

**DEPARTMENT WISE EQUIPMENT DETAILS****“ DEPARTMENT OF CIVIL ENGINEERING”**

Sr. No.	Name of the Department	Total No. of Labs
1	Civil Engineering	6

Sr. No.	Name of the Laboratory	Labs Location
1	FLUID MECHANICS LABORATORY	B-104
2	MATERIAL TESTING LABORATORY	B-105
3	ENVIRONMENTAL ENGINEERING LABORATORY	A103
4	GEOTECHNICAL ENGINEERING LABORATORY	A116
5	SURVEYING & BASIC CIVIL ENGINEERING LABORATORY	A-104
6	TRANSPORTATION ENGINEERING LABORATORY	A-106



LAB 1: ROOM NO:B-104

LAB NAME: FLUID MECHANICS LABORATORY

Photos :



Objective -To understand fluid flow behavior, hydraulic principles, and flow measurement techniques through practical experiments.

Strength -Well-equipped lab providing hands-on experience in hydraulic and fluid flow analysis.

Major Equipment -

- 1) -Pressure measurement Device
- 2) -Verification of Bernoulli's Theorem
- 3) -Determination of metacentric heights
- 4) -Heleshaw Apparatus
- 5) -Calibration of Orifice / Mouthpiece
- 6) -Calibration of Venturimeter/Orifice meter
- 7) -Losses in pipe Fittings
- 8) -Flow over Notch & Weir / Ogee weir

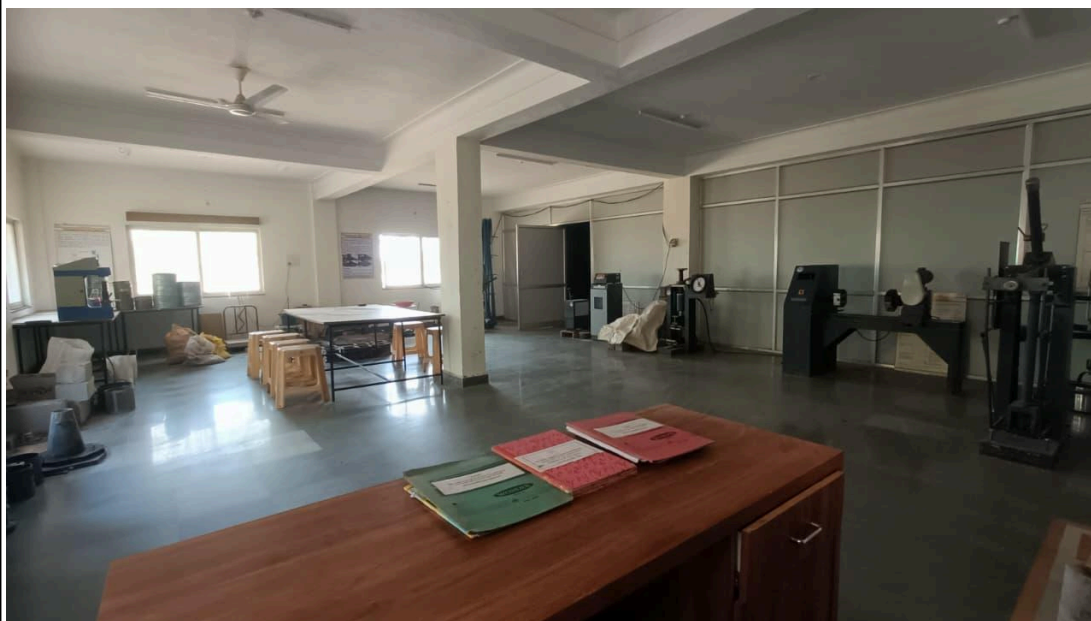


- 9) -Study of Hydraulic jump / Study Broad
- 10) -Impact of jet
- 11) -Pelton Wheel Turbine Test Rig.
- 12) -Centrifugal Pump Test Rig.
- 13) -Losses in pipe Friction
- 14) -Reynolds Apparatus
- 15) -Pipe in Series
- 16) -Pipe in Parallel
- 17) -Laminar Flow through Circular Pipes

LAB 2: ROOM NO: B-105

LAB NAME: MATERIAL TESTING LABORATORY

Photos :





Objective - To determine the physical and mechanical properties of construction materials as per IS standards.

Strength -Advanced testing facilities for quality assessment and practical understanding of material behavior.

Major Equipment -

- Vicat Needle Apparatus
- Specific Gravity Bottle - 100ml Narrow Mouth for Soil
- LE-CHATELIER MOULD - AS PER IS
- Vibrating Machine
- Gauging Trowel 6"
- Pycnometer Bottle
- Density Basket - G.I. 20 X 20 CM
- Coarse Sieve set G.I.FRAME - 30CM DIA
- Fine Sieve set - 20CM DIA
- Bulk Density Cylindrical Metal Measure - 3 LTR & 10LTR
- FLAKINESS GAUGE
- Length Gauge (Elongation Gauge)
- Slump Test Apparatus
- Compaction Factor Apparatus
- Vee Bee Consistometer
- Flow Table For Concrete
- Compression Testing Machine 2000 KN Digital - Manual Pace Control
- Cylindrical Mould - 150Mm Dia X 300 Mm Ht - Non Isi
- Cube Mould - 15Cm
- Flexural Strength Testing Machine
- Beam Mould
- Concrete Mixer - Tilting Drum Type
- Electronic Balance
- Rockwell Cum Brinell Hardness Testing Machine
- Izod Impact Testing Machine
- Torsion Testing Machine - Electronic
- Tile Flexural Strength Machine



LAB 3: ROOM NO: A103

LAB NAME: ENVIRONMENTAL ENGINEERING LABORATORY

Photos :



Objective - To analyze water and wastewater characteristics and study environmental treatment processes.

Strength - Modern laboratory supporting environmental monitoring, analysis, and sustainable engineering practices.

Major Equipment -

- Spectrophotometer
- Flame Photometer



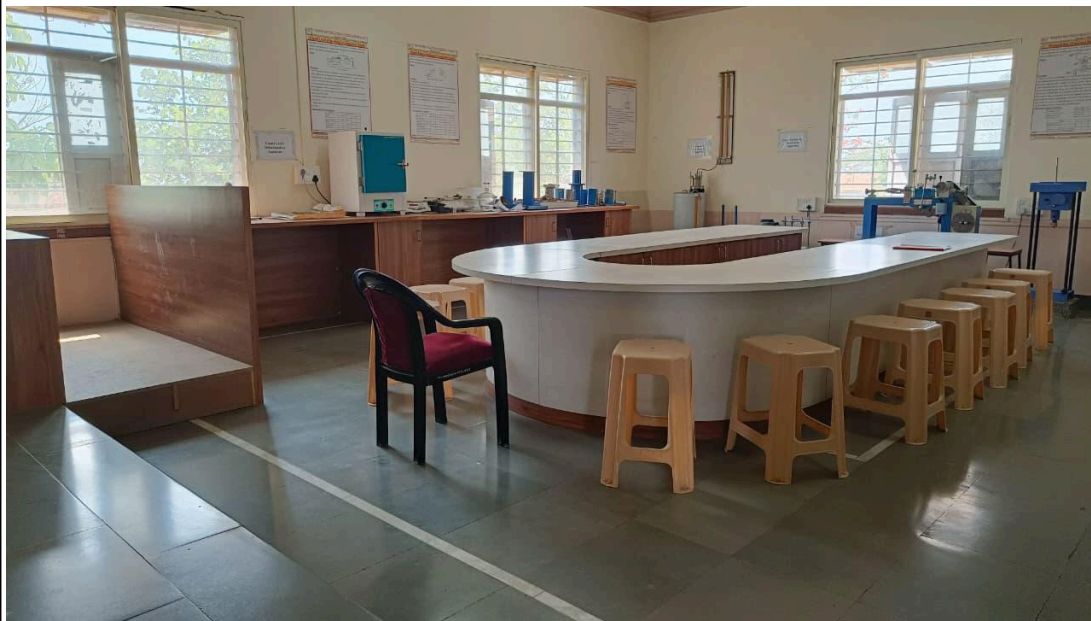
- BOD Incubator
- Flocculator Jar Test Apparatus
- pH Meter Apparatus
- Turbidity Meter Apparatus
- TDS Meter
- Magnetic Stirrer
- Portable Autoclave
- COD Digestion Apparatus

LAB 4: ROOM NO:A116

LAB NAME: GEOTECHNICAL ENGINEERING LABORATORY



Photos :



Objective -To evaluate engineering properties of soil for safe and economical foundation design.

Strength -Standard soil testing equipment enabling practical understanding of soil behavior and geotechnical analysis.

Major Equipment -

- Permeability Test Apparatus
- Direct Shear Test Apparatus
- Swell Pressure Test Apparatus
- Unconfined Compression Testing Machine
- Tri-axial test Apparatus
- Liquid Limit Apparatus
- Plastic Limit apparatus
- Plate Bearing Test Apparatus
- Standard Penetration Test Apparatus
- Thermostatic Oven
- Laboratory Vane Shear Test Apparatus
- Mineral Specimens (Set of 50)

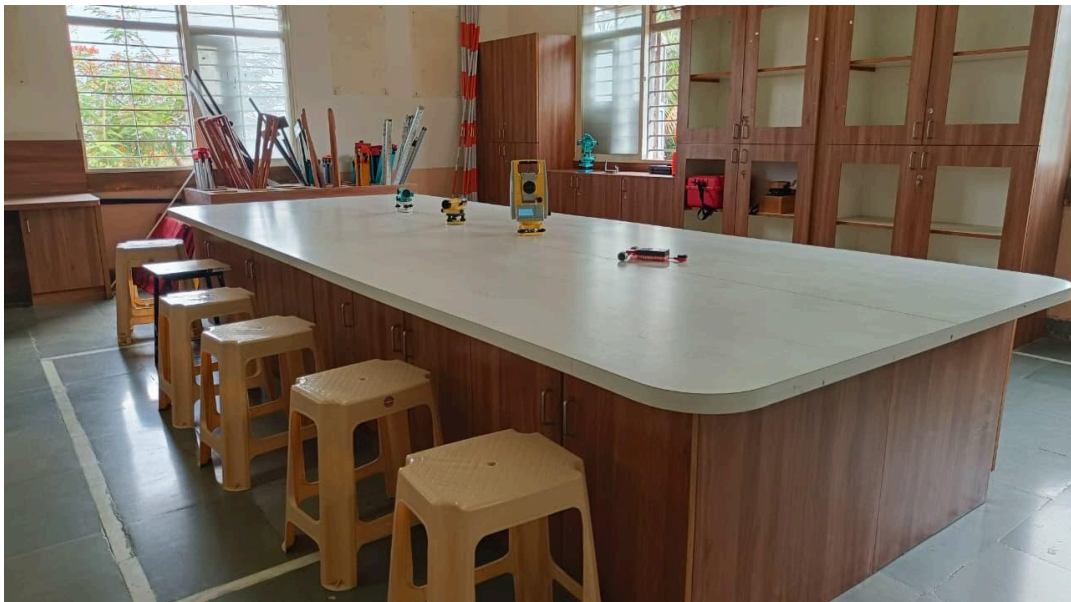


- Mohr's Scale of Hardness - Set of 9 Minerals
- Streak Plates
- Pocket Lens
- Fracture collection,Cleavage Collection,Streak Collection,Luster Collection
- ,Crystal Collection,Color Collection (Set of 10)
- Geological Models of Earthquake, Rocks & Volcanoes, Faults & Folds, Structure of Earth
- Multicolor Charts of Minerals, Volcanoes, Development of Rivers, Earthquake, Structure of Earth
- Igneous Rock Specimens
- Sedimentary Rock Specimens
- Metamorphic Rock Specimens
- Earthy Mineral Specimens

LAB 5: ROOM NO: A-104

**LAB NAME:SURVEYING & BASIC CIVIL ENGINEERING
LABORATORY**

Photos :





Objective -To develop practical skills in surveying, mapping, and basic civil engineering practices.

Strength - Equipped with modern surveying instruments for accurate field measurements and practical exposure.

Major Equipment -

- Dumpy Level DL-7
- Automatic Level - B - 40 - SOKKIA
- Measuring Chain - 20 mtr
- Spirit Level - 6"
- Ranging Rod Single Length - 3 Meter
- Compass Prismatic With Aluminium Stand
- Hand Level
- Abney Level
- Box Sextant
- Ghat Tracer
- Digital Planimeter
- Plane Table With Accessories
- Nautical Sextant
- Mirror Stereoscope
- Aerial Photograph - B & W, Size : 25 X 25 cm
- Aerial Photograph - Coloured, Size : 25 X 25 cm
- Gps System 72H
- Micro Optic Theodolite
- Total Station Model : South Nts-362L (With all Accessories)
- Parallax Bar



LAB 6: ROOM NO:A-106

LAB NAME:TRANSPORTATION ENGINEERING LABORATORY

Photos :



Objective -To study and test highway materials, pavement characteristics, and traffic engineering parameters.

Strength - Well-equipped facilities for pavement material testing and transportation engineering applications.

Major Equipment -



CBR Testing Machine
-Aggregate Impact Testing Machine
-Abrasion Testing Machine
-Marshall Stability Testing Machine
-Penetration Testing Machine
-Coarse Aggregate IS Sieves
-Fine Aggregate IS Sieves
-Ring & Ball Apparatus
-Ductility Testing Machine
-Standard Tar Viscometer
-Aggregate Crushing Value Apparatus
-Bitumen Extractor