Master of Engineering–Course Requirements by Specialization

Core Technical Courses (Must take the following three courses per area of specialization)			
ENVIRONMENTAL AND GREEN ENGINEERING	**BIOMATERIALS AND BIOCHEMICAL ENGINEERING**	**REACTIONS AND PROCESS SYSTEMS ENGINEERING**	**PARTICLE TECHNOLOGY AND FLUIDIZATION**
CBE 9350 – Physical Principles of Environmental Engineering	CBE 9260 - Advanced Bioengineering and Biotechnology	CBE 9450 - Advanced Chemical Reaction Engineering	CBE 9550 - Advanced Particle and Fluidization Engineering
CBE 9361 - Biological Wastewater Treatment or CBE 9312 - Air Pollution Control or CBE 9314 – Solid Waste Treatment	CBE 9250 - Advanced Biomaterials Engineering	CBE 9160 - Transport Processes	CBE 9160 - Transport Processes or CBE 9450 - Advanced Chemical Reaction Engineering
CBE 9311 - Green Energy and Engineering or CBE 9334 – Green Fuels and Chemicals	BME 9526 - Tissue Engineering or CBE 9241 – Nanobiotechnology	CBE 9552 – Industrial Three-Phase Reactor Systems or CBE 9455 – Advanced Polymerization Engineering	CBE 9551 – Advanced Design in Fluidized Bed Reactors or CBE 9561 – Advanced High Velocity Fluidization Technology or CBE 9587 – Fine Powder Technologies and Application

Professional Engineering Courses (Two of the following four courses are required)	
ECE 9010 - Intellectual Property for Engineers	CBE 9185 - Risk Assessment and Management in Engineering Systems
CEE 9510 – Engineering Planning and Project Management	MME 9670 – Engineering Communication

Recommended CBE Electives	
CBE 9132 – Oil Refining and Processing	CBE 9150 - Advanced Chemical Engineering Thermodynamics
CBE 9160 - Transport Processes	CBE 9170 - Mathematical Methods in Engineering
CBE 9180 - Instrumental Methods of Analysis for Engineers	CBE 9190 - Advanced Statistical Process Analysis
CBE 9211 – Fundamentals of Biochemical Engineering	CBE 9241 – Nano-biotechnology
CBE 9250 - Advanced Biomaterials Engineering	CBE 9260 - Advanced Bioengineering and Biotechnology
CBE 9263 - Biosensors: Principles and Applications	CBE 9312 – Air Pollution Control
CBE 9334 – Green Fuels and Chemicals	CBE 9350 - Physical Principles of Environmental Engineering
CBE 9417 – Industrial Catalysis	CBE 9424 - Computer Process Control
CBE 9450 - Advanced Chemical Reaction Engineering	CBE 9455 - Advanced Polymerization Engineering
CBE 9461 – Advanced Process Control	CBE 9544 – Pharmaceutical Manufacturing Processes
CBE 9550 - Advanced Particle and Fluidization Engineering	CBE 9552 - Industrial Three-Phase Reactor Systems
CBE 9561 – Advanced High Velocity Fluidization	

NOTES
Students are allowed to take graduate courses from other disciplines in the Faculties of Engineering and Science as technical electives. Students need to complete the appropriate form to enroll in courses outside the home program (CBE) and this is subject to the approval of the MEng Program Director.