

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSION PLAN

SESSION - JULY-DEC 2024

NAME OF FACULTY : CHANDRESH KUMAR DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : MECHANICAL ENGINEERING

COURSE : MACHINE DESIGN ESTIMATION &
COSTING

COURSE CODE : 2037572(037)

SEMESTER : V

SESSION STARTS FROM : 20.08.2024

Lecture No.	Unit No.	Topics to be Covered	Planned Date	Execution Date	Remarks (Teaching Method)
1	I	Fundamentals of Machine Design – Basic concepts	20.08.2024	28/08/24	Lecture + Numerical/Board
2	I	Factors in design of machine components	22.08.2024	28/08/24	Lecture + Numerical/Board
3	I	Selection of mechanism & materials	24.08.2024	29/08/24	Lecture + Numerical/Board
4	I	Forces, loading and space requirements	26.08.2024	30/08/24	Lecture + Numerical/Board
5	I	Reliability, safety and failure criteria	28.08.2024	31/08/24	Lecture + Numerical/Board
6	I	Codes and Standards (IS/ISO/ASME)	30.08.2024	03/09/24	Lecture + Numerical/Board
7	I	Engineering materials & properties	01.09.2024	05/09/24	Lecture + Numerical/Board
8	I	Numerical/Case discussion (Unit 1)	03.09.2024	05/09/24	Lecture + Numerical/Board
9	II	Types of loads, stresses and strains	05.09.2024	20/09/24	Lecture + Numerical/Board
10	II	Factor of safety & stress concentration	07.09.2024	20/09/24	Lecture + Numerical/Board
11	II	Design under static single axial loading	09.09.2024	23/09/24	Lecture + Numerical/Board
12	II	Theories of failure	11.09.2024	23/09/24	Lecture + Numerical/Board
13	II	Design under static multi-axial loading	13.09.2024	27/09/24	Lecture + Numerical/Board
14	II	Numericals on static loading	15.09.2024	27/09/24	Lecture + Numerical/Board
15	II	Design procedure practice	17.09.2024	30/09/24	Lecture + Numerical/Board

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16	II	Tutorial (Unit 2)	19.09.2024	01/10/24	Lecture + Numerical/Board
17	III	Types of shafts, materials & standard sizes	21.09.2024	04/10/24	Lecture + Numerical/Board
18	III	Design of solid shaft (torsion & bending)	23.09.2024	04/10/24	Lecture + Numerical/Board
19	III	Design of hollow shaft	25.09.2024	07/10/24	Lecture + Numerical/Board
20	III	Design based on strength	27.09.2024	08/10/24	Lecture + Numerical/Board
21	III	Design based on stiffness	29.09.2024	10/10/24	Lecture + Numerical/Board
22	III	Types of keys & effect of keyway	01.10.2024	10/10/24	Lecture + Numerical/Board
23	III	Design of square & rectangular key	03.10.2024	15/10/24	Lecture + Numerical/Board
24	III	Design of couplings (Muff & Flange)	05.10.2024	16/10/24	Lecture + Numerical/Board
25	III	Numericals (Unit 3)	07.10.2024	18/10/24	Lecture + Numerical/Board
26	IV	Riveted joints – types & terminology	09.10.2024	18/10/24	Lecture + Numerical/Board
27	IV	Design of riveted joints	11.10.2024	21/10/24	Lecture + Numerical/Board
28	IV	Eccentrically loaded riveted joints	13.10.2024	25/10/24	Lecture + Numerical/Board
29	IV	Boiler joints	15.10.2024	25/10/24	Lecture + Numerical/Board
30	IV	Welded joints – types & symbols	17.10.2024	04/11/24	Lecture + Numerical/Board

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31	IV	Design of welded joints	19.10.2024	08/11/24	Lecture + Numerical/Board
32	IV	Threaded fasteners & bolt terminology	21.10.2024	08/11/24	Lecture + Numerical/Board
33	IV	Design of bolted joints	23.10.2024	12/11/24	Lecture + Numerical/Board
34	IV	Numericals (Unit 4)	25.10.2024	13/11/24	Lecture + Numerical/Board
35	V	Classification of bearings	27.10.2024	14/11/24	Lecture + Numerical/Board
36	V	Ball & roller bearing terminology	29.10.2024	14/11/24	Lecture + Numerical/Board
37	V	Life & load rating calculations	31.10.2024	18/11/24	Lecture + Numerical/Board
38	V	Selection using manufacturer catalogue	02.11.2024	19/11/24	Lecture + Numerical/Board
39	V	Applications of ball bearings	04.11.2024	22/11/24	Lecture + Numerical/Board
40	V	Bearing numericals	06.11.2024	22/11/24	Lecture + Numerical/Board
41	V	Tutorial (Unit 5)	08.11.2024	25/11/24	Lecture + Numerical/Board
42	VI	Definition & aims of Estimating	10.11.2024	29/11/24	Lecture + Numerical/Board
43	VI	Estimating procedure & constituents	12.11.2024	29/11/24	Lecture + Numerical/Board
44	VI	Definition & aims of Costing	14.11.2024	02/12/24	Lecture + Numerical/Board
45	VI	Elements of cost – material, labour, expenses	16.11.2024	03/12/24	Lecture + Numerical/Board

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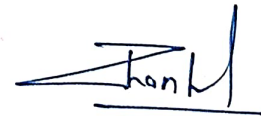
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46	VI	Direct & indirect costs	18.11.2024	04/12/24	Lecture + Numerical/Board
47	VI	Costing methods & procedure	20.11.2024	06/12/24	Lecture + Numerical/Board
48	VI	Difference between estimating & costing	22.11.2024	06/12/24	Lecture + Numerical/Board
49	VII	Machining terminology – speed, feed, DOC	24.11.2024	09/12/24	Lecture + Numerical/Board
50	VII	Lathe operations & time estimation	26.11.2024	10/12/24	Lecture + Numerical/Board
51	VII	Drilling, boring & reaming estimation	28.11.2024	12/12/24	Lecture + Numerical/Board
52	VII	Welding time estimation	30.11.2024	12/12/24	Lecture + Numerical/Board
53	VII	Forging & casting estimation	02.12.2024	13/12/24	Lecture + Numerical/Board
54	VII	Volume & weight calculation	04.12.2024	13/12/24	Lecture + Numerical/Board
55	VII	Numericals & Revision	06.12.2024	13/12/24	Lecture + Numerical/Board



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