th	9 th	Scale
10 th	10 th	Unit:-4 Orthographic Projection Theory of orthographic projections (Elaborate theoretical instructions) Projections of points in different quadrants Projection of line (1st angle and 3rd angle) 4.3.1 Line parallel to both planes
11 th	11 th	4.3.2 Line perpendicular to any one of the principal plane 4.3.3 Line inclined to any one of the principal plane and parallel to other.
12 th	12 th	Projection of Solid-Cube, Cuboid, Cone, Prism, pyramid Three views of orthographic projections of different objects (At least one sheet in 3rd angle)
13 th	13 th	4.6 Making above sheets in AutoCAD of:- point line solids and two objects
14 th	14 th	Unit:- 5 Sectioning and Identification of surfaces 5. 1 Identifications of surfaces, Importance and salient features of sectioning of objects
15 th	15 th	5. 2 Description of full section, half section partial or broken out sections, Offset Sections, revolved sections and removed sections