

Master of Science Program in Industrial Chemistry

Research Focus

- Advanced Material Synthesis and Applications
- Functionalized Natural Rubber
- Biomaterial and Applications
- Natural Fiber Polymer Composites
- Bioplastics Modifications
- Polymer Blend and Composites

Structure of the Program

1. Credit Requirements *

Requirements	Option 1.2
Coursework	24
- Core Courses	15
- Electives	9
Required Non-credit Courses	4
Thesis	12
Total	36

* Minimum credits required

2. Core Courses

Requirements	Option 1.2	
	Course No.	Cr.
Advanced Industrial Chemistry	277511	4
Investment and Management in Industrial Chemistry	277512	3
Material Characterization	277513	3
Techniques in Microstructure and Mechanical Properties of Materials	277518	2
Waste and Wastewater Management in Chemical Industry	277543	3
Total	5	15

3. Electives

Requirements	Option 1.2	
	Course No.	Cr.
General Chemistry Module		
Instrumentation for Spectroscopy Techniques	256556	3
Sample Preparations and Separation Techniques for Chemical Analysis	256557	3
Current Topics in Industrial Chemistry	277517	3
Ceramics Module		
Solid State of Ceramics	277521	3
Ceramic Processing	277522	3
Metallic Materials	277531	3
Structure and Thermodynamics of Metallic Materials	277532	3
Petrochemical and Polymer Module		
Organic Chemistry of Polymers	277551	3
Polymer Physics	277552	3
Polymer Processing Technology	277553	3
Rubber Science and Technology	277554	3
Petroleum and Petrochemical Industry	277561	3
Catalyst and Catalytic Process	277562	3
Polymer Blends and Composites	277555	3
Advanced Polymer Synthesis	277556	3
Total	≥3	≥9

4. Required Non-credit Courses

Requirements	Option 1.2	
	Course No.	Cr.
Research Methodology in Science and Technology	256511	3
Seminar	277514	1
Total	2	4

5. Thesis Credit Requirements

Requirements	Option 1.2	
	Course No.	Cr.
Thesis 1, Option 1.2	277597	3
Thesis 2, Option 1.2	277598	3
Thesis 3, Option 1.2	277599	6
Total	3	12