

# Lesson Plan

<b>Discipline:</b> Mechanical, <b>Semester:</b> 4TH, <b>Name of Faculty :</b> TRUPTI MOHANTY		
<b>Subject:</b> Fluid Mechanics	<b>No. of days/ week Class allotted: 4</b>	<b>Semester From Date: 13-02-2023 To date : 23-05-2023</b>
<b>Week</b>	<b>Class Day</b>	<b>Theory</b>
<b>1st</b>	<b>1st</b>	<b>Introduction to subject</b>
	<b>2nd</b>	Define fluid
	<b>3rd</b>	Description of fluid properties like Density, Specific weight
	<b>4th</b>	specific gravity, specific volume
<b>2nd</b>	<b>1st</b>	solve simple problems.
	<b>2nd</b>	Definitions and Units of Dynamic viscosity
	<b>3rd</b>	kinematic viscosity, surface tension
	<b>4th</b>	Capillary phenomenon
<b>3rd</b>	<b>1st</b>	Definitions and units of fluid pressure
	<b>2nd</b>	pressure intensity and pressure head.
	<b>3rd</b>	Statement of Pascal's Law.
	<b>4th</b>	Concept of atmospheric pressure
<b>4th</b>	<b>1st</b>	gauge pressure, vacuum pressure and absolute pressure
	<b>2nd</b>	Manometers (Simple and Differential)
	<b>3rd</b>	Bourdon tube pressure gauge(Simple Numerical)
	<b>4th</b>	Solve simple problems on Manometer.
<b>5th</b>	<b>1st</b>	Definition of hydrostatic pressure
	<b>2nd</b>	Total pressure and centre of pressure on immersed bodies
	<b>3rd</b>	Horizontal and Vertical Bodies
	<b>4th</b>	Solve Simple problems.
<b>6th</b>	<b>1st</b>	Solve Simple problems.
	<b>2nd</b>	Archimedes 'principle, concept of buoyancy
	<b>3rd</b>	meta center and meta centric height
	<b>4th</b>	Concept of floatation
<b>7th</b>	<b>1st</b>	Types of fluid flow
	<b>2nd</b>	Types of fluid flow

	<b>3rd</b>	Continuity equation
	<b>4th</b>	Bernoulli's theorem
<b>8th</b>	<b>1st</b>	Applications and limitations of Bernoulli's theorem
	<b>2nd</b>	Venturimeter, pitot tube
	<b>3rd</b>	Solve simple problems
	<b>4th</b>	Solve simple problems
<b>9th</b>	<b>1st</b>	Define orifice
	<b>2nd</b>	Flow through orifice
	<b>3rd</b>	Orifices coefficient & the relation between the orifice coefficient,
	<b>4th</b>	Classifications of notches & weirs
<b>10th</b>	<b>1st</b>	Discharge over a rectangular notch or weir
	<b>2nd</b>	Discharge over a triangular notch or weir
	<b>3rd</b>	Simple problems on above
	<b>4th</b>	<b>Unit test</b>
<b>11th</b>	<b>1st</b>	Definition of pipe.
	<b>2nd</b>	Loss of energy in pipes.
	<b>3rd</b>	Loss of energy in pipes.
	<b>4th</b>	Head loss due to friction
<b>12th</b>	<b>1st</b>	Darcy's and Chezy's formula
	<b>2nd</b>	Solve Problems using Darcy's and Chezy's formula.
	<b>3rd</b>	Solve Problems using Darcy's and Chezy's formula.
	<b>4th</b>	Hydraulic gradient
<b>13th</b>	<b>1st</b>	total gradient line
	<b>2nd</b>	<b>TEST</b>
	<b>3rd</b>	Impact of jets
	<b>4th</b>	Impact of jet on fixed plates
<b>14th</b>	<b>1st</b>	Impact of jet on moving vertical flat plates
	<b>2nd</b>	Derivation of work done on series of vanes
	<b>3rd</b>	Derivation of work done on series of vanes
	<b>4th</b>	condition for maximum efficiency.
<b>15th</b>	<b>1st</b>	Impact of jet on moving curved vanes
	<b>2nd</b>	illustration using velocity triangles
	<b>3rd</b>	derivation of work done, efficiency
	<b>4th</b>	derivation of work done, efficiency

16th	1st	Overall subject revision
	2nd	Overall subject revision
	3rd	Previous year question answer discussion
	4th	Previous year question answer discussion