

## Facilities

Civil Engineering is housed in modern buildings which provide facilities for undergraduate Civil Engineering programmes, the postgraduate Master of Science and Postgraduate Diploma programmes, post-experience programmes and an active PhD research centre.



We have a comprehensive range of specialist laboratories, excellent computing facilities and make a point of undertaking work in co-operation with industry.

Students have access to ample PCs (operating under Microsoft and Novell Netware), and superfast Alpha computers. As well as free, individual internet and email access, students have access to many civil engineering information sources via the high speed campus network.

Our lecture rooms are fully equipped with audio, cine and computer equipment and facilities for large screen projection.

## Laboratories

### Concrete and Structures

The structures laboratory is equipped to carry out simple and complex testing. Three strong floors are available to test a wide range of assemblies. A full range of Universal testing machines is available which can provide loads of up to 500

tonnes. Some of the machines are servo-controlled and so enable complex dynamic loading tests to be performed. The concrete laboratory is equipped with the facilities for mix design and trial production and also for testing models and samples.

### Geotechnics and Highways

The laboratories are well equipped for the testing of soil samples with several triaxial cells oxdometers, shear boxes (including a 300mm square shear box), ring shears and permeability apparatus. There are facilities for testing large and small geotechnical models, including a 2.0m x 2.0m x 3.0m test tank. A large sand pit is available for the testing of pavement sections. Bitumen testing is also carried out.

### Groundwater

Electrical analogue models of groundwater flow are used for teaching both undergraduate and postgraduate courses, while digital groundwater flow models are used for research projects.

### Hydraulics and Water Engineering

Several large flumes are available for hydraulic engineering research and are ideally suited for model testing. Test tanks are used for teaching demonstrations, and new facilities for atmospheric and wind engineering have been developed.

### Public Health Engineering

Research into water treatment is carried out using complex filter equipment and chemical testing can be done utilising a full range of sophisticated devices.