

COMPUTER AIDED MACHINE DRAWING - I LAB

Name of Lab In-charge: Mr. Kuber Dwivedi

Course Outcomes:

Code	COURSE Outcome(CO)
1	Students will be able to understand knowledge of engineering drawing ethics in simple machine components.
2	Students will be able to understand and apply orthographic projection for simple machine elements.
3	Students will be able to understand various types of fasteners used for permanent and temporary joints like Screw, Bolt and rivet etc.
4	Students will be able to understand knowledge of free hand sketching for machine components
5	Students will be able to understand assembly drawing of couplings and brackets
6	Students will be able to understand and apply CAD software for drafting machine components.

List of Equipment:

1. Drawing Board
2. Auto cad software

List of Experiments:

Sheet. No.	As per AKTU	Performed/ Not performed
1	Introduction (1 drawing sheets) Introduction, classification of machine drawings, principles of drawing, conventional representation of machine components and materials, lines, types of lines, dimensioning types, lines and rules of dimensioning.	Performed
2	Orthographic Projections (3 drawing sheets) Introduction to orthographic projection, concept of first angle and third angle projection, drawing of simple machine elements in first angle projection, missing line problems, principle of visualization of objects, sectional views, full and half sectional views, auxiliary views.	
3		Performed
4		
5	UNIT-II Fasteners (2 drawing sheets) Temporary and permanent fasteners, thread nomenclature and forms, thread series, designation, representation of threads, bolted joints, locking arrangement of nuts, screws, washers, foundation bolts etc., keys, types of keys, cotter	
6		Performed

	and knuckle joints	
7	UNIT-III Riveted joints (1 drawing sheet) Introduction, rivets and riveting, types of rivets, types of riveted joints, drawing of boiler joints etc.	Performed
8	Free hand sketching (1 drawing sheet) Introduction, Need for free hand sketching, Free hand sketching of foundation bolts, studs, pulleys, couplings etc..	
9	UNIT-IV Assembly drawing (2 drawing sheets)	Performed
10	Introduction to assembly drawing, drawing assembly drawing of simple machine elements like rigid or flexible coupling, muff coupling, Plummer block, footstep bearing, bracket etc.	
11	UNIT-V Computer aided drafting (1 drawing) Introduction to computer aided drafting; advantages and applications of CAD, concepts of computer aided 2D drafting using any drafting software like AutoCAD, Solid Edge, Draft Sight etc., basic draw and modify commands, making 2D drawings of simple machine parts.	Performed

Pictures of Labs: