



**Srishyla Educational Trust (R), Bheemasamudra**  
**GM INSTITUTE OF TECHNOLOGY, DAVANAGERE**  
**GMIT – POLYTECHNIC**

(Approved by AICTE, New Delhi, Affiliated DTE & Govt. of Karnataka)  
Phone: 08192-252560, 233377, 252777, Fax: 08192 233344



## DEPARTMENT OF CIVIL ENGINEERING

### LABORATORY DETAILS

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

| Sl. No. | LABORATORY NAME                         | Area (m <sup>2</sup> ) |
|---------|-----------------------------------------|------------------------|
| 1       | Design and Detailing of RCC Str         | 60.00                  |
| 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. Design and Detailing of RCC Structure:



The laboratory will be used in IV semester as per the present syllabus and also for project works in the area of structural engineering. The laboratory equipped with Bending Hook, Bending Die, Bending Table, Steel Bars and Binding Wire and also various Structural Models like Footing Mat, Column, One way and Two Way Slab, Lintel with chejjah etc.,

### Coordinator details:



**Mr.Ningaraju C**  
**Assistant Professor**  
**Department of Civil Engineering**  
**GMIT-Polytechnic**  
**Davangere - 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 (Brinnel 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 (Brinnel and Rockwell),
- Impact Testing Machine (for Izod and Charpy),
- Fatigue Testing Machine

### Coordinator details:



**Mrs.Poornima K B**  
**Assistant Professor**  
**Department of Civil**  
**Engineering**  
**GMIT-Poytechnic**  
**Davanagere - 577006.**

## 2. 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 software's 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, 8GBB 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:



**Mrs. Gangamma G C**  
**Lecturer**  
**Department of Civil Engineering**  
**GMIT-Poytechnic**  
**Davangere - 577006**



#### 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:



**Mrs. Poornima K B**  
**Assistant Professor**  
**Department of Civil**  
**Engineering**  
**GMIT-Poytechnic**  
**Davanagere - 577006.**

## 5. Environmental Engineering Lab



The laboratory will be used for v 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:



**Mrs.Gangamma G C**  
**Lecturer**  
**Department of Civil Engineering**  
**GMIT-Poytechnic**  
**Davangere - 577006**

## 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
- Shrinkage Limit Set
- Plastic Limit Sett
- Infrared moisture meter

### Coordinator details:



**Mr. Maruthi K P**  
**Lecturer**  
**Department of Civil Engineering**  
**GMT-Polytechnic**  
**Davangere - 577006.**

## 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
- Turbines

### Coordinator details:



**Mr.Ningaraju C**  
**Assistant Professor**  
**Department of Civil Engineering**  
**GMIT-Polytechnic**  
**Davangere - 577006.**



## 8. Survey Laboratory



Survey Laboratory is equipped with all new instruments. This includes 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:



**Mr. Maruthi K P**  
**Lecturer**  
**Department of Civil Engineering**  
**GMIT-Polytechnic**  
**Davangere - 577006.**



Srishyla Educational Trust (R), Bheemasamudra.

# GM INSTITUTE OF TECHNOLOGY, DAVANGERE

Post Box No. 4, P. B. Road, Davangere - 577 006 KARNATAKA | INDIA



## Polytechnic - Diploma Programme Details on Infrastructure: Department of Civil Engineering Practical Sessions - Laboratories / Workshops

| Semester | Sl No | Subject Code | Subject                                                  | Labs / Work Shops                                     | Facilities / Major Equipments                                                                  | Venue               |
|----------|-------|--------------|----------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------|
| First    | 1     | 20EG01P      | Communication Skills                                     | Computer Lab                                          | Computers (20 Nos)<br>MS Office                                                                | GMIT<br>Polytechnic |
|          | 1     | 20SC02P      | Statistics and Analytics                                 | Computer Lab                                          | Computers (20 Nos)<br>MS Office                                                                | GMIT<br>Polytechnic |
|          | 1     | 20CS01P      | IT Skills                                                | Computer Lab                                          | Computers (20 Nos)<br>MS Office                                                                | GMIT<br>Polytechnic |
| Second   | 2     | 20CE21P      | Civil Engineering Graphics                               | CADD Lab                                              | Computers (29 Nos)<br>Auto CAD software, LCD<br>projector, Plotter & Power<br>Backup           | GMIT<br>Civil Dept  |
|          | 2     | 20CE22P      | Basic Surveying                                          | Surveying Lab                                         | Chain, Compass, Dumpy Level<br>& other Surveying Accessories                                   | GMIT<br>Civil Dept  |
|          | 2     | 20EE01P      | Fundamentals Of Electrical<br>and Electrical Engineering | Electrical & Electronics Lab                          | I C Trainer kit, Wooden Wiring<br>board, Portable Moving Coil<br>DC Voltmeters, etc.,          | GMIT<br>Civil Dept  |
| Third    | 3     | 20CE31P      | Engineering Mechanics<br>& Strength of Materials         | Material Testing Lab<br>& ANSYS Lab                   | Charpy's apparatus, UTM<br>Lami's apparatus, etc., and<br>Computers (20 Nos)<br>ANSYS Software | GMIT<br>Mech Dept   |
|          | 3     | 20CE32P      | Modern Surveying                                         | Surveying Lab                                         | Dumpy Level, Theodilite, Total<br>Station and other Surveying<br>Accessories                   | GMIT<br>Civil Dept  |
|          | 3     | 20CE33P      | Construction Techniques                                  | Geotechnical Engg. Lab &<br>Construction Practice Lab | Soil testing machine,<br>Atterberg limit apparatus etc.,                                       | GMIT<br>Civil Dept  |
|          | 3     | 20CE34P      | Building Drawing Using<br>CADD                           | CADD Lab                                              | Computers (20 Nos)<br>Auto CAD software, LCD<br>projector, Plotter & Power<br>Backup           | GMIT<br>Civil Dept  |

Programme Coordinator  
Department of Civil Engineering  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology

Head of the Department  
Department of Civil Engineering  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology

HOD

Principal  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology  
Davangere





Srishyala Educational Trust (R), Bheemasamudra.

# GM INSTITUTE OF TECHNOLOGY, DAVANGERE

Post Box No. 4, P. B. Road, Davangere - 577 006 KARNATAKA | INDIA



## Polytechnic - Diploma Programme Details on Infrastructure: Department of Civil Engineering Practical Sessions - Laboratories / Workshops

| Semester | Sl No | Subject Code | Subject                             | Labs / Work Shops                   | Facilities / Major Equipments                                                                  | Venue           |
|----------|-------|--------------|-------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------|-----------------|
| Fourth   | 1     | 20CE41P      | Concrete Technology                 | Concrete Lab & Material Testing Lab | Vicat Apparatus, Pycnometer CTM, Slump test apparatus, Compaction factor test apparatus, etc., | GMIT Civil Dept |
|          | 2     | 20CE42P      | Building Estimation & Valuation     | CADD Lab                            | Computers (20 Nos) Auto CAD software, LCD projector, Plotter & Power Backup                    | GMIT Civil Dept |
|          | 3     | 20CE43P      | Site Management                     | CADD Lab                            | Computers (20 Nos) Primavera software, LCD projector, Plotter & Power Backup                   | GMIT Civil Dept |
|          | 4     | 20CE44P      | Design and Detailing RCC Structures | CADD Lab                            | Computers (20 Nos) Auto CAD, STADD Pro software, LCD projector, Plotter & Power Backup         | GMIT Civil Dept |

Faculty signature  
Programme Coordinator  
Department of Civil Engineering  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology  
Davangere - 577 006.

HOD  
Head of the Department  
Department of Civil Engineering  
GMIT Polytechnic (College Code 569)  
GM Institute of Technology

Principal  
Principal  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology  
Davangere - 577 006



Srishyla Educational Trust (R), Bheemasamudra.

# GM INSTITUTE OF TECHNOLOGY, DAVANGERE

Post Box No. 4, P. B. Road, Davangere – 577 006 KARNATAKA | INDIA



## Polytechnic - Diploma Programme Details on Infrastructure: Department of Civil Engineering Practical Sessions - Laboratories / Workshops

| Semester | Sl No | Subject Code | Subject           | Labs / Work Shops             | Facilities / Major Equipments                                                                                                    | Venue           |
|----------|-------|--------------|-------------------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------|
| FIFTH    | 1     | 20CE54I      | Built Environment | Environmental Engineering Lab | pH meter, Muffle furnace, oven jar test apparatus, burette stand, pipette, imhoff cone, EC meter, Turbidity Meter, DO, BOD, COD. | GMIT Civil Dept |
|          |       |              |                   | Surveying Lab                 | Dumpy Level, Theodilite, Plan table, prismatic compass, Total Station and other Surveying Accessories.                           | GMIT Civil Dept |

Faculty signature

HOD

Head of the Department  
Department of Civil Engineering  
GMIT Polytechnic (College Code 569)  
GM Institute of Technology  
Davangere-577 006.

Principal

Principal  
GMIT Polytechnic (College Code: 569)  
GM Institute of Technology  
Davangere - 577 006