

LESSON PLAN

NAME OF FACULTY: SHIV KUMAR

DISCIPLINE: COMPUTER ENGINEERING

SEMESTER: 2ND SEM

SUBJECT: ENGINEERING GRAPHICS

LESSON PLAN DURATION: 15 WEEKS

WORK LOAD (LECTURE/PRACTICAL) PER WEEK: 6 PRACTICALS

Week	Lecture Day	Topics
1 st	1.	1. Introduction to Engineering Drawing and Graphics
	2.	1.1 Introduction to use and care of drawing instruments
	3.	drawing materials,
	4.	layout and sizes of drawing sheets
	5.	drawing boards
	6.	1.2 Symbols and conventions-
2 nd	7.	a) Conventions of Engineering Materials, Sectional Breaks and Conventional lines
	8.	b) Civil Engineering Sanitary fitting symbols
	9.	c) Electrical fitting symbols for domestic interior installations.
	10.	Geometrical construction-
	11.	geometrical figures such as triangles, rectangles
	12.	circles
3 rd	13.	ellipses and curves
	14.	hexagons
	15.	pentagons bisecting a line and arc
	16.	division of line and circle with the help of drawing instruments
	17.	2. Technical Lettering of Alphabet and Numerals
	18.	Definition and classification of lettering
4 th	19.	Free hand (of height of 5,8,12 mm) and instrumental lettering (of height 20 to 35 mm): upper case and lower case
	20.	single and double stroke,
	21.	vertical and inclined (Gothic lettering) at 75 degree to horizontal and with suitable Height to width ratio 7:4.
	22.	Checking drawing Sheets of symbols, Geometrical figures, Letters
	23.	Assignments/Test
	24.	Revision Previous Topics
5 th	25.	1st Sessional
	26.	3. Dimensioning
	27.	3.1 Necessity of dimensioning,
	28.	method and principles of dimensioning (mainly theoretical instructions).
	29.	3.2 Dimensioning of overall sizes, circles,

	30.	threaded holes
6 th	31.	chamfered surfaces
	32.	angles, tapered surfaces holes
	33.	equally spaced on P.C.D., countersunk holes, counter bored holes, cylindrical parts, narrow spaces and gaps, radii, curves and arches
	34.	4. Scales
	35.	4.1 Scales –Needs and importance (theoretical instructions),
	36.	Type of scales
7 th	37.	Definition of Representative Fraction (R.F.) and Length of Scale.
	38.	4.2 To draw/construct plain and diagonal scales
	39.	Checking drawing sheets on scale
	40.	Assignments/Tests
	41.	Revision of scale topic
	42.	UNIT II 1 Orthographic Projections
8 th	43.	1.1 Theory of orthographic projections (Elaborate theoretical instructions).
	44.	1.2 Three views of orthographic projections of different objects of given pictorial view of a block in 1st and 3rd angle
	45.	1.3 Projection of Points in different quadrant
	46.	1.4 Projection of Straight Line (1 st angle)
	47.	i. Line parallel to both the planes.
	48.	ii. Line perpendicular to any one of the reference plane and parallel to others
9 th	49.	iii. Line inclined to any one of the references and parallel to another plane
	50.	1.5 Projection of Plane – Different lamina like square rectangular, triangular, circle and Hexagonal pentagon. Trace of planes (HT and VT).
	51.	1.6 Identification of surfaces.
	52.	2. Sectioning
	53.	2.1 Importance and salient features
	54.	2.1 Drawing of full section, half section, partial or broken out sections, Offset sections, revolved sections and removed sections (theoretical only).
10 th	55.	2.3 Orthographic sectional views of different objects.
	56.	Practices of Orthographic sectional views
	57.	Assignments/Tests
	58.	Revision of Orthographic View
	59.	UNIT III
	60.	1. Introduction of projection of right solids such as prism & pyramid (square, Pentagon, Hexagonal) cube, cone & cylinder (Axes perpendicular to H.P and parallel to V.P.)
11 th	61.	2. Introduction of sections of right solids - Section planes, Sections of Hexagonal prism, pentagon pyramid, cylinder and cone (Section plane parallel to anyone reference planes and perpendicular to V.P. and inclined to H.P.)
	62.	Development of Surfaces – Development of lateral surfaces of right solids like cone, pentagonal prism, pyramid and hexagonal pyramid (Simple problems)
	63.	Development of lateral surfaces of right solids like cylinder

	64.	Development of lateral surfaces of right solids like pentagonal prism
	65.	Development of lateral surfaces of right solids like pyramid and hexagonal pyramid (Simple problems)
	66.	Drawing Sheets on Development on surfaces
12 th	67.	Checking Drawing sheets of previous units such as orthographic projections and Development of surfaces
	68.	Revision of previous units
	69.	Assignments /tests
	70.	2nd Sessional
	71.	UNIT IV Isometric Views
	72.	1. Fundamentals of isometric projections and isometric scale
13 th	73.	2. Isometric views of different laminas like circle, pentagon and hexagon
	74.	3. Isometric views of different regular solids like cylinder,.
	75.	3. Isometric views of different regular solids like cone
	76.	3. Isometric views of different regular solids like cube, cuboid
	77.	3. Isometric views of different regular solids like pyramid and prism
	78.	4. Isometric views from given different orthographic projections(front, side and top view)
14 th	79.	Checking Drawing sheets of previous units such isometric projections
	80.	Revision of previous units
	81.	Assignments /tests
	82.	Revision of isometric projections
	83.	UNIT V Introduction to AutoCAD
	84.	Basic introduction and operational instructions of various commands in AutoCAD.
15 th	85.	At least two sheets of different objects on AutoCAD (given pictorial/isometric view of a block)
	86.	Revision
	87.	Revision
	88.	3rd Sessional
	89.	Revision
	90.	Revision