

Course Number and Name												
<b>BCE5L2 - FLUID MECHANICS AND FLUID MACHINERY LAB</b>												
Credits and Contact Hours												
<b>2 &amp; 45</b>												
Course Coordinator's Name												
Ms.B.Kaviya												
Text Books and References												
<b>REFERENCES:</b>												
1. Modi P.N & Sethi S.M "Hydraulics and Hydraulic Mechanics". Standard, Publishing Co, New Delhi.												
Course Description												
<ul style="list-style-type: none"> <li>Students should be able to verify the principles studied in theory by performing the experiments in lab.</li> </ul>												
Prerequisites						Co-requisites						
Fluid Mechanics						NIL						
required, elective, or selected elective (as per Table 5-1)												
Course Outcomes (COs)												
CO1	Measure theoretical discharge in pipes, Venturi meter, orifice meter and notches											
CO2	Demonstrate and conduct experiment to find characteristic curves of various pumps											
CO3	Demonstrate and conduct experiment to find characteristic curves of various turbines											
Student Outcomes (SOs) from Criterion 3 covered by this Course												
COs/SOs	a	b	c	d	e	f	g	h	i	j	k	
CO1		H										
CO2		H		M				M				
CO3		H				L						
List of Topics Covered												
<b>LIST OF EXPERIMENTS</b>												
<b>A) Fluid Mechanics Lab Experiments</b>												
1. Determination of flow through pipes, losses in pipes.												
2. Calibration of Orifice Meter & Venturi Meter												
3. Flow through Notches & weirs.												
4. Flow Through open orifices: Calculation of Cd, Co & Cv												
5. Buoyancy experiment, Metacentric- height												
6. Calibration of Mouth Pieces- Constant & Variable Head Method												
7. Impact of jet on Vanes: inclined, curved.												

8. Verification of Bernoulli's equation.

**B) Fluid Machinery Lab Experiments**

1. Performance characteristics of Centrifugal Pump.
2. Performance characteristics of Multistage Pump
3. Performance characteristics of Gear Pump
4. Performance characteristics of Reciprocating Pump
5. Performance characteristics of Impulse Turbine
6. Performance characteristics of Reaction Turbine.
7. Performance characteristics of Jet Pump
8. Performance characteristics of Vane Pump