			GOVT. POLYTECHNIC MAYURBHANJ
			LESSON PLAN
Discipline : MECHANICAL ENGG.		**Semester: 4th Sem**	**Name of the Teaching Faculty :Sagar Kumar Mohapatra**
Subject : FM		**No. of Days / per week class allotted : 04**	**Semester From date : 10.03.2022** **To Date : 10.06.2022**

MONTH	Week	Day	Topics
MARCH	2nd	5th	**1.0 Properties of Fluid ,**Define fluid ,Description of fluid properties like Density, Specific weight
		6th	problem solved
	3rd	2nd	specific gravity, specific volume and solve simple problems
		3rd	Definitions and Units of Dynamic viscosity, kinematic viscosity,
	4th	2nd	surface tension ,Capillary phenomenon
		3rd	**2.0 Fluid Pressure and its measurements** , Definitions and units of fluid pressure, pressure intensity and pressure head
		5th	Statement of Pascal's Law. Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure
		6th	Pressure measuring instruments Manometers (Simple and Differential)
	5th	2nd	Pressure measuring instruments Manometers (Simple and Differential)
		3rd	Bourdon tube pressure gauge
APRIL	1st	6th	Solve simple problems on Manometer.
	2nd	2nd	**3.0 Hydrostatics -** Definition of hydrostatic pressure
		3rd	**CLASS TEST -1**
		5th	Total pressure and centre of pressure on immersed bodies(Horizontal and Vertical Bodies)
		6th	Total pressure and centre of pressure on immersed bodies(Horizontal Bodies)
	3rd	2nd	Total pressure and centre of pressure on immersed bodies(Vertical Bodies)
		3rd	Solve Simple problems.
		6th	Solve Simple problems.
	4th	2nd	Archimedes 'principle, concept of buoyancy
		3rd	meta center and meta centric height ,Concept of floatation
		5th	**4.0 Kinematics of Flow** Types of fluid flow 4.2 Continuity equation(Statement and proof for one dimensional flow)
		6th	Different type of fluid flow
	5th	2nd	Bernoulli's theorem(Statement and proof) Applications and limitations of Bernoulli's theorem (Venturimeter, pitot tube)
		3rd	Bernoulli's theorem(Statement and proof) Applications and limitations of Bernoulli's theorem
		5th	Solve simple problems
		6th	Venturimeter

MAY	1st	3rd	pitot tube	
		5th	Solve simple problems	
		6th	**5.0 Orifices, notches & weirs**,Define orifice , Flow through orifice	
	2nd	2nd	Orifices coefficient & the relation between the orifice coefficients	
		3rd	**INTERNAL**	
		5th	Solve simple problems	
		6th	Classifications of notches & weirs	
	3rd	2nd	Discharge over a rectangular notch or weir	
		3rd	Discharge over a triangular notch or weir	
		5th	Classifications of notches & weirs	
		6th	Simple problems	
	4th	2nd	**6.0 Flow through pipe** ,Definition of pipe. Loss of energy in pipes.	
		3rd	Head loss due to friction: Darcy's and Chezy's formula (Expression only)	
		5th	Head loss due to friction: Minor loss	
		6th	Hydraulic gradient and total gradient line	
	5th	2nd	problem solved	
JUNE	1st	3rd	**7.0 Impact of jets** , Impact of jet on fixed and moving vertical flat plates	
		5th	Impact of jet on fixed and moving vertical inclined plates	
		6th	Impact of jet on fixed and moving vertical curved plates	
	2nd	2nd	Derivation of work done on series of vanes and condition for maximum efficiency.	
		3rd	Impact of jet on moving curved vanes, illustration using velocity triangles	
		5th	**CLASS TEST-2**	

HOD, Mechanical   Subject Expert   Academic Co-ordinator

Govt. polytechnic   Govt. polytechnic   Govt. polytechnic

Mayurbhanj   Mayurbhanj   Mayurbhanj