

BMEE204P	Fluid Mechanics and Machines Lab	L	T	P	C
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Pre-requisite	NIL	Syllabus version			
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Course Objectives					
<ol style="list-style-type: none"> To train students practically with the procedures for measuring the co-efficient of discharge of orifice, mouthpiece, notches, orifice meter and venturi meter. To train the students to determine the friction factor and minor losses in pipe components. To equip the students to perform experiments in hydraulic machines and analyse the results. 					
Course Outcomes					
At the end of the course, the student will be able to					
<ol style="list-style-type: none"> Perform experiments on various flow measuring devices to calibrate them. Perform experiments to determine friction factor and minor losses in pipe components. Conduct experiments on hydraulic machines to assess their performance. 					
List of Experiments					
1	Determination of coefficient of discharge of an orifice.				
2	Determination of coefficient of discharge of a mouthpiece.				
3	Determination of coefficient of discharge of a rectangular/ triangular notch.				
4	Determination of coefficient of discharge of a venturi meter / orifice meter.				
5	Estimation of friction factor of a pipe.				
6	Estimation of minor losses in pipe fittings.				
7	Verification of the Bernoulli Theorem.				
8	Study and calibration of a pitot static tube.				
9	To study the performance of a centrifugal pump.				
10	Study the performance of a Pelton Turbine.				
11	Determination of static pressure distribution around an air foil.				
Total Laboratory Hours					30 hours
Text Books					
1	Som S K, Gautam Biswas, Chakraborty S, Introduction to Fluid Mechanics and Fluid Machines, 2017, McGraw Hill				
2	Lab Manual prepared by course faculty				
Mode of assessment: Continuous assessment, FAT, Oral examination					
Recommended by Board of Studies		09-03-2022			
Approved by Academic Council		No. 65	Date	17-03-2022	