

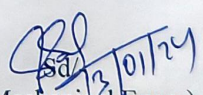
BHUBANANANDA ODISHA SCHOOL OF ENGINEERING, CUTTACK
DEPARTMENT OF MECHANICAL ENGINEERING



LESSON PLAN

SUBJECT: FLUID MECHANICS (TH-3)
FACULTY: PRIYADARSINI MALLICK

ACADEMIC SESSION: 2023-24
SEMESTER: 4th
SECTION-B


H O D (Mechanical Engg.)

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Discipline- Mechanical Engg	Semester :- 4 TH		Name of the teaching faculty :- Priyadarsini Mallick
Subject-Fluid Mechanics	No of periods Allotted per Week- 04 (Monday Tuesday Wednesday Saturday)		Semester from Date - 16/01/2024 To Date - 26/04/2024 No. of Weeks: 15
Week	Class	No Of Periods available	Theory Topics
1st	16/01/2024	1	1.0 PROPERTIES OF FLUID 1.1 Define fluid
	17/01/2024	1	1.2 Description of fluid properties like Density, Specific weight, specific gravity, specific volume
	20/01/2024	1	1.2.1 Simple problems on fluid properties
2nd	22/01/2024	1	1.3 .1 Definitions and Units of Dynamic viscosity, kinematic viscosity,
	24/01/2024	1	1.3.2 Surface tension Capillary phenomenon
	27/01/2024	1	PROBLEMS ON CAPILLARY
3rd	29/01/2024	1	Problems on 1.3.1 & 1.3.2
	30/01/2024	1	2.0 FLUID PRESSURE AND ITS MEASUREMENTS 2.1 Definitions and units of fluid pressure, pressure intensity and pressure head.
	31/01/2024	1	2.2 Statement of Pascal's Law.
	03/02/2024	1	2.3 Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
4th	05/02/2024	1	2.4.1 Pressure measuring instruments Manometers (Simple)

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	06/02/2024	1	2.4.2 Pressure measuring instruments Manometers (Differential)
	07/02/2024	1	Problems on Simple & Differential Manometer
	10/02/2024	1	2.4.3 Bourdon tube pressure gauge (Simple Numerical)
5th	12/02/2024	1	2.5 Solve simple problems on Manometer
	13/02/2024	1	CLASS TEST-1
	17/02/2024	1	3.0 HYDROSTATICS 3.1 Definition of hydrostatic pressure
6th	19/02/2024	1	3.2.1 Total pressure and centre of pressure on immersed bodies (Horizontal)
	20/02/2024	1	3.2.2 Total pressure and centre of pressure on immersed bodies (Vertical Bodies)
	21/02/2024	1	3.3 Solve Simple problems on Total pressure and Centre of pressure
	24/02/2024	1	3.4 Archimedes 'principle, concept of buoyancy, meta centre and meta centric height (Definition only)
7th	26/02/2024	1	3.5 Concept of floatation
	27/02/2024	1	Problems on 3.2.1 & 3.2.2
	28/02/2024	1	4.0 KINEMATICS OF FLOW 4.1 Types of fluid flow
	02/03/2024	1	4.2 Continuity equation (Statement and proof for one dimensional flow)
8th	04/03/2024	1	4.3 .1 Bernoulli's theorem (Statement and proof)
	06/03/2024	1	4.3.2 Applications of Bernoulli's theorem (Venturi meter, pitot tube)

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	09/03/2024	1	Simple Numerical on Bernoulli's
9th	11/03/2024	1	4.3.2 Limitations of Bernoulli's theorem (Venturi meter, pitot tube)
	12/03/2024	1	4.4 Simple problemson Fluid Flow
	13/03/2024	1	5.0 ORIFICES, NOTCHES & WEIRS 5.1 Define orifice5.2 Flow through orifice
	16/03/2024	1	5.3 Orifices coefficient & the relation between the orifice coefficients
10th	18/03/2024	1	5.4 Classifications of notches & weirs
	19/03/2024	1	5.5 Discharge over a rectangular notch or weir
	20/03/2024	1	5.6 Discharge over a triangular notch or weir
	23/03/2024	1	5.7 Simple problems on above
11 TH	27/03/2024	1	6.0 FLOW THROUGH PIPES 6.1 Definition of pipe
	30/03/2024	1	6.2 Loss of energy in pipe
12 TH	02/04/2024	1	6.3 Head loss due to friction: Darcy's and Chezy's formula (Expression only)
	03/04/2024	1	6.4 Solve Problems using Darcy's and Chezy's formula
	06/04/2024	1	6.5 Hydraulic gradient and total gradient line
13 TH	08/04/2024	1	7.0 IMPACT OF JETS 7.1.1 Impact of jet on fixed and moving vertical flat plates
	09/04/2024	1	7.1.2 Impact of jet on moving vertical flat plates
	10/04/2024	1	7.2 .1Derivation of work done on series of vanes

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	13/12/2024	1	7.2 .2 Derivation ON condition for maximum efficiency
14TH	15/04/2024	1	7.3.1 Impact of jet on moving curved vanes,
	16/04/2024	1	7.3.2 illustration using velocity triangles,
	20/04/2024	1	7.3.3 Derivation of work done, efficiency
15TH	22/04/2024	1	CLASS TEST-2
	23/04/2024	1	REVISION
	24/04/2024	1	REVISION