

# Master of Education Program in Chemistry

## Research Focus

- Educational Management in Chemistry
- Instructional Development in Chemistry
- Context-focused Student Development

## Structure of the Program

### 1. Credit Requirements \*

Requirements	Option 1.2	Option 2.1
Coursework	24	30
- Required Course	3	3
- Core Courses	18	18
- Electives	3	9
Required Non-credit Courses	5	5
Thesis	12	-
Independent Study	-	6
<b>Total</b>	<b>36</b>	<b>36</b>

\* Minimum credits required

### 2. Required Course

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Theoretical Foundations of Education	366511	3	366511	3
<b>Total</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>3</b>

### 3. Core Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Sample Preparations and Separation Techniques for Chemical Analysis	256557	3	256557	3
Waste and Wastewater Management in Chemical Industry	277543	3	277543	3
Petroleum and Petrochemical Industry	277561	3	277561	3
Scientific Literacy and Curriculum Development	378511	3	378511	3
Research in Science Education	378512	3	378512	3
Development of Learning Management in Chemistry	379501	3	379501	3
<b>Total</b>	<b>6</b>	<b>18</b>	<b>6</b>	<b>18</b>

### 4. Electives

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Bioorganic Chemistry	256529	3	256529	3
Current Topics in Inorganic Chemistry	256538	3	256538	3
Current Topics in Analytical Chemistry	256555	3	256555	3
Current Topics in Organic Chemistry	256571	3	256571	3
Advanced Industrial Chemistry	277511	3	277511	3
Investment and Management in Industrial Chemistry	277512	3	277512	3
STEM Education	378513	3	378513	3
Organization of Science and Mathematics Camp	378514	3	378514	3
<b>Total</b>	<b>≥1</b>	<b>≥3</b>	<b>≥3</b>	<b>≥9</b>

### 5. Required Non-credit Courses

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Research Methodology in Social Sciences	366513	3	366513	3
Seminar 1	378581	1	378581	1
Seminar 2	378582	1	378582	1
<b>Total</b>	<b>3</b>	<b>5</b>	<b>3</b>	<b>5</b>

### 6. Thesis/Independent Study Credit Requirements

Requirements	Option 1.2		Option 2.1	
	Course No.	Cr.	Course No.	Cr.
Thesis 1, Option 1.2	378583	6	-	-
Thesis 2, Option 1.2	378584	6	-	-
Independent Study 1	-	-	378591	2
Independent Study 2	-	-	378592	2
Independent Study 3	-	-	378593	2
<b>Total</b>	<b>2</b>	<b>12</b>	<b>3</b>	<b>6</b>