Master of Engineering Program in Chemical Engineering

Research Focus

- Renewable energy
- Biodegradable composite
- Biorefinery platform
- Chemical process design and control
- Catalyst development and process simulation

Structure of the Program

Credit Requirements *

Requirements	Type A1	Type A2
1. Coursework		24
1.1 Core Courses		9
1.2 Electives		15
2. Thesis	36	12
3. Required Non-credit Courses	5	5
Total	36	36

Core Courses

Requirements	Type A2	
	Course No	Cr
Advanced Chemical Engineering Thermodynamics	312502	3
Advanced Transport Phenomena	312503	3
Advanced Chemical Engineering Kinetics	312504	3
Total		3

Electives Courses

Requirements	Type A2	
	Course No	Cr
Adsorption Process	312511	3
Advanced Process Control	312512	3
Advanced Heat Transfer	312513	3
Advanced Mass Transfer	312514	3
Membrane Technology	312515	3
Supercritical Fluids Technology	312516	3
Advanced Separation Technology	312517	3
Process Modeling and Simulation for Chemical Engineering	312518	3
Computational Process Control	312519	3
Total		≥15

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Electives

- **Chemical engineering and Material**

Requirements	Option Type A 2	
	Course No	Cr
Polymer Engineering	**312531**	**3**
Polymer Rheology	**312532**	**3**
Nano Technology	**312533**	**3**
Plasma Technology	**312534**	**3**

- **energy engineering and Catalytic**

Requirements	Option Type A 2	
	Course No	Cr
Heterogeneous Catalytic Reaction	312541	3
Characterization of Catalyst	312542	3
Advanced Petrochemical Engineering	312543	3
Alternative Energy Technology	312544	3
Advanced Solid Waste Management Engineering	312545	3
Energy and Environmental Management for Sustainability	312546	3

- **Selected Topics in Chemical Process Engineering**

Requirements	Option Type A 2	
	Course No	Cr
Selected Topics in Chemical Process Engineering	312583	3
Current Issues in Chemical Engineering	312584	3

Thesis Credit Requirements

Requirements	Type A 1	
	Course No	**Cr**
Thesis 1, Type A 1	312591	9
Thesis 2, Type A 1	312592	9
Thesis 3, Type A 1	312593	9
Thesis 4, Type A 1	312594	9
Total		**36**

Master of Engineering Program in Electrical Engineering

Thesis Credit Requirements

Requirements	Type A 2	
	Course No	**Cr**
Thesis 1, Type A 2	312595	3
Thesis 2, Type A 2	312596	3
Thesis 3, Type A 2	312597	6
Total		**12**

Required Non-credit Courses

Requirements	Type A 2	
	Course No	Cr
Research Methodology in Science and Technology	312505	3
Seminar 1	312581	1
Seminar 2	312582	
Total		4