



MECHANICS OF SOLIDS LABORATORY

Location: ROOM NO. 138 A, GROUND FLOOR, ADIT

Introduction of Lab:

Mechanics of Solids is the combination of physical, mathematical, and manual techniques to predict the behavior of solid materials that are subjected to mechanical or thermal loading. It is the branch of mechanics that deals with the behavior of solid matter under external actions. The external actions may be external force or displacement. This is one of the vital laboratories in the course curriculum of the Bachelor of Civil Engineering. Students can learn variety of engineering and structural materials and their mechanical and engineering properties, different testing procedure and testing standards, testing equipment, materials stress-strain behavior and failure patterns, types of materials based on characterization.

In this laboratory, students will have the opportunity to apply loads to various materials under different equilibrium conditions. The student will perform tests on materials in tension, compression, torsion, bending, and impact. The machines and equipment used to determine experimental data include universal testing machines, torsion equipment, spring testing machine, compression testing machine, impact tester, hardness tester, etc. Data will be collected using Dial indicators, extensometers, strain gauges and strain indicator equipment.

**CIVIL ENGINEERING DEPARTMENT,
A.D.PATEL INSTITUTE OF TECHNOLOGY**