



## **FLUID MECHANICS LAB**

### **Courses Covered:**

1. CET-211-L-Fluid Mechanics

**DEPARTMENT OF CIVIL ENGINEERING  
TECHNOLOGY  
PUNJAB TIANJIN UNIVERSITY OF TECHNOLOGY,  
LAHORE**

## **Course Title: CET-211-L-Fluid Mechanics**

### **List of Experiments:**

1. Introduction to Practical contents, Equipment, and HSE (Health, Safety and Environment) measures.
2. Demonstration of Hydraulics Bench.
3. To perform experiment for determination of the viscosity of a given fluid (oil/water) by using falling sphere type viscometer.
4. To check accuracy of Bourden Gauge through its calibration by means of dead weight apparatus.
5. To conduct experiment for the magnitude of Hydrostatic force on partially submerged surface and locate center of the pressure.
6. To conduct experiment for the magnitude of Hydrostatic force on fully submerged surface and locate center of the pressure.
7. To conduct experiment for the metacentric height and locate the positions of various important points of a floating body.
8. To conduct experiment for measurement of the pressure using Manometer.
9. To perform experiment for Study of Laminar, Transitional and Turbulent Flow using Reynold's concept equipment.
10. To conduct experiment for coefficient of discharge of a rectangular and triangular Notch.
11. To conduct experiment for the hydraulic coefficients of an orifice.
12. To verify the Bernoulli's theorem for steady flow of water.
13. To measure the flow of incompressible fluid in pipes by Flow Meters.

### **List of Equipment's:**

1. Digital Hydraulic Bench (Quantity = 01).
2. Pitot tube Apparatus (Quantity = 01).
3. Venturi Meter (Quantity = 01).
4. Flow over a Notch (Quantity = 01).
5. Bernoulli's Theorem Apparatus (Quantity = 01).
6. Mini Flow Channel (Quantity = 01).
7. Current Velocity Meter with Accessories (Quantity = 01).
8. Standard TAR (BRTA, Redwood) Digital Viscometer (Quantity = 01).



**Venturi Meter**



**Pitot tube Apparatus**



**Digital Hydraulic Bench**



**Bernoulli's Theorem Apparatus**



**Mini Flow Channel**



**Digital Viscometer**



**Current Velocity Meter with Accessories**