4.2.1.2 Requirements

The graduation requirements include obtaining a minimum Cumulative Average Point (CAP) of 3.00 (equivalent to an average of Grade B-) for the best 40 MCs, inclusive of core modules, where required. Of the 40 MCs, at least 30 MCs must be at graduate level within the subject or in a related discipline, the remaining credits may be from other levels in the same or other disciplines as approved by the Department.

Students of the MSc (ChemEng) must successfully complete a programme of study consisting of at least four core modules, at least three electives from Group 1 and the remaining modules from Group 1 or Group 2. Modules in Group 1 are in several specialised areas of chemical engineering while those in Group 2 consist of selected modules from the Master of Science programmes in Environmental Engineering and Safety, Health and Environmental Technology approved by the Department.

Core Modules
CN5010 Mathematical Methods in Chemical & Environmental Engineering
CN5020 Advanced Reaction Engineering
CN5030 Advanced Chemical Engineering Thermodynamics
CN5040 Advanced Transport Phenomena
CN5050 Advanced Separation Processes

Elective Modules
Group 1*
CN5111 Optimisation of Chemical Processes
CN5131 Colloids and Surfaces
CN5161 Polymer Processing Engineering
CN5162 Advanced Polymeric Materials
CN5172 Biochemical Engineering
CN5173 Downstream Processing of Biochemical & Pharmaceutical Products
CN5181 Computer Aided Chemical Engineering
CN5191 Project Engineering
CN5192 Future Fuel Options: Prospects and Technologies
CN5193 Instrumental Methods of Analysis
CN5222 Pharmaceuticals and Fine Chemicals
CN5251 Membrane Science and Technology
CN5252 Metabolic Engineering
CN5371 Special Topics in Biochemical Engineering and Bioseparations
CN5391 Selected Topics in Advanced Chemical Engineering – I
CN5392 Selected Topics in Advanced Chemical Engineering – II
CN5401 Contemporary Topics in Advanced Chemical Engineering
CN5555    Chemical Engineering Project

Group 2

ESE5202   Air Pollution Control Technology
ESE5602   Environmental Management Systems
SH5004    Fundamentals in Industrial Hygiene
SH5201    Hazard Identification and Evaluation
SH5202    Quantified Risk Analysis
SH5204    Safety Engineering

*All modules listed are worth 4 MCs each except for CN5401 Contemporary Topics in Advanced Chemical Engineering which is 2 MCs and CN5555 Chemical Engineering Project which is 8 MCs. Not all modules listed above are necessarily available in any one year, and new modules may be made available from time to time.