

GOVERNMENT POLYTECHNIC GARIYABAND

GARIYABAND (C.G.)

LESSION PLAN

SESSION - ~~JULY-DEC-2024~~ Jan-June-2025

NAME OF FACULTY : CHANDRESH KUMAR DEWANGAN

DESIGNATION : LECTURER (MECHANICAL)

DEPARTMENT : ~~Mining~~ Mechanical ENGINEERING

COURSE : FLUID MECHANICS AND MACHINERY

COURSE CODE :

SEMESTER : IV

SESSION STARTS FROM : 01.02.2025

~~2000192(037)~~

2037474(037)

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
1	1	Introduction & Classification of Fluids	04.02.2025	06/02/25	Lecture + Numerical Discussion
2	1	Fluid Properties – Density, Specific Gravity	06.02.2025	07/02/25	Lecture + Numerical Discussion
3	1	Specific Weight, Specific Volume	07.02.2025	13/02/25	Lecture + Numerical Discussion
4	1	Dynamic & Kinematic Viscosity	11.02.2025	14/02/25	Lecture + Numerical Discussion
5	1	Surface Tension & Capillarity	13.02.2025	18/02/25	Lecture + Numerical Discussion
6	1	Vapour Pressure, Compressibility, Bulk Modulus	14.02.2025	20/02/25	Lecture + Numerical Discussion
7	1	Types of Fluids – Ideal, Real, Newtonian, Non-Newtonian	18.02.2025	21/02/25	Lecture + Numerical Discussion
8	1	Continuity Equation – Theory	20.02.2025	25/02/25	Lecture + Numerical Discussion
9	1	Continuity Equation – Numericals	21.02.2025	27/02/25	Lecture + Numerical Discussion
10	1	Pressure – Absolute, Gauge, Vacuum	25.02.2025	28/02/25	Lecture + Numerical Discussion
11	1	Pressure Measurement – Manometers	27.02.2025	04/03/25	Lecture + Numerical Discussion
12	1	Inclined & Differential Manometers	28.02.2025	06/03/25	Lecture + Numerical Discussion
13	1	Pascal's Law & Applications	04.03.2025	07/03/25	Lecture + Numerical Discussion
14	1	Hydrostatic Forces on Plane Surface	06.03.2025	11/03/25	Lecture + Numerical Discussion
15	1	Hydrostatic Forces on Curved Surface & Metacenter	07.03.2025	13/03/25	Lecture + Numerical Discussion

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SEMESTER : IV

~~200102(037)~~

SESSION STARTS FROM : 01.02.2025

2037 474(037)

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
16	2	Forms of Energy in Fluid Flow	11.03.2025	18/02/25	Lecture + Numerical Discussion
17	2	Datum, Pressure Head, Velocity Head	13.03.2025	20/02/25	Lecture + Numerical Discussion
18	2	Bernoulli's Theorem – Derivation	14.03.2025	21/02/25	Lecture + Numerical Discussion
19	2	Bernoulli's Theorem – Assumptions & Applications	18.03.2025	27/02/25	Lecture + Numerical Discussion
20	2	Bernoulli's Numericals	20.03.2025	28/02/25	Lecture + Numerical Discussion
21	2	Navier Stokes Equation (Intro)	21.03.2025	room	Lecture + Numerical Discussion
22	2	Energy Equation Problems	25.03.2025	01/04/25	Lecture + Numerical Discussion
23	2	Revision & Class Test (Unit 1-2)	27.03.2025	students	Lecture + Numerical Discussion
24	3	Types of Flow – Steady, Unsteady, Laminar, Turbulent	28.03.2025	conting only	Lecture + Numerical Discussion
25	3	Reynolds Number & Flow Regime	01.04.2025	Absent/	Lecture + Numerical Discussion
26	3	Flow Measurement – Venturimeter	03.04.2025		Lecture + Numerical Discussion
27	3	Orifice Meter & Pitot Tube	04.04.2025		Lecture + Numerical Discussion
28	3	Major & Minor Losses	08.04.2025		Lecture + Numerical Discussion
29	3	Darcy Weisbach Equation	10.04.2025		Lecture + Numerical Discussion
30	3	Hagen Poiseuille Equation	11.04.2025		Lecture + Numerical Discussion

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COURSE : FLUID MECHANICS AND MACHINERY

COURSE CODE :

SEMESTER : I

SESSION STARTS FROM : 01.02.2025

~~2000192(037)~~
 2037 474(037)

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
31	3	Pipes in Series & Parallel	15.04.2025		Lecture + Numerical Discussion
32	3	Hydraulic Gradient Line & Total Energy Line	17.04.2025		Lecture + Numerical Discussion
33	3	Water Hammer & Surge Tank	18.04.2025		Lecture + Numerical Discussion
34	3	Numericals on Pipe Flow	22.04.2025		Lecture + Numerical Discussion
35	3	Revision & Problem Solving	24.04.2025		Lecture + Numerical Discussion
36	4	Classification of Hydraulic Turbines	25.04.2025		Lecture + Numerical Discussion
37	4	Impulse & Reaction Turbines	29.04.2025		Lecture + Numerical Discussion
38	4	Pelton Wheel – Construction & Working	01.05.2025		Lecture + Numerical Discussion
39	4	Francis Turbine – Construction & Working	02.05.2025		Lecture + Numerical Discussion
40	4	Kaplan Turbine – Construction & Working	06.05.2025		Lecture + Numerical Discussion
41	4	Draft Tube – Types & Functions	08.05.2025		Lecture + Numerical Discussion
42	4	Selection of Turbine	09.05.2025		Lecture + Numerical Discussion
43	4	Numericals on Turbines	13.05.2025		Lecture + Numerical Discussion
44	5	Centrifugal Pump – Construction & Working	15.05.2025		Lecture + Numerical Discussion
45	5	Priming & Cavitation	16.05.2025		Lecture + Numerical Discussion

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Absent

All students

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SEMESTER : IV

~~200192(037)~~

2037 474 (037)

SESSION STARTS FROM : 01.02.2025

Lecture No.	Unit No.	Topic to be Covered	Planned Date	Execution Date	Remarks
46	5	Performance Characteristics of Centrifugal Pump	20.05.2025		Lecture + Numerical Discussion
47	5	Reciprocating Pump – Construction & Working	22.05.2025		Lecture + Numerical Discussion
48	5	Slip & Negative Slip	23.05.2025		Lecture + Numerical Discussion
49	5	Comparison of Pumps	27.05.2025		Lecture + Numerical Discussion
50	5	Revision & Final Test	29.05.2025		Lecture + Numerical Discussion



chandresh ku. Dewangan

Lecturer (mechanical)



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