



Slrshyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY, DAVANAGERE

(Affiliated to VTU Belagavi, Approved by AICTE, New Delhi & Govt. of Karnataka)

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DEPARTMENT OF CIVIL ENGINEERING

LABORATORY DETAILS

The Department houses all the eight full-fledged laboratories prescribed in VTU syllabus.

Sl. No.	LABORATORY NAME	Area (m ²)
1	Applied Engineering Geology Laboratory	70.98
2	Basic Materials Testing Lab	148.00
3	Computer Aided Design and Drawing Lab	104.23
4	Concrete & Highway Material Testing Lab	115.64
5	Environmental Engineering Lab	108.89
6	Geotechnical Engineering Lab	115.64
7	Hydraulics and Hydraulic Machinery Lab	230.00
8	Survey Laboratory	49.20

1. Applied Engineering Geology Laboratory



The Laboratory is very well equipped to train undergraduate students of Civil Engineering in the field of material of construction and in the field of geo-technical engineering connected to the major civil engineering projects such as construction of dams, roads, highways, bridges and reservoir structures and multistory structures. Over 200 specimens of rock forming minerals, carbonate minerals, metallic minerals, industrial minerals and semi-precious gem minerals. Over 200 rock specimens which are used as building stones belonging to igneous rocks, sedimentary rocks and metamorphic rocks. It includes grey, pink and green granites, sand stones, dolerites and marbles. The Laboratory also has soil samples such as red, black, clayey and sandy soils to demonstrate to the students about geo-technical solution. The Laboratory is also equipped geological survey instruments such as Brunton compass etc., for geological mapping.

Equipment details:

- Igneous rocks
- Sedimentary rocks
- Metamorphic Rocks
- Quartz Minerals
- Natural Occurring Minerals
- Ore Minerals
- Mohr's Scale of hardness

Coordinator details:



Dr. S L Arun Kumar
Associate Professor
Department of Civil Engineering
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Davanagere – 577006.

2. Basic Materials Testing Lab



Basic Materials Testing Laboratory (also called Strength of Materials Laboratory), in which all Under Graduate students of Civil Engg, Mechanical Engg, and their respective diploma students undergo a course mandatorily, is equipped with the state of the art equipments/ machines to test the basic properties of engineering materials like steel, copper, brass, aluminium, and concrete. The lab houses the following equipments: Universal Testing Machines, Compression Testing Machine, Torsion Testing Machine, Hardness Testing Machines (Brinell and Rockwell), Impact Testing Machine (for Izod and Charpy), Fatigue Testing Machine, etc. The laboratory also carries out commercial testing of construction materials like reinforcing steel, concrete, hollow and solid building blocks, interlock paving blocks, etc. on a regular basis.

Equipment details:

- Universal Testing Machine
- Compression Testing Machine,
- Torsion Testing Machine,
- Hardness Testing Machines (Brinell and Rockwell),
- Impact Testing Machine (for Izod and Charpy),
- Fatigue Testing Machine

Coordinator details:



Dr. Harish B A
Assistant Professor
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3. Computer Aided Design and Drawing Lab



CAD stands for Computer Aided Design. CAD is used to design, develop and optimize products. While it is very versatile, CAD is extensively used in the design of tools and equipment required in the manufacturing process as well as in the construction domain. A well-equipped computer lab with advanced facilities is established for the benefit of the Civil Engineering students. High end terminals supported by latest hardware and software, latest visual aids, plotting devices, etc. are among them. Advanced Civil Engineering softwares are procured for making the students globally competitive and industry ready. At CAD lab, students get professional training on 2D & 3D drafting of Civil Engineering drawings using the latest version of Autocad software. Student will learn computer aided design layout and 3D solid modelling definition. Students will also gain the knowledge of design and drafting needed for Civil Engineering discipline.

Equipment details:

- Desktop PC, Intel Core i3-3320 Dual-Core Processor, 3.3 GHz, 8GB Ram, 500GB HDD, Optical Mouse, USB Keyboard, 18.5" TFT Monitor : 33
- Projector
- 24 Port Network Switch:
- Printer
- STAAD.Pro Software
- E-Surveying Software

Coordinator details:



Mr. Swamy L V
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4. Concrete & Highway Material Testing Lab

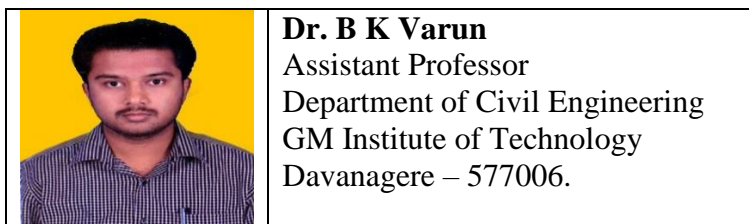


The Concrete & Highway Material Testing Lab is well equipped with machinery & apparatus for testing building materials like cement, fine aggregate, coarse aggregate, cement concrete, bricks, tiles (Roofing & Paving), concrete blocks, bitumen etc. The lab is used for the regular academic works and consultancy work. Consultancy service is provided in the area of testing cement, fine aggregate, coarse aggregate, cement concrete, highway materials, bricks, tiles, paving blocks & other building materials. Consultancy service is also provided in the area of mix design of cement concrete.

Equipment details:

- Vibrating Table
- Compaction Factor Apparatus
- Laboratory Cement Autoclave
- Aggregate Impact Tester
- LA Abrasion Testing Machine
- Vibrating Machine
- Ductility Testing Apparatus
- Vee Bee Consistometer
- Flash and Fire Point Testing Apparatus
- Ring and Ball Apparatus
- Air Permeability Apparatus
- Compression Strength Testing Machine
- Digital Weighing Machines
- Concrete Mixer
- Flexure testing machine
- V funnel apparatus
- J ring apparatus

Coordinator details:



5. Environmental Engineering Lab



The laboratory will be used in VII semester as per the present syllabus and also for project works in the area of environmental engineering. The laboratory has the facility to test water and waste water samples for various physical, chemical and biological parameters. The laboratories also used for consultancy works like testing of water samples from wells, rivers etc and also waste water samples from the industries.

Equipment details:

- Jar test Apparatus
- Digital pH meter
- Digital conductivity meter
- Muffle furnace
- COD Digestion apparatus
- Digital colony counter
- Digital Turbidity Meter(Nephelometer)
- Microwave Oven
- High Volume Sampler
- Noise Meter

Coordinator details:



Dr. Kiran Kumar H S
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6. Geotechnical Engineering Lab

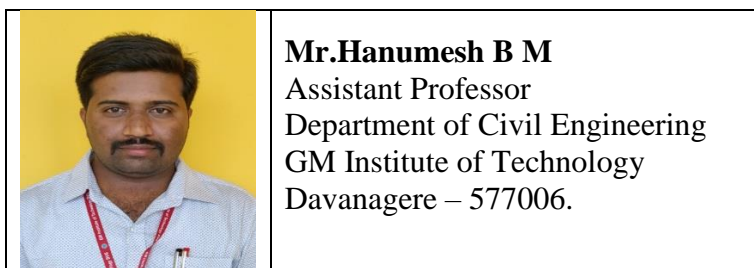


The Geotechnical Laboratory (also called Soil Mechanics laboratory) possesses a wide range of testing equipments to study the properties of soil and to quantify these properties to predict how soil will behave under field loading for the safe design of structures. The laboratory is equipped with the apparatus required to perform all standard soil tests including the triaxial test, the direct shear test, CBR test, Static cone penetrometer test etc, the laboratory also provides services to the private sector. Standard soil tests are conducted on soil samples that have been brought for analysis which includes grain size distribution, consistency limits, permeability tests, proctor compaction tests, bearing capacity etc, to predict the soil behaviour.

Equipment details:

- Unconfined Compression Tester
- Direct shear test Apparatus
- CBR Test Apparatus
- Triaxial Test Apparatus
- Consolidation Test Apparatus
- Vane Shear Apparatus
- Permeability Apparatus
- Sieve Shaker Motorised
- Compaction Test Apparatus
- Core Cutter
- Sand Pouring Cylinder Apparatus
- Liquid Limit device
- Soil Penetrometer with Digital Display
- Shrinkage Limit Set
- Plastic Limit Set
- Infrared moisture meter

Coordinator details:



7. Hydraulics and Hydraulic Machinery Lab



The Hydraulics and Hydraulic Machinery Lab caters to the needs of the undergraduate programmes offered by the departments of Civil Engineering, Mechanical Engineering and Bio-Technology Engineering and their respective diploma courses. In addition to the laboratory courses of the academic programmes. The objective of the laboratory courses in Hydraulic Machines is to familiarise the students with the components and working principles of the Hydraulic machines- different types of Turbines, Pumps, and other miscellaneous hydraulics machines. Students study the performance characteristics of the machines under widely varying operating conditions in this laboratory. They also study flow measurements. Experiments are conducted to measure the rate of flow using Notches, weirs, Venturimeter, Orifices meter etc and there by determining coefficient of discharge.

Equipment details:

- Bernoulli's Apparatus
- Flume and weir Apparatus
- Vertical Orifice and Mouth piece
- Coordinator details
- Turbines

Coordinator details:



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8. Survey Laboratory



Survey Laboratory is equipped with all new instruments. This include instruments used to carry out Chain survey, Compass survey, Plane table survey, Levelling and Theodolite Survey etc. The Laboratory also has Electronic distance measurement instrument called Total Station which has the capability to carry almost any type of survey. Which are used not only for carrying out academic activities but also consultancy works.

Equipment details:

- Total Station
- Theodolite
- Dumpy level
- Optical square
- Digital Planimeter
- Prismatic compass

Coordinator details:

	<p>Mr. Virupaksha H V Assistant Professor Department of Civil Engineering GM Institute of Technology Davanagere – 577006.</p>
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