

19ME3452-FLUID MECHANICS LAB

Offering Branches	ME		
Course category:	Program Core	Credits	1.5
Course Type:	Theory	Lecture-Tutorial-Practical:	0-0-3
Prerequisites	Nil	Continuous Evaluation:	25
		Semester End Evaluation:	50
		Total Marks:	75
Course Outcomes			
Upon successful completion of the course, the student will be able to			
CO1	Estimate major and minor losses in pipes.		L2
CO2	Evaluate coefficient discharge of various flow measuring devices.		L2
CO3	Determine the coefficient of the impact of jet on vanes.		L3
CO4	Verify Bernoulli's theorem.		L3
CO5	Test the performance of pumps and turbines.		L3
Course Content			
Experiment-1	Determination of loss of head due to the sudden contraction in a pipeline.		CO1
Experiment-2	Determination of friction factor for a given pipeline.		CO1
Experiment-3	Determination of coefficient of discharge of Triangular Notch		CO2
Experiment-4	Determination of coefficient of discharge of Venturimeter.		CO2
Experiment-5	Determination of coefficient of discharge of Orifice meter.		CO2
Experiment-6	Determination of coefficient of Impact of jets on Stationary Vanes.		CO3
Experiment-7	Verification of Bernoulli's equation.		CO4
Experiment-8	Performance Test on Single Stage Centrifugal Pump.		CO5
Experiment-9	Performance Test on Multi Stage Centrifugal Pump.		CO5
Experiment-10	Performance Test on Pelton Wheel.		CO5
Experiment-11	Performance Test on Kaplan Turbine.		CO5
Experiment-12	Performance Test on Francis Turbine.		CO5
Learning Resources			
Text books:	1.K.L.Kumar.“Engineering Fluid Mechanics” Experiments, Eurasia Publishing House, 1997 2.Jagdish Lal, Hydraulic Machines, Metropolitan Book Co, Delhi, 1995		
Reference books	1.Hydraulics and Fluid Mechanics, by P.N.Modi and S.M.Seth, Standard book house, 2000, New Delhi. 2.Fluid Mechanics and Hydraulic Machines, by Sukumar Pati, Mc Graw Hill Education Private Limited, 2014, New Delhi. 3.Hydraulics and Fluid Mechanics and fluid machines, by S Ramamrutham, Dhanapat rai publishing company, New Delhi		

Course coordinator

HOD