Structural Engineering Laboratory

Capabilities

- Testing of simply supported reinforced concrete and steel beams for strength and deflection behaviour.
- Testing of reinforced concrete column subjected to concentric and eccentric loading.
- Characteristic analysis of RC and Steel Beams when subjected to dynamic and static loading.
- Non Destructive testing of in - situ strength of concrete.
- Study about the various elastic and plastic properties of RC beams.

List of Equipment

S.No	Equipment
1	Loading Frame 100 Tones capacity
2	Hydraulic Jack 50 T
3	Load Cell 100 T
4	Proving Ring - 50 T, 20 T & 10 T
5	Demec Gauge 200 mm
6	Electrical Strain Gauge with indicator
7	Rebound Hammer
8	Ultrasonic Pulse Velocity Tester
9	Dial Gauges 25 mm
10	Clinometer
11	Vibration Exciter
12	Vibration Meter

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students

In-charges

- **Mr.K.Letcham. M.E.(Ph.D.)**,

  Assistant Professor (Sl.Grade),

  Department of Civil Engineering.

- **Mr. B.Sivakumar,** Technical

  Assistant, Department of Civil

  Engineering.

Strength of Materials Laboratory

Capabilities

- Tension and Compression tests on various materials like wood, metal and concrete blocks.
- Shear, impact and hardness tests on metals
- Torsion and deflection test on mild steel rods, metal beam and springs.

List of Equipment

S.No	Equipment
1	UTM (400 KN Capacity)
2	Torsion Testing Machine
3	Izod Impact Testing Machine
4	Rockwell Hardness Testing Machine
5	Brinnel Hardness Testing Machine
6	Beam Deflection Test Apparatus
7	Le Chatelier's Apparatus
8	Vicat's Apparatus
9	Extensometer
10	Compress meter
11	Muffle Furnace
12	Spring Testing Machine

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students

In charges

- **Mr.S.Anandaraj. M.E.(Ph.D.)**,

  Assistant Professor (Sr.Grade),

  Department of Civil Engineering.

- **Mr. S. Ashokpandian B.E.,**

  Technical Assistant,

  Department of Civil Engineering.

Concrete & Highway Engineering Laboratory

Capabilities

- Physical properties of construction materials like cement, sand, aggregates, bitumen etc
- Properties of fresh concrete and hardened concrete
- Physical properties of bituminous mixes

List of Equipment

S. No	Equipment
1	Concrete Mixer Machine
2	Flow Table Apparatus
3	Vibrating Table Apparatus
4	Compression Testing Machine (200T)
5	Vee Bee Consist meter
6	Aggregate Impact Testing Machine
7	CBR Apparatus
8	Blains Apparatus
9	Vicat's Apparatus
10	Le Chatelier's Apparatus
11	Flexure Testing Machine
12	Los Angeles Abrasion Testing Machine
13	Universal Penetrometer
14	Standard Tar Viscometer
15	Ductility Testing Machine
16	Ring and Ball Apparatus
17	Marshal Stability Apparatus
18	Bitumen Extractor Apparatus
19	Electronic Weighing Balance

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students
- Industry peoples

In-charges

- **Dr. M. Nithya**

  Assistant Professor (Sr.Grade),

  Department of Civil Engineering.

- **Mr. S.Ashok Pandian,**

  Technical Assistant, Department

  of Civil Engineering

Soil mechanics Laboratory

Capabilities

- Calculation of index properties like specific gravity, grain size distribution of various types of soils
- Study about the liquid limit, plastic limit, and shrinkage limit of various types of soils.
- Calculation of in situ and compaction characteristics
- Tests to determine the permeability and other engineering properties of the soil.

List of Equipment

S.No	Equipment
1	Hydrometer (Including Measuring Jar & Thermometer)
2	Liquid and Plastic Limit Apparatus
3	Shrinkage Limit Apparatus
4	Proctor Compaction Apparatus
5	Sieves with Sieve Shaker
6	Unconfined Compression Test Apparatus
7	Direct Shear Apparatus
8	Triaxial Shear Apparatus
9	Three Gang Consolidation Test Device
10	California Bearing Ratio Test Apparatus
11	Vane Shear Apparatus
12	Swell Pressure Test Apparatus
13	SPT Test Apparatus
14	Falling Head Permeability Apparatus
15	Constant Head Permeability Apparatus
16	Relative Density Apparatus
17	Hot Air Oven
18	Universal Automatic Compactor

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students
- Industry peoples

In-charges

- **Dr. R. Dharmaraj**

  Associate Professor,

  Department of Civil Engineering.

- **Mr. K. Gandhi,**

  Technical Assistant, Department of Civil Engineering.

Environmental Engineering Laboratory

Capabilities

- Characterization of waste water.
- Study on treat-ability of the water.
- Tests to find out the various chemical constituents of the water.

List of Equipment

S.No	Equipment
1	pH Meter
2	Turbidity Meter
3	Conductivity Meter
4	Refrigerator
5	BOD Incubator
6	Muffle Furnace
7	Hot Air Oven
8	Jar Test Apparatus
9	COD Apparatus
10	Kjeldahl Apparatus
11	Heating Mantles
12	Calorimeter
13	Chlorine Comparator
14	Filtration Assembly
15	Electronic Top Loading Balance
16	Double Beam UV Visible Spectrophotometer
17	Flame Photometry
18	Atomic Adsorption Spectroscopy

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students
- Industry peoples

In-charges

- **Dr. S. Kanmani,**

  Associate Professor,

  Department of Civil Engineering

- **Mr. K. Gandhi,**

  Technical Assistant,

  Department of Civil Engineering

Fluid Mechanics Laboratory

Capabilities

- Measurement of flow of water through various type of flow
- Measurement of major and minor losses when passed through pipes Characteristics of pumps and turbines

List of Equipment

S.No	Equipment
1	Flow through Orifice meter
2	Flow through Venturi meter
3	Rotometer
4	Centrifugal Pump (Single Stage)
5	Centrifugal Pump (Multiple Stage)
6	Submergible Pump
7	Reciprocating Pump
8	Gear oil Pump
9	Pelton Wheel Turbine
10	Francis Turbine
11	Kaplan Turbine
12	Bernoulius Theorem
13	Metacentric Height
14	Pitot's Tube
15	Flow through Open Chanel (Notches)
16	Flow through Orifice
17	Flow through Mouthpiece
18	Losses In Pipes (Major Loss)
19	Losses In Pipes (Minor Loss)

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students

In-charges

- **Mrs. P. Indhira Devi, M.E.**,

  Assistant Professor (Sr.G),

  Department of Civil Engineering.

- **Mr. M.Kannan. DCE** Technical

  Assistant, Department of Civil

  Engineering.

Survey Practical Laboratory

Capabilities

- Marking and ranging of a line.
- Area of the plot with regular and irregular boundaries by different methods of surveying
- Development of a contour map.
- Marking and Curves setting for various engineering projects using Theodolites and Total Stations.

List of Instruments

S.No	Equipment
1	Total Station
2	Theodolite
3	Dumpy Level
4	Plane Table
5	Pocket Stereoscope
6	Prismatic Compass
7	Surveyor Compass
8	GPS
9	Laser Distance Meter
10	Auto Level
11	Substance Bar
12	Mirror Stereoscope

Target Users

- UG Students
- Industry peoples

In-charges

- **Mr. V. Rajeshkumar M.E.(Ph.D.),**

  Assistant Professor, Department of Civil

  Engineering.

- **Mr. M.Kannan. DCE**

  Technical Assistant, Department

  of Civil Engineering

CADD Laboratory

Capabilities

- Planning and detailing of the section of any engineering structure using Auto CAD
- Analysis and Design of a RC and Steel structure using STAAD Pro.

Facilities

S.No	Equipment
1	Computer System of Core 2 Duo - 80 nos
2	Models of Structures

Software

- Auto CAD
- STAAD Pro
- Primavera

Target Users

- Faculties and Research Scholars from various institutions
- PG and UG Students

In-charges

- **Mr. K. S. Elango,**

  Assistant Professor,

  Department of Civil Engineering

- **Mr. B.Sivakumar** Technical

  Assistant, Department of Civil

  Engineering.