

COURSES OF MASTER PROGRAM IN CHEMISTRY

This table aims to give detailed information related to the subjects the students need to take every semester

Semester 1

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Instrument Chemistry	3	Compulsory	
2	Separation and Purification Chemistry	3	Compulsory	
3	Synthesis of Essential Oils and Their Derivatives	3	Compulsory	
4	Synthesis of Organic and Inorganic Chemistry	3	Compulsory	
5	Essential Oil Characterization	3	Compulsory	
6	Ecology and Environmental Chemistry	2	Compulsory	
7	Organic reaction mechanism	2	Compulsory	
8	Quantum and Computational Chemistry	3	Compulsory	
9	Natural Material Synthesis	3	Compulsory	
10	Electrochemical Analysis	3	Compulsory	
11	Advanced Materials	2	Compulsory	
12	Pharmacology and Toxicology	3	Compulsory	

Semester 2

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Research and publication design (Practical Work)	2	Compulsory	
2	Proposal and Preliminary Research Practical Work)	2	Compulsory	

3	Elucidation of Organic and inorganic compounds	2	Compulsory	
4	Essential Oil Industry Process	2	Elective	
5	Perfume, Flavor, Aromatherapy	2	Elective	
6	Oil bioactivity	2	Elective	
7	essential	2	Elective	
8	Essential oil for edible coating	2	Elective	
9	Essential oil for	2	Elective	
10	pest control	2	Elective	
11	Green and Sustainable Chemistry	2	Elective	
12	Adsorption Technology	2	Elective	
13	Waste Treatment Technology	2	Elective	
14	Catalyst Chemistry	2	Elective	
15	Inorganic reaction mechanism	2	Elective	
16	Sensors and Biosensors	2	Elective	
17	Functional materials	2	Elective	
18	Functional Food Chemistry	2	Elective	
19	Enzimology	2	Elective	
20	Synthesis Technique	2	Elective	
21	Enzymatic	2	Elective	
22	Bioactivity of natural ingredients	2	Elective	

Semester 3

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Islam Ulil Albab	2	Compulsory	
2	Thesis Research	5	Compulsory	Proposal and Preliminary Research

3	Islam Rahmatan Lil Alamin	1	Compulsory	
4	Scientific work International	1	Compulsory	Proposal and Preliminary Research

Semester 4

No	Subject	Credit	Status (Compulsory/Elective)	Prerequisite
1	Thesis	2	Compulsory	Proposal and Preliminary Research

Scientific Interest Compulsory Courses

Semester 4

No	Subject	Credit	Prerequisite
1	Instrument Chemistry	3	
2	Separation and Purification Chemistry	3	
3	Synthesis of Essential Oils and Their Derivatives	3	
4	Synthesis of Organic and Inorganic Chemistry	3	
5	Essential Oil Characterization	3	
6	Ecology and Environmental Chemistry	2	
7	Organic reaction mechanism	2	
8	Quantum and Computational Chemistry	3	
9	Natural Material Synthesis	3	
10	Electrochemical Analysis	3	
11	Advanced Materials	2	
12	Pharmacology and Toxicology	3	
13	Research and publication design (Practical Work)	2	
14	Proposal and Preliminary Research (Practical Work)	2	
15	Elucidation of Organic and inorganic compounds	2	
16	Thesis Research	5	Proposal and Preliminary Research
17	Scientific work International	1	Proposal and Preliminary Research
18	Thesis	2	Proposal and Preliminary Research

Elective Courses

No	Subject	Credit	Prerequisite
1	Essential Oil Industry Process	2	
2	Perfume, Flavor, Aromatherapy	2	
3	Oil bioactivity	2	
4	essential	2	
5	Essential oil for edible coating	2	
6	Essential oil for	2	
7	pest control	2	
8	Green and Sustainable Chemistry	2	
9	Adsorption Technology	2	
10	Waste Treatment Technology	2	
11	Catalyst Chemistry	2	
12	Inorganic reaction mechanism	2	
13	Sensors and Biosensors	2	
14	Functional materials	2	
15	Functional Food Chemistry	2	
16	Enzimology	2	
17	Synthesis Technique	2	
18	Enzymatic	2	
19	Bioactivity of natural ingredients	2	

Table of List of Compulsory Student Activities

No	Activity	Credit (skp)
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1	Intensive Study of the Koran	5
2	Islam in the discipline of chemistry	3
3	Ethics in the chemist profession	2
4	Scientific Writing Workshop / Publication Activities	2