Lesson Plan

Name of the Faculty :

Discipline : Civil Engineering

Year/Semester :1st Sem

ENGINEERING GRAPHICS

Lesson Plan duration : 15 weeks

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

Week	Practical	
	Practical Day	Topic
1st	1st	**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
2nd	2nd	1.5 Practice of geometrical figures such as –triangles, rectangles, circles, ellipses and parabola, hexagonal, pentagon with the help of drawing instruments.
3rd	3rd	Definition and classification of lettering, single stroke vertical and inclined lettering at 75_0 (alphabet and numerals) Freehand letter writing and sketches of various kind of objects in graph Sketch book/graph paper.
4th	4th	**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
5th	5th	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
6th	6th	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.

7th	7th	**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.
8th	8th	3.2 Construction of Plain and diagonal scale.
9th	9th	**Scale**
10th	10th	**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
11th	11th	44.3.2 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.
12th	12th	Projection of Solid-Cube, Cuboid, Cone, Prism, pyramid Three views of orthographic projections of different objects (At least one sheet in 3rd angle)
13th	13th	4.6 Making above sheets in AutoCAD of:- point line solids and two objects
14th	14th	**Unit:- 5 Sectioning and Identification of surfaces** 5. 1 Identifications of surfaces, Importance and salient features of sectioning of objects
15th	15th	5. 2 Description of full section, half section partial or broken out sections, Offset Sections, revolved sections and removed sections