UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA

Academic Lesson Plan for 1st Semester – 2023 (Winter)

Name of the teaching faculty:Miss Subhashree Dash,
PTGF Lecturer (Civil)
Dept.: Department of Mathematics & Science
Semester : 1st (Mechanical Engg.)
Subject : Practical 3A : Engineering drawing
No of Periods per Week: 6,   Total Periods: 90,
End semester Exam.: 100 Marks,   Sessional : 50 Marks,
Total Marks: 150 Marks

Week	Date	Period	Unit/ Chapter	Topics to be covered
1st		3	1.1 1.2 1.3	1. INTRODUCTION & DEMONSTRATION 1.1 Identify various sizes of drawing boards, drawing sheets as pr BIS. 1.2 List the types of pencils, instruments, and scales (RF). 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).
		3	2.1 2.2	2. TYPES OF LINES, LETTERING & DIMENSIONING 2.1 Demonstrate and explain the use of various types of lines. 2.2 Demonstrate the principle of single stroke, gothic lettering & numerals as per BIS.
2nd		3	3.1 3.2	3. SCALES 3.1 Significance of scales in drawing; different scales. 3.2 Define and draw plain sale and diagonal sale.
		3	4.1 4.2	4. CURVES 4.1 Explain Conic sections with illustration, Explain terms like focus, vertex, directrix and eccentricity. 4.2 Draw conics sections by eccentricity method – Ellipse, Parabola and Hyperbola.
3rd		3	4.3 4.4	4.3 Draw Ellipse by concentric circle method sand arc of cicle method. 4.4 Draw parabola by Rectangle Method and Tangent Method.
		3	5.1	5. OTHOGRAPHIC PROJECTIONS 5.1 Demonstrate the principles of 1st angle and 3rd angle projections with the help of

				models and draw symbols.
4th		3	5.2	5.2 Draw projection of points.
		3	5.3	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).
5th		3	5.4	5.4 Draw plane figure such as squares, rectangles, triangles,
		3	5.4	Draw plane figure such as circle, Pentagon and hexagon. (perpendicular to one plane and inclined to other).
6th		3	5.5	5.5 Draw projections of solids such as prism, cylinder. (with axis parallel to one reference plane and perpendicular to other reference plane).
		3	5.5	Draw projections of cone, tetrahedron and pyramid in simple position (with axis parallel to one reference plane and perpendicular to other reference plane).
7th		3	6.1	6. SECTION & DEVELOPMENTS 6.1 Draw the sectional projection & development of prismin simple position by a cutting plane perpendicular to one reference plane and inclined to other reference plane.
		3	6.1	cylinder
8th		3	6.1	cone
		3	6.1	pyramid
9th		3	6.1	pyramid
		3	6.2	6.2 Draw true shape of the cutting sections.
10th		3	6.2	6.2 Draw true shape of the cutting sections.
		3	7	7. ISOMETRIC PROJECTIONS Draw isometric view & Isometric projection of prism, pyramid with axis horizontal and vertical with construction of isometric scales.
11th		3	7	Draw isometric view & Isometric projection of cone & cylinder.
		3	8.1	8. BUILDING DRAWING 8.1 Explain terms related to building drawing.
12th		3	8.2	8.2 Draw plan
		3	8.2	elevation of single room building with verandah (Flat roof according to given line plan and specification).
13th		3	8.2	elevation of single room building with verandah (Flat roof according to given line plan and specification).
		3	9.1	9. PRACTICES ON AUTO CAD 9.1 Introduction-Settings, Limits etc.
14th		3	9.2	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse,

				rectangle).
		3	9.2	Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
15th		3	9.3.1	9.3 Exercise for practice using Auto CAD. 9.3.1 Orthographic projections of lines, planes sand solids as per chapter 5.0.
		3	9.3.2	9.3.2 Isometric projection as per Chapter 7.0. (Note: Focus should be on Hands on Practice of student using AutoCAD software)

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