

LESSON PLAN : Pr 3. Engineering Drawing

Discipline: civil engineering	Semester: 1ST	Name of the Teaching Faculty: GANESH PRADHAN
Subject: Pr 3. Engineering Drawing	No. of days/ per week class allotted: 6	Semester From Date : 16/08/2023 to Date: No. of Weeks: 15
Week	Class Day	Theory/ Practical Topics
1ST		1. INTRODUCTION & DEMONSTRATION
	1	1.1 Identify various sizes of drawing boards, drawing sheets as per BIS.
	2	1.2 List the types of pencils, instruments, and scales (RF).
	3	1.3 Demonstrate lying of drawing sheet, margin, standard layout and title block as per BIS, folding principle of drawings (blue prints, print outs etc).
		2. TYPES OF LINES, LETTERING & DIMENSIONING
	4	2.1 Demonstrate and explain the use of various types of lines.
	5	2.2 Demonstrate the principle of single stroke, gothic lettering & numerals as per BIS
	6	2.2 Demonstrate the principle of single stroke, gothic lettering & numerals as per BIS
		3.SCALES
2ND	1	3.1 Significance of scales in drawing; different scales.
	2	3.2 Define and draw plain sale and diagonal sale.
	3	3.2 Define and draw plain sale and diagonal sale.
		4. CURVES
	4	4.1 Explain Conic sections with illustration, Explain terms like focus, vertex, directrix and eccentricity.
	5	4.1 Explain Conic sections with illustration, Explain terms like focus, vertex, directrix and eccentricity.
	6	4.2 Draw conics sections by eccentricity method – Ellipse, Parabola and Hyperbola.
3RD	1	4.2 Draw conics sections by eccentricity method – Ellipse, Parabola and Hyperbola.
	2	4.3 Draw Ellipse by concentric circle method sand arc of cicle method.
	3	4.4 Draw parabola by Rectangle Method and Tangent Method.
		5. OTHOGRAPHIC PROJECTIONS
	4	5.1 Demonstrate the principles of 1st angle and 3rd angle projections with the help of models and draw symbols.
	5	5.1 Demonstrate the principles of 1st angle and 3rd angle projections with the help of models and draw symbols.
	6	5.1 Demonstrate the principles of 1st angle and 3rd angle projections with the help of models and draw symbols.
4TH	1	5.2 Draw projection of points.
	2	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).
	3	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).
	4	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).
	5	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).
	6	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).

5TH	1	5.3 Draw projection of straight line (parallel to both planes, parallel to one and perpendicular to other, parallel to one and inclined to other and inclined to both reference planes).
	2	5.4 Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other).
	3	5.4 Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other).
	4	5.4 Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other).
	5	5.4 Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other).
	6	5.4 Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other).
6TH	1	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
	2	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
	3	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
	4	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
	5	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
	6	5.5 Draw projections of solids such as prism, cylinder, cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
		6. SECTION & DEVELOPMENTS
7TH	1	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	2	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	3	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	4	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	5	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	6	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
8TH	1	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	2	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.

	3	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	4	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	5	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
	6	6.1 Draw the sectional projection & development of prism, cylinder, cone and pyramid in simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
9TH	1	6.2 Draw true shape of the cutting sections.
	2	6.2 Draw true shape of the cutting sections.
	3	6.2 Draw true shape of the cutting sections.
	4	6.2 Draw true shape of the cutting sections.
	5	6.2 Draw true shape of the cutting sections.
	6	6.2 Draw true shape of the cutting sections.
10TH	1	6.2 Draw true shape of the cutting sections.
	2	6.2 Draw true shape of the cutting sections.
	3	6.2 Draw true shape of the cutting sections.
		7. ISOMETRIC PROJECTIONS
	4	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
	5	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
	6	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
11TH	1	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
	2	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
	3	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
		8. BUILDING DRAWING
	4	8.1 Explain terms related to building drawing
	5	8.1 Explain terms related to building drawing
	6	8.1 Explain terms related to building drawing
12TH	1	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	2	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	3	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	4	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	5	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	6	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
13TH	1	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	2	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).

	3	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
		9. PRACTICES ON AUTO CAD
	4	9.1 Introduction-Settings, Limits etc.
	5	9.1 Introduction-Settings, Limits etc.
	6	9.1 Introduction-Settings, Limits etc.
14TH	1	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	2	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	3	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	4	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	5	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	6	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
		9.3 Exercise for practice using Auto CAD.
15TH	1	9.3.1 Orthographic projections of lines, planes sand solids as per chapter 5.0.
	2	9.3.1 Orthographic projections of lines, planes sand solids as per chapter 5.0.
	3	9.3.1 Orthographic projections of lines, planes sand solids as per chapter 5.0.
	4	9.3.2 Isometric projection as per Chapter 7.0.
	5	9.3.2 Isometric projection as per Chapter 7.0.
	6	9.3.2 Isometric projection as per Chapter 7.0.

Ganesh Pradhan

Faculty signature

HOD

Math & Sc. Department

Principal
Govt. Polytechnic Malkangiri