

Hydraulics Lab

Lab-In-Charge: Prof. Bharat Jhamnani

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About the Lab:

The Hydraulic and Water Resources Engineering Group, operating within the Department of Civil Engineering, is renowned for its long-standing expertise in both surface and sub-surface flow hydraulics. The group offers an M.Tech. course focused on Hydraulic and Water Resources Engineering. Equipped with cutting-edge technology like ADV, bed profiler, digital velocity meter, current meter, ultrasonic depth profiler, pitot tube, digital manometer, and more, the Hydraulics laboratory is a testament to the group's commitment to staying at the forefront of innovation. The team of professors, including Prof. Munendra Kumar, Prof. S. Anbu Kumar, and Prof. T. Vijay Kumar, has contributed significantly to the laboratory's excellence. The group's research covers a wide range of areas, including physical and mathematical modeling of rivers and hydraulic structures, hydraulic design of river training works, hydraulic and hydrologic modeling, physical modeling and design of hydraulic structures, reservoir sedimentation, water hammer, and dam-break studies, climate change studies (including low flow and flood forecasting), groundwater hydrology and modeling, and subsurface flow and transport modeling.

List of Equipment:

1. Open channel flow flume
2. Kaplan turbine apparatus
3. Impact of jet apparatus
4. Masonary flume
5. Francis turbine apparatus
6. Mini hydraulic flume
7. Pelton turbine apparatus
8. Centrifugal Pump apparatus

List of Experiments:

1. To study the characteristics of the centrifugal pump.
2. Verification of momentum equation experimental.
3. To study the characteristics of the Pelton wheel turbine.
4. To study the characteristics of the Francis turbine.
5. To study the characteristics of the Kaplan turbine
6. To determine the discharge coefficient of venturi flumes.
7. To determine the discharge coefficient of a broad crested weir. 8. To determine the discharge coefficient of a sharp-crested weir
9. To determine the discharge coefficient of the spillway Weir.
10. To study the formation of hydraulic jumps.







