

UTKAL GOURAV MADHUSUDAN INSTITUTE OF TECHNOLOGY, RAYAGADA

Academic Lesson Plan for 2nd Semester – 2022 (Summer)

Name of teaching faculty: Miss Pratiba Kumara Behera, PTGF(Civil Engg.)

Discipline/Deptt: Mathematics & Science,

Semester: 2nd

Subject (Theory): PR3A: Engg. Drawing

No. of periods per week: 6

Total Periods: 90

End semester Exam: 100

Sessional : 50 Marks

Total marks: 150

Week	Period	Unit /Chapter	Topics to be covered
1 st	3	1	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	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. Force System.
2 nd	3	3	3. SCALES 3.1 Significance of scales in drawing; different scales. 3.2 Define and draw plain scale and diagonal scale.
	3	4 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
3 rd	3	4.3 4.4	4.3 Draw Ellipse by concentric circle method and arc of circle method. 4.4 Draw parabola by Rectangle Method and Tangent Method
	3	5 5.1	5. ORTHOGRAPHIC PROJECTIONS 5.1 Demonstrate the principles of 1st angle and 3rd angle projections with the help of models and draw symbols.
4 th	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)..
5 th	3	5.4	5.4 Draw plane figure such as squares, rectangles,

			triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other
	3	5.5	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).
			Practice above drawings
			Practice above drawings
	3	5.5	Practice above
6 th	3	6 6.1	6. SECTION & DEVELOPMENTS 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
	3	6.1	practice
7 th	3	6.1.1	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	6.1.1	Practice above drawing
8 th	3	6.2	6.2 Draw true shape of the cutting sections.. Prism , cylinder, cone , pyramid
	3	6.2	Practice above drawing
9 th	3	6.2	Practice above drawing
	3	7	7. ISOMETRIC PROJECTIONS Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
10 th	3	7	Practice above drawings
	3	8.1	8. BUILDING DRAWING 8.1 Explain terms related to building drawing.
11 th	3	8.2	8.2 Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification).
	3	8.2	Model of single building drawing practice
12 th	3	8.2	Model of single building drawing practice
	3	8.2	Practice above
13 th	3	9 9.1	9. PRACTICES ON AUTO CAD 9.1 Introduction-Settings, Limits etc.
	3	9.2	9.2 Auto CAD commands- Draw commands (Line, circle, are polygon, ellipse, rectangle). Edit command, Dimension commands and Modify Commands for two
14 th	3	9.2	

			dimensional drafting only.
	3	9.2	Practice above
15 th	3	9.3	9.3 Exercise for practice using Auto CAD.
	3	9.3.1 9.3.2	9.3.1 Orthographic projections of lines, planes sand solids as per chapter 5.0. 9.3.2 Isometric projection as per Chapter 7.0.

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