



Study Plan: Bachelor of Chemistry

First Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	MTH 1101	General Mathematics	3	3	0	0	0	---	---	College
2	CHM 1100	General Chemistry (1)	3	2	0	2	0	---	---	College
3	ENGL 1102	English Language (1)	4	2	0	4	0	---	---	College
4		University Elective Course from Group (1)	2							University
5		University Elective Course from Group (1)	2							University
6		University Elective Course from Group (2)	2							University
7		University Elective Course from Group (3)	3							University
Total			19							

Second Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	ENGL 1103	English Language (2)	4	2	0	4	0	ENGL 1102	---	College
2	BIO 1101	Principles of Biology	3	2	0	2	0	--	---	College
3	MTH 1102	Differential Calculus	3	3	0	0	0	MTH 1101	---	College
4	PHS 1100	General Physics (1)	3	2	0	2	0	--	---	College
5	MTH 1171	General Statistics	3	3	0	0	0	---	---	College
6	BUS 1102	Principles of Project Management	2	2	0	0	0	---	---	University
Total			18							



Third Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	CHM 1202	General Chemistry (2)	3	2	0	2	0	CHM 1100	---	Program
2	CHM 1241	Principles of Organic Chemistry (1)	3	2	0	2	0	CHM 1100	---	Program
3	MTH 1203	Integral Calculus	3	3	0	0	0	MTH 1102	---	Program
4	CHM 1231	Chemical Thermodynamics	2	2	0	0	0	CHM 1100	---	Program
5	CHM 1251	Volumetric Analysis	3	2	0	2	0	CHM 1100	---	Program
6	CIS 1210	Principles of Artificial Intelligence in Science	2	2	0	0	0	---	---	Program
7	CHM 1280	Lab Safety and Management	2	0	0	4	0	CHM 1100	---	Program
Total			18							

Fourth Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	CHM 1242	Principles of Organic Chemistry (2)	3	2	0	2	0	CHM 1241	---	Program
2	CHM 1221	Chemistry of Main Groups Elements	3	3	0	0	0	CHM 1202	---	Program
3	CHM 1252	Gravimetric Analysis	2	1	0	2	0	CHM 1100	---	Program
4	CHM 1232	Phases of Matter and Solutions	2	2	0	0	0	CHM 1231	---	Program
5	CHM 1233	Quantum Chemistry (1)	2	2	0	0	0	CHM 1231	---	Program
6	CHM 1234	Electrochemistry	3	2	0	2	0	CHM 1231	---	Program
7	CHM 1299	Industrial Chemistry	3	2	0	2	0	CHM 1202	---	Program
Total			18							



Fifth Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	CHM 1321	Transition Elements and Coordination Chemistry	3	3	0	0	0	CHM 1221	---	Program
2	CHM 1341	Heterocyclic Chemistry	3	2	0	2	0	CHM 1242	---	Program
3	CHM 1351	Spectroscopic Analysis Methods	3	2	0	2	0	CHM 1251	---	Program
4	CHM 1342	Biochemistry	2	1	0	2	0	CHM 1242	---	Program
5	CHM 1333	Chemistry of Solid State	2	2	0	0	0	CHM 1232	---	Program
6	CHM 1352	Electrochemical Analysis Methods	2	1	0	2	0	CHM 1252	---	Program
7	CHM 1381	Measurements and Instrumentation in Chemistry	3	1	0	4	0	Pass 55 Credit Hours	---	Program
Total			18							

Sixth Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	CHM 1353	Separation Methods and Chromatography	2	1	0	2	0	CHM 1351	-	Program
2	CHM 1336	Chemical Kinetics	3	2	0	2	0	CHM 1231	-	Program
3	CHM 1343	Chemistry of Polymers and Industrial Petrochemicals	3	2	0	2	0	CHM 1341	-	Program
4	CHM 1323	Spectroscopy of Inorganic Compounds	2	2	0	0	0	CHM 1321	-	Program
5	CHM 1324	Organometallic Chemistry	3	2	0	2	0	CHM 1321	-	Program
6		Elective Course (Group A)	2						-	Program
Total			15							



Seventh Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec	Tut.	Lab	Tr			
1	CHM 1491	Cooperative Training (1)	4	0	0	0	8	Pass 95 Credit Hours	PHS 1400	Program
2	CHM 1492	Skills in Writing Scientific Research and Analyzing of Chemical Data	2	0	0	4	0	Pass 95 Credit Hours	---	Program
3	PHS 1400	Professional Courses	2	0	0	0	4	---	CHM 1491	University
4	CHM 1424	Lanthanides and Actinide	3	3	0	0	0	CHM 1324	---	Program
5	CHM 1442	Organic Compounds Spectroscopy	3	3	0	0	0	CHM 1341	---	Program
Total			14							

Eighth Level:

	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites	Type of requirements (University, College, or Program)
				Lec.	Tut.	Lab	Tr			
1	CHM 1494	Cooperative Training (2)	4	0	0	0	8	CHM 1491	---	Program
2	CHM 1493	Graduation Project	3	0	0	6	0	Pass 100 Credit Hours CHM 1492	---	Program
3	CHM 1431	Surface and Catalysis Chemistry	3	2	0	2	0	CHM 1336	---	Program
4	CHM 1454	Environmental Chemistry and Pollution	2	2	0	0	0	CHM 1353	---	Program
5	CHM 1443	Organic Reactions Mechanism	2	2	0	0	0	CHM 1343	---	Program
6		Elective Course (Group B)	2							Program
Total			16							



Program Requirements (Elective Courses Group A):

The student must select (1) course (2 Credit Hours) from the list below:

#	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites
				Lec.	Tut.	Lab	Tr		
1	CHM 1345	Natural Products	2	1	0	2	0	CHM 1341	---
2	CHM 1338	Nanochemistry and Applications	2	2	0	0	0	CHM 1333	---
3	CHM 1398	Renewable Energy Chemistry	2	2	0	0	0	Pass 80 Credit Hours	---
4	CHM 1335	Corrosion	2	1	0	2	0	CHM 1234	---
5	CHM 1326	Advanced Topics in Inorganic Chemistry	2	2	0	0	0	CHM 1321	---
6	CHM 1337	Quantum Chemistry (2)	2	2	0	0	0	CHM 1333	---
7	CHM 1346	Physical Organic Chemistry	2	2	0	0	0	CHM 1341	---
Total			2						

Program Requirements (Elective Courses Group B):

The student must select (1) course (2 Credit Hours) from the list below:

#	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites
				Lec.	Tut.	Lab	Tr		
1	CHM 1496	Green Chemistry	2	2	0	0	0	Pass 90 Credit Hours	---
2	CHM 1453	Advanced Subjects in Analytical Chemistry	2	1	0	2	0	CHM 1353	---
3	CHM 1444	Advanced Practical Applications in Organic Chemistry	2	0	0	4	0	CHM 1343	---
4	CHM 1422	Inorganic Reaction Mechanism	2	2	0	0	0	CHM 1321	---
5	CHM 1423	Photochemistry	2	2	0	0	0	CHM 1321	---
6	CHM 1433	Physical Chemistry of Polymers	2	1	0	2	0	CHM 1343	---
7	CHM 1495	Selected Topics in Chemistry	2	2	0	0	0	Pass 90 Credit Hours	---
Total			2						



University Requirements (Elective Courses Group 1):

The student must select (2) courses (4 Credit Hours) from the list below Group (1):

#	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites
				Lec.	Tut.	Lab	Tr		
1	ISL 1100	The Noble Qur'an	2	2	0	0	0	--	--
2	ISL 1101	Interpretation of the Qur'an	2	2	0	0	0	--	--
3	ISL 1102	Creed and Family in Islam	2	2	0	0	0	--	--
4	ARB 1102	Arabic Language Skills	2	2	0	0	0	--	--
5	EDU 1101	History and Civilization of Kingdom of Saudi Arabia	2	2	0	0	0	--	--
6	EDU 1104	Islamic Ethics and Values	2	2	0	0	0	--	--
7	EDU 1105	Learning and Communication Skills	2	2	0	0	0	--	--
Total			4						

University Requirements (Elective Courses Group 2):

The student must select (1) course (2 Credit Hours) from the list below Group (2):

#	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites
				Lec	Tut.	Lab	Tr		
1	BUS 1101	Entrepreneurship	2	2	0	0	0	--	--
2	BUS 1103	Principles of Financial Knowledge	2	2	0	0	0	--	--
Total			2						

University Requirements (Elective Courses Group 3):

The student must select (1) course (3 Credit Hours) from the list below Group (3):

#	Course Code	Course Title	Credit Hours	Activity				Pre-requisites	Co-requisites
				Lec.	Tut.	Lab	Tr.		
1	CIS 1100	Computer Skills	3	2	0	2	0	-	-
Total			3						