4.2.5.2 Degree Requirements

The MSc (Geotechnical Engineering) programme consists of seven compulsory core modules (total of 28 MCs) and eight elective modules. The core modules are formulated specifically to address the primary objective, while the elective modules are formulated to address the secondary objective. Each module carries 4 MCs.

To satisfy graduation requirements, a candidate must obtain a minimum Cumulative Average Point (CAP) of 3.00 (equivalent to an average of Grade B-) for the best 40 MCs, inclusive of seven core modules and three elective modules. In addition, the grade point for each of the seven core modules must be at least 2.5 (Grade C+). A student is allowed one re-take for at most two core modules if the grade point obtained is less than 2.5 (Grade C+).

Core Modules

- CE4257 Linear Finite Element Methods
- CE5108 Earth Retaining Structures
- CE5111 Underground Construction Design Project
- CE5112 Structural Support Systems for Excavation (compulsory pre-requisite: CE5108 Earth Retaining Structures)
- CE5113 Geotechnical Investigation and Monitoring
- CE6101 Geotechnical Constitutive Modelling
- CE6102 Geotechnical Analysis

Elective Modules

- CE5101 Seepage and Consolidation of Soils
- CE5104 Underground Space
- CE5105 Analytical and Numerical Methods in Foundation Engineering
- CE5106 Ground Improvement
- CE5107 Pile Foundation
- CE5881 Topics in Geotechnical Engineering
- CE6002 Analysis of Civil Engineering Experiments
- CE6077 Advanced Numerical Methods in Mechanics & Environmental Flows

Note: Not all elective modules listed are necessarily available in any one year. All modules listed are of 4 MCs each.

1 Students are expected to complete CE5111 in one semester. Request for extension will be approved on a case-by-case basis and only with valid reasons (which exclude heavy work commitment). Extension, if granted, is limited to one semester, and students who fail to complete CE5111 in two semesters will be
given a grade F and will have to repeat the module.

CE6102 requires two pre-requisites/co-requisites, namely CE4257 and CE6101. In other words, students need to have taken CE4257 and CE6101 in a previous semester or are taking them in the same semester as CE6102. Otherwise, the system will not register him/her for CE6102. In terms of contents, CE6102 will draw heavily from CE4257 and CE6101. For this reason, students are advised to take CE4257 and CE6101 as early as possible in their study.