

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSION PLAN

SESSION - JULY-DEC 2025

NAME OF FACULTY : CHANDRESH KUMAR DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : MECHANICAL ENGINEERING

COURSE : MACHINE DESIGN ESTIMATION & COSTING

COURSE CODE : 2037372(037)

SEMESTER : V

SESSION STARTS FROM : 25.08.2024

Lecture No.	Unit No.	Topics to be Covered	Planned Date	Execution Date	Remarks (Teaching Method)
1	I	Fundamentals of Machine Design – Basic concepts	27.08.2025	03/12/25	Lecture + Numerical/Board
2	I	Factors in design of machine components	28.08.2025	03/12/25	Lecture + Numerical/Board
3	I	Selection of mechanism & materials	29.08.2025	03/12/25	Lecture + Numerical/Board
4	I	Forces, loading and space requirements	03.09.2025	03/12/25	Lecture + Numerical/Board
5	I	Reliability, safety and failure criteria	04.09.2025	04/12/25	Lecture + Numerical/Board
6	I	Codes and Standards (IS/ISO/ASME)	05.09.2025	04/12/25	Lecture + Numerical/Board
7	I	Engineering materials & properties	10.09.2025	04/12/25	Lecture + Numerical/Board
8	I	Numerical/Case discussion (Unit 1)	11.09.2025	04/12/25	Lecture + Numerical/Board
9	II	Types of loads, stresses and strains	12.09.2025	05/12/25	Lecture + Numerical/Board
10	II	Factor of safety & stress concentration	17.09.2025	05/12/25	Lecture + Numerical/Board
11	II	Design under static single axial loading	18.09.2025	05/12/25	Lecture + Numerical/Board
12	II	Theories of failure	19.09.2025	05/12/25	Lecture + Numerical/Board
13	II	Design under static multi-axial loading	24.09.2025	11/12/25	Lecture + Numerical/Board
14	II	Numericals on static loading	25.09.2025	11/12/25	Lecture + Numerical/Board
15	II	Design procedure practice	26.09.2025	11/12/25	Lecture + Numerical/Board

students were not coming to class. last 15 days of the session, one of the student came to class.

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16	II	Tutorial (Unit 2)	01.10.2025	11/12/25	Lecture + Numerical/Board
17	III	Types of shafts, materials & standard sizes	02.10.2025	12/12/25	Lecture + Numerical/Board
18	III	Design of solid shaft (torsion & bending)	03.10.2025	12/12/25	Lecture + Numerical/Board
19	III	Design of hollow shaft	08.10.2025	17/12/25	Lecture + Numerical/Board
20	III	Design based on strength	09.10.2025	17/12/25	Lecture + Numerical/Board
21	III	Design based on stiffness	10.10.2025	17/12/25	Lecture + Numerical/Board
22	III	Types of keys & effect of keyway	15.10.2025	—	Lecture + Numerical/Board
23	III	Design of square & rectangular key	16.10.2025	—	Lecture + Numerical/Board
24	III	Design of couplings (Muff & Flange)	17.10.2025	—	Lecture + Numerical/Board
25	III	Numericals (Unit 3)	22.10.2025	—	Lecture + Numerical/Board
26	IV	Riveted joints – types & terminology	23.10.2025	19/12/25	Lecture + Numerical/Board
27	IV	Design of riveted joints	24.10.2025	19/12/25	Lecture + Numerical/Board
28	IV	Eccentrically loaded riveted joints	29.10.2025	19/12/25	Lecture + Numerical/Board
29	IV	Boiler joints	30.10.2025	—	Lecture + Numerical/Board
30	IV	Welded joints – types & symbols	31.10.2025	21/12/25	Lecture + Numerical/Board

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31	IV	Design of welded joints	05.11.2025	22/12/25	Lecture + Numerical/Board
32	IV	Threaded fasteners & bolt terminology	06.11.2025	—	Lecture + Numerical/Board
33	IV	Design of bolted joints	07.11.2025	—	Lecture + Numerical/Board
34	IV	Numericals (Unit 4)	12.11.2025	—	Lecture + Numerical/Board
35	V	Classification of bearings	13.11.2025	22/12/25	Lecture + Numerical/Board
36	V	Ball & roller bearing terminology	14.11.2025	22/12/25	Lecture + Numerical/Board
37	V	Life & load rating calculations	19.11.2025	22/12/25	Lecture + Numerical/Board
38	V	Selection using manufacturer catalogue	20.11.2025	—	Lecture + Numerical/Board
39	V	Applications of ball bearings	21.11.2025	—	Lecture + Numerical/Board
40	V	Bearing numericals	26.11.2025	23/12/25	Lecture + Numerical/Board
41	V	Tutorial (Unit 5)	27.11.2025	—	Lecture + Numerical/Board
42	VI	Definition & aims of Estimating	28.11.2025	—	Lecture + Numerical/Board
43	VI	Estimating procedure & constituents	03.12.2025	—	Lecture + Numerical/Board
44	VI	Definition & aims of Costing	04.12.2025	—	Lecture + Numerical/Board
45	VI	Elements of cost – material, labour, expenses	05.12.2025	—	Lecture + Numerical/Board

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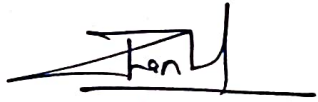
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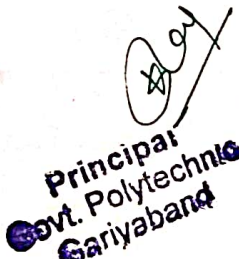
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46	VI	Direct & indirect costs	10.12.2025	24/12/25	Lecture + Numerical/Board
47	VI	Costing methods & procedure	11.12.2025	24/12/25	Lecture + Numerical/Board
48	VI	Difference between estimating & costing	12.12.2025	24/12/25	Lecture + Numerical/Board
49	VII	Machining terminology - speed, feed, DOC	17.12.2025	-	Lecture + Numerical/Board
50	VII	Lathe operations & time estimation	18.12.2025	-	Lecture + Numerical/Board
51	VII	Drilling, boring & reaming estimation	19.12.2025	-	Lecture + Numerical/Board
52	VII	Welding time estimation	24.12.2025	-	Lecture + Numerical/Board
53	VII	Forging & casting estimation	25.12.2025	-	Lecture + Numerical/Board
54	VII	Volume & weight calculation	26.12.2025	-	Lecture + Numerical/Board
55	VII	Numericals & Revision	31.12.2025	-	Lecture + Numerical/Board


Chandresh Kumar Dewangan
Lecturer (Mechanical)


Principal
Govt. Polytechnic
Gariyaband