



Civil Engineering Department

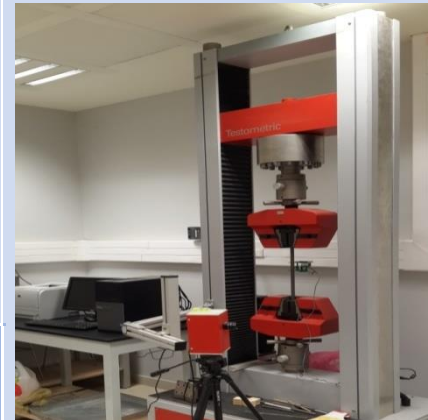
1.1.1. Materials Laboratory

Laboratory Objective

The main objective of the materials lab is to give a broad understanding of materials related to civil engineering with an emphasis on the fundamentals of structure-property-application relationships. In addition, the focus is to provide physical observations to complement concepts learned in theory courses.

Laboratory Description

The lab has an area of 80 sq. meters and comprises all the major equipment required to carry out the experiments for mechanical and physical properties of construction materials. Universal testing machines and compression testing machines are among the key equipment. The students are also introduced to tests such as the direct tension tests, torsion tests, and abrasion tests.





1.1.2. Concrete Laboratory

Laboratory Objective

The objective of the Concrete Laboratory is to implement the student's knowledge about concrete and its role in construction, tests, and various processes that are carried out during the construction process

Laboratory Description

The concrete laboratory covers an area of 78 square meters and contains 22 machines. In addition to a set of tools, all experiments and laboratory tests are carried out on the fresh and hardened concrete needed by the student in different courses or graduation projects.





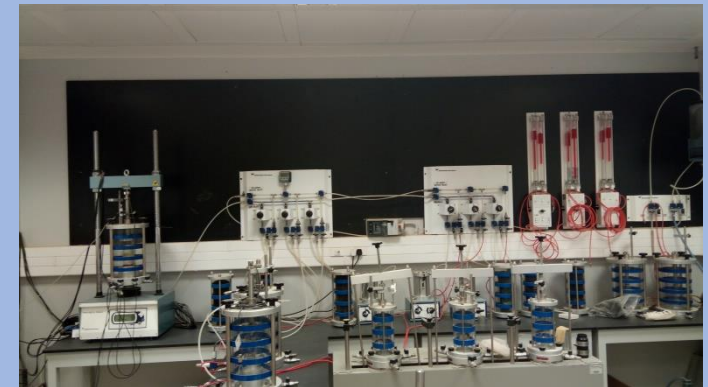
1.1.3. Soil and Rock Laboratory

Laboratory Objective

The objective of the soil and rock laboratory is to provide a state-of-the-art facility for civil engineering students to explore the characteristic properties of soils and rocks by performing various tests on soil and rock samples.

Laboratory Description

The soil and rock laboratory has an 84 sq. meter area and is equipped with the necessary setups and apparatus which are required to perform the tests on different types of soils and rocks. Primarily, the laboratory has facilities to carry out the tests for determination of moisture content, specific gravity, density, grain size distribution, plastic limit, liquid limit, permeability tests, compaction, compressibility, and shear strength of soil.





1.1.4. Transportation Laboratory

Laboratory Objective

To enable students and faculty members to conduct various experiments related to bituminous materials and mixtures, for learning, research, and investigation or evaluation of existing pavement structures.

Laboratory Description

The laboratory houses equipment to conduct testing of bituminous materials (penetration, softening point, flash, and fire point, ductility, viscosity), aggregates (sieve analysis), paving mixtures (density, specific gravity, extraction of bitumen, resistance to plastic flow, aging), and emulsified asphalt.





1.1.5. Environmental Engineering Laboratory

Laboratory Objective

Facilitates experimental teaching in the field of environmental engineering

Laboratory Description

Focus on the areas of contaminant transport in environmental systems, water and air quality, water purification, sewage and industrial wastewater and disposal, air pollution, and solid waste management





1.1.6. Hydraulics Laboratory

Laboratory Objective

The hydraulic laboratory's objective is to allow the students to explore the fundamental principles of fluid mechanics and hydraulics through experimentation and to demonstrate key hydraulic phenomena using hands-on lab devices.

Laboratory Description

The water resources laboratory is 84 square meters in area. It includes a 10m in-length open channel tilting flume and several movable hydraulic benches that deal with multi-experiments related to fluid mechanics and hydraulics in addition to the basic tools required for conducting the experiments.





1.1.7. Surveying Laboratory

Laboratory Objective

The objective of the surveying and photogrammetry laboratory is to introduce the students to the use of the latest surveying and leveling instruments, data acquisition and interpolation techniques, and photogrammetry principles.

Laboratory Description

The laboratory has a 66 square meter floor area. The surveying and photogrammetry laboratory provide students with hands-on experience with the latest surveying instruments. The Laboratory has a variety of modern surveying equipment, such as total station, modern digital theodolites, and digital levels.

