

Department of Applied Mechanics, IIT Delhi
2025-2026-I

Fluids & Solids Laboratory (AMP 262) 0-0-4 (<https://web.iitd.ac.in/~prgupta/AMP262.html>)

Course Co-ordinator: Prateek Gupta (Fluids)

Course Instructor: Maloy Kumar Singha (Solids)

Class Schedule:

Mon/Thu: 3.00-4.50 pm (batches A1 & A2)

Tue/Wed: 3.00-4.50 pm (batches A3 & A4)

Teaching Assistants:

Fluid Mechanics: MD Waquar, Varnit Kapoor, Datti Ganapathi, Altaf Ahmed, Shubham Sharma, Mohd Naved, Sumit Kumar

Solid Mechanics: Amar Shrivastav, Ranu Raj, Souvik Jana, Himanshu Kumar, Pawan Kumar, Ankit Singh Chandel, Vagish Kumar, Sahil Khan

Experiments:

Fluid Name of Experiment

- F01 Fully Developed Flow Through Pipes
- F02 Performance characteristics of Pelton turbine
- F03 Conservation of Mechanical Energy (Bernoulli's equation)
- F04 Study of the mean flow of a free air (submerged) jet
- F05 Performance characteristics of a free jet
- F06 Obstruction type flow meters
- F07 Performance Characteristics of Centrifugal Pump
- F08 Flow visualization

Solid Name of Experiment

- S01 Hardness Testing (Brinell & Rockwell)
- S02 Strain Gauge (Tensile & Bending)
- S03 Uniaxial Tension
- S04 Uniaxial Compression
- S05 Torsion
- S06 Impact (Izod)
- S07 Impact (Charpy)
- S08 Buckling

Evaluation Policy: Theory, conduction of experiment, report writing, and viva-voce.

Attendance Policy: If a student's attendance is less than 75%, the student will be awarded one grade less than the actual grade that he/she has earned.

Other Information:

- First lab turn will start on the week of August 4th-Aug 8th 2025.
- Orientation for fluids and solids lab will be carried out during first week of the semester (week of July 28th - August 1st 2025) by the respective lab instructors. The schedule will be announced via email and on the course webpage.
- Separate detailed instructions for fluids and solids lab components will be posted on the course webpage.