

Chemistry Department

Developed study plan - Bachelor of Chemistry program

Program sublevel code	645
Customization code	05310101
Language of instruction	Arabic

The total number of study units for the program	150
Total courses for the program	51

Total academic units required by the university	12	Total course requirements of the university	6
Total academic units required by the college	19	Total courses required by the college	5
Total academic units required by the department	119	Total course requirements of the department	40
The total number of compulsory academic units required for the major	110	The total number of courses required for the major's compulsory requirements	37
Total credits for elective major requirements	9	Total courses for elective major requirements	3
Statement of the duration of field training	-	-	-



Courses

Statement of the levels of the program's study plan (First year - 36 credit hours)

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
1	4	12	14

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	General Chemistry	CHEM1001	4	3	2	-	College
2	Calculus 1	MATH1001	4	3	2 (Tutr)	-	College
3	Islamic Culture 1	ISLM1001	2	2	0	-	Institution
4	Language Skills	ARAB1001	2	2	0	-	Institution

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
2	4	12	14

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	General Biology	BIO1001	4	3	2	-	College
2	General Physics	PHYS1001	4	3	2	-	College
3	Quranic recitation and Guidance	ISLM1003	2	2	0	-	Institution
4	History of KSA	HIST1001	2	2	0	-	Institution

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
3	5	12	13

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	English Language	ENG1005	3	3	0	-	College
2	Fundamentals of Digital Transformation	CS1002	2	2	0	-	Institution
3	Islamic Culture 2	ISLM1002	2	2	0	-	Institution
4	Organic Chemistry 1	CHEM1002	4	4	0	-	Program
5	Practical Organic Chemistry 1	CHEM1003	1	0	2	-	Program



Statement of the levels of the program's study plan (Second year - 37 credit hours)

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
4	4	12	15

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Chemistry of Main Group Elements	CHEM1250	4	3	2	-	Program
2	Chemistry of Solutions	CHEM1251	3	2	2	CHEM1001	Program
3	Safety and Security in Laboratories	CHEM1252	2	2	0	-	Program
4	General Statistics	STAT1251	3	2	2 (Tutr)	-	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
5	4	12	16

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Transition Elements Chemistry	CHEM1253	4	3	2	CHEM1250	Program
2	Organic Chemistry 2	CHEM1254	3	3	0	CHEM1002	Program
3	Practical Organic Chemistry 2	CHEM1255	2	0	4	-	Program
4	Physical Chemistry	CHEM1256	3	2	2	-	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
6	4	13	14

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Principles of Analytical Chemistry	CHEM1257	4	3	2	-	Program
2	Coordination Chemistry	CHEM1258	3	3	0	CHEM1253	Program
3	Kinetic Chemistry	CHEM1259	3	3	0	-	Program
4	Principles of Industrial Chemistry	CHEM1260	3	3	0	-	Program



Statement of the levels of the program's study plan (Third year - 37 credit hours)

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
7	4	12	13

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Organic Chemistry of Heterocyclic Compounds	CHEM1500	3	3	0	CHEM1254	Program
2	Principles of Spectroscopy	CHEM1501	4	3	2	-	Program
3	Environmental Chemistry	CHEM1502	3	3	0	-	Program
4	Principles of Toxicology	CHEM1503	2	2	0	-	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
8	4	13	17

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Biochemistry 1	CHEM1504	4	3	2	CHEM1002	Program
2	Inorganic Preparations	CHEM1505	2	0	4	CHEM1258	Program
3	Separation Methods and Chromatography	CHEM1506	4	3	2	CHEM1257	Program
4	Introduction to Polymer Chemistry	CHEM1507	3	3	0	CHEM1002	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
9	4	12	16

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Organic Synthesis	CHEM1508	3	1	4	CHEM1254	Program
2	Electrochemistry	CHEM1509	3	2	2	CHEM1256	Program
3	Spectroscopy of Organic Compounds	CHEM1510	3	2	2	CHEM1501	Program
4	Advanced Inorganic Chemistry	CHEM1511	3	3	0	CHEM1253	Program



Statement of the levels of the program's study plan (Fourth year - 40 credit hours)

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
10	5	15	18

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Petroleum Chemistry	CHEM1750	3	2	2	-	Program
2	Surface Chemistry and Catalysis	CHEM1751	3	3	0	CHEM1256	Program
3	Electroanalytical Chemistry	CHEM1752	3	2	2	CHEM1257	Program
4	Water Treatment	CHEM1753	3	2	2	CHEM1257	Program
5	Elective 1	-	3	3	0	-	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
11	4	12	16

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Chemical Thermodynamics	CHEM1754	3	2	2	CHEM1256	Program
2	Organic Reactions	CHEM1755	3	3	0	CHEM1254	Program
3	Graduation Project	CHEM1756	3	0	6	Passing 120 hrs.	Program
4	Elective 2	-	3	3	0	-	Program

Level	Total level courses	The total number of academic units approved for the level	Total level contact hours
12	5	13	13

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Quantum Chemistry	CHEM1757	2	2	0	CHEM1256	Program
2	Green Chemistry	CHEM1758	2	2	0	-	Program
3	Biochemistry 2	CHEM1759	3	3	0	CHEM1504	Program
4	Material Science	CHEM1760	3	3	0	CHEM1256	Program
5	Elective 3	-	3	3	0	-	Program



Elective courses

No	Course name	Course code	Credit hours	Contact hours		Prerequisites	Types of requirements
				Theoretical	Practical		
1	Chemistry of Natural Products	CHEM1761	3	3	0	CHEM1254	Program
2	Nuclear and Radioactive Chemistry	CHEM1762	3	3	0	CHEM1256	Program
3	Chemistry of Metal Extraction and Corrosion	CHEM1763	3	3	0	CHEM1253	Program
4	Instrumental Analysis	CHEM1764	3	3	0	CHEM1501	Program
5	Physical Chemistry of Polymers	CHEM1765	3	3	0	CHEM1256	Program
6	Applied Analytical Chemistry	CHEM1766	3	3	0	CHEM1501	Program
7	Physical Organic Chemistry	CHEM1767	3	3	0	CHEM1254	Program
8	Organometallic Chemistry	CHEM1768	3	3	0	CHEM1258	Program
9	Medicinal Chemistry	CHEM1769	3	3	0	CHEM1254	Program

