

# LESSON PLAN

**DEPARTMENT OF MECHANICAL ENGINEERING, ITT, CHOUDWAR**

**SUBJECT:** Pr.3a. Engineering Drawing      **Periods:** 2 class days/week      **SEMESTER:** 1<sup>st</sup>/ 2<sup>nd</sup>

**NAME OF FACULTY:** Manoranjan Sahoo, Instr (Mech) **No. of weeks:** 15

Week	Class Day (3 Hrs/Day)	Theory / Practical Topics
1 <sup>st</sup>	1 <sup>st</sup>	INTRODUCTION & DEMONSTRATION
	2 <sup>nd</sup>	Identify various sizes of drawing boards, drawing sheets as per BIS
2 <sup>nd</sup>	1 <sup>st</sup>	List the types of pencils, instruments, and scales (RF).
	2 <sup>nd</sup>	Demonstrate lying of drawing sheet, margin, standard layout and title block as per BIS, folding principle of drawings (blue prints, print outs etc.).
3 <sup>rd</sup>	1 <sup>st</sup>	TYPES OF LINES, LETTERING & DIMENSIONING Demonstrate and explain the use of various types of lines.
	2 <sup>nd</sup>	Demonstrate the principle of single stroke, gothic lettering & numerals as per BIS
4 <sup>th</sup>	1 <sup>st</sup>	Significance of scales in drawing; different scales
	2 <sup>nd</sup>	Define and draw plain scale and draw diagonal scale
5 <sup>th</sup>	1 <sup>st</sup>	Explain Conic sections with illustration,
	2 <sup>nd</sup>	Explain terms like focus, vertex, directrix and eccentricity
6 <sup>th</sup>	1 <sup>st</sup>	Draw conics sections by eccentricity method – Ellipse, Parabola and Hyperbola
	2 <sup>nd</sup>	Draw Ellipse by concentric circle method and arc of circle method.
7 <sup>th</sup>	1 <sup>st</sup>	Draw parabola by Rectangle Method and Tangent Method.
	2 <sup>nd</sup>	ORTHOGRAPHIC PROJECTIONS Demonstrate the principles of 1 <sup>st</sup> angle and 3 <sup>rd</sup> angle projections with the help of models and draw symbols.
8 <sup>th</sup>	1 <sup>st</sup>	Demonstrate the principles of 1 <sup>st</sup> angle and 3 <sup>rd</sup> angle projections with the help of models and draw symbols.
	2 <sup>nd</sup>	Draw projection of points, straight lines
9 <sup>th</sup>	1 <sup>st</sup>	Draw projection of points, straight lines parallel to both planes
	2 <sup>nd</sup>	parallel to one and perpendicular to other
10 <sup>th</sup>	1 <sup>st</sup>	parallel to one and inclined to other
	2 <sup>nd</sup>	inclined to both reference planes
11 <sup>th</sup>	1 <sup>st</sup>	Draw plane figure such as squares, rectangles, triangles, circle, Pentagon and hexagon
	2 <sup>nd</sup>	Draw rectangles, triangles, circle, Pentagon and hexagon (perpendicular to one plane and inclined to other
12 <sup>th</sup>	1 <sup>st</sup>	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 <sup>nd</sup>	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
13 <sup>th</sup>	1 <sup>st</sup>	Draw true shape of the cutting sections.
	2 <sup>nd</sup>	Draw isometric view & Isometric projection of prism, pyramid, cone & cylinder with axis horizontal and vertical with construction of isometric scales.
14 <sup>th</sup>	1 <sup>st</sup>	Explain terms related to building drawing

	2 <sup>nd</sup>	Draw plan, elevation of single room building with verandah (Flat roof according to given line plan and specification). Auto CAD Introduction- Settings, Limits etc.
15th	1 <sup>st</sup>	Auto CAD commands Draw commands (Line, circle, arc, polygon, ellipse, rectangle) Edit command, Dimension commands and Modify Commands for two dimensional drafting only.
	2 <sup>nd</sup>	Orthographic projections of lines, planes and solids as per chapter 5.0, Practice Isometric projection



Sign. of Faculty