

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSON PLAN

SESSION - JULY-DEC 2024

NAME OF FACULTY : Prakash Vibhor Baghel

COURSE : Diploma in Engineering

SUBJECT:- Machine Drawing & Computer Aided Drafting

SESSION STARTS FROM : 02/09/2024

DESIGNATION : Lecturer (Mechanical)

DEPARTMENT : Mechanical Engineering

COURSE CODE 2037374(037)

SEMEST: III

TOTAL CLASS PER WEEK:- 3

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
1	1	Curves of intersection of surfaces of the regular solids in the following cases: Prism with prism (Tri- angular and square), Cylinder with cylinder, Square Prism with Cylinder when a. the axes are at 90° and intersecting	04/09/24	04/09/24	
	2	Curves of intersection of surfaces of the regular solids in the following cases: Prism with prism (Tri- angular and square), Cylinder with cylinder, Square Prism with Cylinder when b. The axes are at 90° and Offset	04/09/24	04/09/24	
	3	Tutorial Class	11/09/24	11/09/24	
	4	Cylinder with Cone: when axis of cylinder is parallel to both the reference planes and cone resting on base on HP with axis intersecting with axis of cylinder.	11/09/24	11/09/24	
	5	Cylinder with Cone: when axis of cylinder is parallel to both the reference planes and cone resting on base on HP offset from axis of cylinder.	13/09/24	13/09/24	
	6	Tutorial Class	18/09/24	18/09/24	

Department of Mechanical Engineering,

Govt. Polytechnic, Gariyaband (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
2	7	Development of Lateral surfaces of objects cylinder, cone & pyramids	10/09/24	10/09/24	
	8	Development of Lateral surfaces of objects cylinder, cone & pyramids	20/09/24	20/09/24	
	9	Tutorial Class	25/09/24	25/09/24	
	10	Development of Lateral surfaces of objects cylinder, cone & pyramids	25/09/24	25/09/24	
	11	applications such as funnel, Chimney, pipe bend.	27/09/24	27/09/24	
	12	Tutorial Class	04/10/24	04/10/24	

Handwritten signature

Handwritten signature

HOD
Department of Mechanical Engg.
GSSS, Polysarjanis Garhiyaband (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
3	13	Standard conventions as per BIS [SP – 46 (1988)] Materials- C.I., M.S, Brass, Bronze, Aluminum, wood, Glass, Concrete and Rubber	09/10/24	09/10/24	
	14	Standard conventions as per BIS [SP – 46 (1988)] Long and short break in pipe, rod and shaft. Ball and Roller Bearings. Pipe joints, cocks, valves.	09/10/24	09/10/24	
	15	Tutorial Class	16/10/24	16/10/24	
	16	Internal / external threads, Knurling Serrated shafts, splined shafts, and keys and key ways	16/10/24	16/10/24	
	17	Springs with square and flat ends Gears, sprocket wheel, chain wheels Countersunk & counter bored holes Tapers	18/10/24	16/10/24	
	18	Springs with square and flat ends Gears, sprocket wheel, chain wheels Countersunk & counter bored holes Tapers	23/10/24	18/10/24	
	19	Tutorial Class	23/10/24	23/10/24	

HOD

Department of Mechanical Engg.
Govt. Polytechnic Gatyaband (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
4	20	Limits, fits and tolerances: Definitions, Introduction to ISO system of tolerances - unilateral and bilateral tolerance and its representation on drawing, dimensional tolerances,	25/10/24	23/10/24	
	21	Elements of interchangeable system, hole & shaft base systems, tolerance diagram, Selection of fit (clearance, transition and interference) for engineering applications.	06/11/24	25/10/24	
	22	Tutorial Class	06/11/24	06/11/24	
	23	Geometrical tolerances Definitions, Tolerances of form and position and its geometric representation-tolerance frame, datum feature, magnitude of tolerance and symbol, interpretation of a given symbol on drawing, simple examples.	08/11/24	06/11/24	
	24	General welding symbols, length and size of weld, surface contour and finish of weld, all round and site weld, symbolic representation in Engineering practices and its interpretation.	13/11/24	08/11/24	
	25	Characteristics of surface roughness Indication of machining symbol showing direction of lay, roughness grades, machining allowances, manufacturing methods, using ISO code. Relation of surface roughness values with manufacturing processes.	13/11/24	13/11/24	
	26	Tutorial Class	29/11/24	13/11/24	

Department of Mechanical Engineering
Govt. Polytechnic Ganyahand (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
5	27	Introduction, types of assembly drawing, accepted norms to be observed for assembly drawings, sequence for preparing assembly drawing. Bill of Material.	20/11/24	20/11/24	
	28	Exploded view of :	22/11/24	20/11/24	
		i. Flange coupling ii. Bushed Bearing			
	29	Tutorial Class Exploded view of :	27/11/24	22/11/24	
	30	iii. Plummer Block	27/11/24	27/11/24	
iv. Lathe Square Tool Post					
v. Knuckle Joint					
31	vi. Cast Iron Pulley	29/11/24	27/11/24		
	32	Any other assembly consisting of 6 -10 parts. Tutorial Class	04/12/24	29/11/24	

Department of Mechanical Engg
 Govt. Polytechnic Gandhinagar (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
6	33	Introduction, types of assembly drawing, accepted norms to be observed for assembly drawings, sequence for preparing assembly drawing. Bill of Material.	09/12/24	11/12/24	
	34	Flange coupling, Plummer Block,	06/12/24	11/12/24	
	35	Tutorial Class	11/12/24	13/12/24	
	36	Lathe Square Tool Post, Knuckle Joint, Cast Iron Pulley.	11/12/24	20/12/24	
	37	Tutorial Class	13/12/24	27/12/24	

[Handwritten signature]

[Handwritten signature]

HOD
Department of Mechanical Engg.
Govt. Polytechnic Ghatyaband (C.G.)

Unit No.	Lecture No.	Topics to be covered	Planned Date	Execution Date	Remark
7	38	Recall Isometric and orthographic projections. Conversion of pictorial view into Orthographic views and	20/12/24	27/12/24	
	39	Conversion of orthographic views into Isometric View/projection.	27/12/24	01/01/25	
	40	Tutorial Class	01/01/25	01/01/25	
	41	Need for sectional views, Cutting plane and line, Sectioning conventions and section lines.	01/01/25		
	42	Types of sections: Full, Half, Broken, Removed, Revolved and Offset.	03/01/25		
	43	Tutorial Class	08/01/25		
	44	Recall AutoCAD Draw, Modify, Edit and Plot commands.	08/01/25		
	45	Tutorial Class	10/01/25		
	46	Isometric and Orthogonal drawings using any computer aided drafting software (AutoCAD).	15/01/25		
	47	Isometric and Orthogonal drawings using any computer aided drafting software (AutoCAD).	15/01/25		
	48	Tutorial Class	17/01/25		

HOD

Department of Mechanical Engg
Govt. Polytechnic Garkyaband (C.G.)