

**Study Plan of the Program of chemistry.**

Level	Course Code	Course Title	Required or Elective	* Pre-Requisite Courses	Credit Hours	University, College or Department
Prep Year Level 1	١١.٣.١١٩	English Language 1	Required	None	3	University Requirement
	١٩.٤١١.١	Calculus 1	Required	None	4	College Requirement
	١٩.١١١.١	General Biology	Required	None	4	College Requirement
	١١.٢.٢.٤	Islamic Culture 1 (The Islamic Manners)	Required	None	2	University Requirement
	١١.١.١.١	Health Culture	Required	None	1	University Requirement
	١٩.٩١٢١٣	Arabic Editing	Required	None	2	University Requirement
<b>Total Credit Hours</b>			<b>16</b>			
Level 2	11030219	English Language 2	Required	English Language 1 (11030119)	3	University Requirement
	19031104	General Physics 1	Required	-	4	College Requirement
	19061201	General Chemistry 1	Required	-	4	College Requirement
	11020107	The Holy Koran (Recitation Correction)	Required	-	2	University Requirement
	11010111	Islamic Culture 2 (The Islamic Civilization)	Required	-	2	University Requirement
<b>Total Credit Hours</b>			<b>15</b>			
Level 3	١٩.٦١٢.٤	General Chemistry 2	Required	General Chemistry 1 (19061201)	4	Department Requirement
	١٩.٦٢٢.٥	Inorganic Chemistry I	Required	General Chemistry 1 (19061201)	4	Department Requirement
	١٩.٦١٢.٢	Organic Chemistry 1	Required	General Chemistry 1 (19061201)	4	Department Requirement
	١٩.٤٢٢.٣	Principles of Statistics & Probability	Required	-	3	Department Requirement
	١٩.٦١٢.٩	Specialized English Language	Required	English Language 2 (11030219)	2	College Requirement

	11.1.113	Voluntary Community Service 1	Required	-	0	University Requirement
	<b>Total Credit Hours</b>		<b>17</b>			
<b>Level 4</b>	19.613.1	Organic Chemistry 2	Required	Organic Chemistry 1 (19061202)	3	Department Requirement
	19.622.2	Inorganic Chemistry 2	Required	Inorganic Chemistry I (19062205)	4	Department Requirement
	19.322.1	General Physics 2	Required	General Physics 1 (19031104)	4	Department Requirement
	19.12211	General Physiology	Required	General Biology (19011101)	3	Department Requirement
	19.412.2	Calculus 2	Required	Calculus 1 (19041101)	3	Department Requirement
	11010123	Voluntary Community Service 2	Required	-	0	University Requirement
	<b>Total Credit Hours</b>		<b>17</b>			
<b>Level 5</b>	19.61437	Inorganic Chemistry 3	Required	Inorganic Chemistry 2 (19062202)	3	Department
	19.613.7	Physical Chemistry 1	Required	General Chemistry 2 (19061204)	3	Department
	19.61320	Analytical Chemistry 1	Required	General Chemistry 1 (19061201)	4	Department
	19.613.4	Biochemistry 1	Required	Organic Chemistry 2 (19061301)	4	Department
	19.61419	Petroleum Chemistry	Required	Organic Chemistry 2 (19061301)	2	Department
	11.1.112	Research and Essay Writing skills	Required	-	2	University
	<b>Total Credit Hours</b>		<b>18</b>			
<b>Level 6</b>	19.61322	Physical Chemistry 2	Required	Physical Chemistry 1 (19061307)	2	Department Requirement
	19.61324	Analytical Chemistry 2	Required	Analytical Chemistry 1 (19061325)	4	Department

						Requirement
	19.614.2	Chemistry of Heterocyclic Compounds	Required	Organic Chemistry 2 (19061301)	2	Department Requirement
	19.613.14	Environmental Chemistry	Required	-	3	Department Requirement
	19.613.26	Principles of Industrial Chemistry	Required	General Chemistry 2 (19061204)	2	Department Requirement
	19.614.12	Electrochemistry	Required	Physical Chemistry 1 (19061307)	2	Department Requirement
	19.613.16	Nuclear and Radioactive Chemistry	Required	Physical Chemistry 1 (19061307)	2	Department Requirement
	<b>Total Credit Hours</b>			<b>17</b>		
Level 7	19.614.23	Polymer Chemistry	Required	Organic Chemistry 2 (19061301)	3	Department Requirement
	19.614.17	Analytical Chemistry 3	Required	Analytical Chemistry 1 (19061325)	3	Department Requirement
	19.614.38	Physical Chemistry 3	Required	Physical Chemistry 1 (19061307)	3	Department Requirement
	19.613.11	Spectroscopy	Required	Organic Chemistry 2 (19061301)	2	Department Requirement
	19.614.27	Graduation Project	Required	Passing 85 hr	2	Department Requirement
	19.614.43	Water Treatment	Required	Principles of Industrial Chemistry (19061326)	3	Elective (1)

	19.61440	Organic Reaction Mechanism	Required	Organic Chemistry 2 (19061301)	3	Elective (1)
	19.61447	Electroanalytical Methods	Required	Electrochemistry (19061412)	3	Elective (1)
	<b>Total Credit Hours</b>		<b>16</b>			
<b>Level 8</b>	19061442	Material Science	Required	Physical Chemistry 1 (19061307)	3	Department
	19.61418	Coordination Chemistry	Required	Inorganic Chemistry 2 (19062202)	2	Department
	19.61420	Chemical Kinetics	Required	Physical Chemistry 1 (19061307)	2	Department
	19.61444	Chemistry of Natural Products	Required	Organic Chemistry 2 (19061301)	3	Department
	19.61420	Organic Synthesis	Required	Organic Chemistry 2 (19061301)	3	Department
	19.61442	Biochemistry 2	Required	Biochemistry 1 (19061304)	3	Elective (2)
	19.61444	Polynuclear Aromatic Compounds	Required	Organic Chemistry 2 (19061301)	3	Elective (2)
	19.61446	Chemistry of Minerals extraction and Corrosion	Required	Inorganic Chemistry 2 (19062202)	3	Elective (2)
	<b>Total Credit Hours</b>		<b>16</b>			
Include additional levels if needed (i.e. summer courses).						