



Program Specification

Program Name	BACHELOR OF SCIENCE (B.Sc.) IN CHEMISTRY
Qualification Level	6 Sublevel: 645 (SASCED-2020)
Department	Chemistry
College	College of Science
Institution	Imam Mohammed Ibn Saud Islamic University

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A. Program Identification and General Information

1. Program Main Location:														
Main Campus														
2. Branches Offering the Program:														
<i>Branch 1.</i> Main Campus for the Male Section.														
<i>Branch 2.</i> King Abdullah City for the Female Section.														
3. Reasons for Establishing the Program: (Economic, social, cultural, and technological reasons, and national needs and development, etc.)														
<p>i. Economic reasons</p> <p>Satisfy the consistent demand of the job market for students who can combine chemistry with other disciplines.</p> <ol style="list-style-type: none"> 1. Supplying highly qualified chemists for research and development laboratories 2. Satisfy the growing demand for teachers and researchers in Chemistry. 3. Participate in the country's economic growth and serve the community. <p>ii. Social or cultural reasons</p> <ol style="list-style-type: none"> 1. Communal awareness and safety education on hazardous materials affecting health and protection of the environment 2. To set bases for staff and students to acquire international recognition and efficiently compete for international awards and national prizes. 														
4. Total Credit Hours for Completing the Program: (174 Credit Hours)														
5. Professional Occupations/Jobs:														
<p>Students who complete the chemistry program at the college of Science will be well-prepared for careers that require problem-solving and creative thinking abilities in chemistry or related fields. Professions or occupations the program is designed to prepare students for are:</p> <ul style="list-style-type: none"> • Education Employers: Public schools, Private schools, Colleges and Universities. • Government Areas: Governmental and private sector chemical laboratories, Research & Development laboratories, Administration Employers. • Industry Areas: Quality Control Laboratories in pharmaceutical, food, mining, detergents, Environmental protection agencies, and other chemical Industries <p>The following table shows Professional Occupations/Jobs for the Chemistry Program graduates</p> <p>A- according to the classification of the Ministry of Human Resources</p> <table border="1"> <thead> <tr> <th></th> <th>Code</th> <th>Professional Name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>211301</td> <td>Chemist</td> </tr> <tr> <td>2</td> <td>211302</td> <td>Chemist for Industrial Sector</td> </tr> </tbody> </table> <p>B- Unified Saudi Occupational Classification Guide</p> <table border="1"> <thead> <tr> <th></th> <th>Code</th> <th>Professional Name</th> </tr> </thead> <tbody> </tbody> </table>				Code	Professional Name	1	211301	Chemist	2	211302	Chemist for Industrial Sector		Code	Professional Name
	Code	Professional Name												
1	211301	Chemist												
2	211302	Chemist for Industrial Sector												
	Code	Professional Name												

	1	211301	Chemist									
	2	211302	Chemist for Industrial Sector									
	3	211304	Chemist for petrochemical industries									
	4	232005	Applied science instructor Chemistry									
	5	233011	teacher for Secondary School									
	6	211303	Chemist for Pharmaceutical Sciences and health sector labs									
6. Major Tracks/Pathways (if any):												
Major track/pathway		Credit hours (For each track)	Professional Occupations/Jobs (For each track)									
Bachelor of Science in Chemistry		174	Education employers, government and Industrial areas									
7. Intermediate Exit Points/Awarded Degree (if any):												
Intermediate exit points/awarded degree		Credit hours										
After spending two full-time academic years of study with minimum 88 Credit Hours (According NQF-p.24, minimum 60 Credit Hours)/ sublevel 544- (SASCED-2020)/ <i>Diploma of Science in Chemistry</i>		88										
10.1. Professional Occupations/Jobs for Exit Points												
Exit Point	Credit Hours (For each track)	Professional Occupations/Jobs For Exit Point- Diploma of Science in Chemistry										
<i>Diploma of Science in Chemistry</i> - sublevel 544- (SASCED-2020)	88	A. According to the classification of the Ministry of Human Resources)										
		<table border="1"> <thead> <tr> <th></th> <th>Code</th> <th>Professional Name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>311903</td> <td>Assurance Technician فني جودة (assistant-مساعد)</td> </tr> <tr> <td>2</td> <td>311907</td> <td>Laboratory Science Technician (محضر مختبر علوم)</td> </tr> </tbody> </table>			Code	Professional Name	1	311903	Assurance Technician فني جودة (assistant-مساعد)	2	311907	Laboratory Science Technician (محضر مختبر علوم)
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		1	311903	Assurance Technician فني جودة (assistant-مساعد)								
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B. According to Unified Saudi Occupational Classification Guide												
<table border="1"> <thead> <tr> <th></th> <th>Code</th> <th>Professional Name</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>311104</td> <td>Chemical Technician فني كيميائي</td> </tr> <tr> <td>2</td> <td>311108</td> <td>Laboratory Science Technician (محضر مختبر علمي)</td> </tr> </tbody> </table>			Code	Professional Name	1	311104	Chemical Technician فني كيميائي	2	311108	Laboratory Science Technician (محضر مختبر علمي)		
	Code	Professional Name										
1	311104	Chemical Technician فني كيميائي										
2	311108	Laboratory Science Technician (محضر مختبر علمي)										

B. Mission, Goals, and Learning Outcomes

1. Department Mission:

The department is committed to preparing distinguished graduates in Chemistry who can join the labor market by providing them with the basic and Applied Chemistry Sciences, refining their scientific and intellectual skills, and preparing highly qualified researchers who can innovate to achieve the mission of the College and the University.

2. Program Mission:

Preparing qualified graduates with the knowledge, and skills in Basic and Applied Chemical Sciences, and having the capability to integrate into the labor market, continue postgraduate studies, and participate in scientific research and community service.

3. Program Goals:

The program goals (PG) set by the department, in support of the mission, require that the graduate of the chemistry program should:

- PG1. Provide universities, higher institutes, and military academies with scientific excellence for continuing postgraduate studies.
- PG2. Prepare human cadres and national competencies of specialists and researchers in Chemistry
- PG3. Provide scientific and technical aids to develop the faculty member conveying to the achievement of international quality standards
- PG4. Equip highly graduates qualified scientifically able to deal with the tools of modern technology with high efficiency in different areas of Chemistry
- PG5. Communicate the benefit of chemistry to community service.

Obviously, a pre-requisite for achieving these outcomes is that, along with the department and faculty, the students should do the necessary hard work to follow the set procedures seriously and honestly.

4. Relationship between Program Mission and Goals and the Mission and Goals of the Institution/College.

	UG1	UG2	UG3	UG4	UG5	UG6	UG7	UG8	UG9	UG10
PG3-G1		✓		✓	✓	✓	✓	✓	✓	
PG3-G2	✓			✓		✓	✓	✓		✓
PG3-G3		✓	✓	✓	✓	✓	✓			
PG3-G4		✓						✓		
PG3-G5	✓	✓				✓		✓	✓	✓

5. Graduate Attributes:

1. Moderate and proud of his religious and national identity:

The graduate is moderate and moderate in his/her thought and behavior, and he/she has knowledge and awareness of what consolidates his pride in his religious and national

identity and in his Arabic language, and enables him/her to acquire rights and perform duties.

2. Scientifically Proficient:

The graduate possesses a solid knowledge base in his/her field of specialization that enables him/her to absorb, employ and produce knowledge.

3. Contributing to personal and environmental safety:

The graduate is aware of the importance of personal and environmental safety, its components, and its means, which enables him/her to comply and educate others about it.

4. Prepared for the labor market:

The graduate possesses the basic knowledge, skills and competitive capabilities that qualify him to engage in the labor market and entrepreneurship.

5. Active thinker:

Employs various thinking skills to reach effective results in problem solving, decision making, creativity, and innovation.

6. Technically knowledge:

The graduate has the basic knowledge of technology in a way that makes him/her able to develop his knowledge and skills, and use them effectively in improving the quality of performance and results.

7. Researcher:

The graduate has the ability to research, analyze and interpret information, evaluate it, and prepare research and reports.

8. Independent Learner:

Possesses the ability to be independent, adapt to circumstances flexibly, provide initiatives, direct, evaluate and self-develop.

5. Program learning Outcomes*

Knowledge and Understanding

K1	Recall the fundamentals and application of all topics of chemistry and their relevant.
K2	List principals of different instruments and their functionality and applications.
K3	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
K4	Recognize personal safety and the environment emergency responses and outline the routes of exposure to hazards to minimize and control them at the personal and societal level.

Skills

S1	Develop skills in problem-solving, critical thinking, and scientific, logical reasoning.
S2	Create awareness about the impact of chemistry on the society and environment as well as develop research skills for a specific target.
S3	Reorganize a well -developed skills for analysis and evaluation of the complex scientific problem

S4	Demonstrate effectively on advanced techniques and chemistry experiments for developing and solving solutions to complex problems related to a professional target. And applying all fundamental principles for the complex field tasks.
Values	
V1	Show awareness to preserve intellectual and scientific integrity during assignments, projects, and reports based on moderation in his thought and behavior while preserving national and religious identity.
V2	Appraise teamwork, decision-making in unpredictable work, and management of resources and time.

* Add a table for each track and exit Point (if any)

Program learning Outcomes of exit Point

Knowledge and Understanding	
K1	Recall the fundamentals and application of all topics of chemistry and their relevant.
K2	List principals of different instruments and their functionality and applications.
K3	Recognize personal safety and the environment emergency responses and outline the routes of exposure to hazards to minimize and control them at the personal and societal level.
Skills	
S1	Create awareness about the impact of chemistry on the society and environment as well as develop research skills for a specific target.
S2	Utilize developed skills for laboratory safety and management.
S3	Demonstrate effectively on chemistry experiments with the guidance of Chemistry laboratory responsible and recording results and reports..
Values	
V1	Show awareness to preserve scientific integrity during his duties based on moderation in his thought and behavior while preserving national and religious identity.
V2	Appraise teamwork, decision-making in unpredictable work, and management of resources and time.

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	10	20	20 %
	Elective	3	6	6 %
College Requirements	Required	5	21	10%
	Elective			
Program Requirements	Required	28	113	56%
	Elective	2	6	4%
Capstone Course/Project	Required	1	4	2%
Field Experience/ Internship	Required	1	4	2%
Others	-	-	-	-

Total	50	174	100%
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* Add a table for each track (if any)

2. Program Study Plan

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 1	Bio 1101	General Biology	Required		5 (4,0,2)	College
	CHM 1101	General Chemistry 1	Required		5 (4,0,2)	College
	ENG 1140	English 1	Required		3 (2,2,0)	College
	Xxxx	University Requirement 1	Elective		2 (2,0,0)	Institution
Level 2	MAT 1101	Calculus 1	Required		5 (4,2,0)	College
	CHM 1102	General Chemistry (2)	Required	كيم 1101	5 (4,0,2)	Department
	ENG 1195	English 2	Required		3 (2, 2,0)	College
	Xxxx	University Requirement 2	Elective		2 (2,0,0)	Institution
Level 3	CHM 1121	Organic Chemistry (1)	Required	كيم 1101	5 (4,0,2)	Department
	CHM 1103	Mathematics for Chemistry	Required	رياض 1101	5 (4,0,2)	College
	PHY 1101	General Physics (1)	Required		5 (3,2,2)	College
Level 4	CHM 1211	Inorganic Chemistry (1)	Required	كيم 1102	5 (4,0,2)	Department
	CHM 1235	Fundamentals of Analytical Chemistry	Required	كيم 1102	5 (4,0,2)	Department
	CHM 1251	Computer Application in Chemistry	Required	كيم 1101	2 (0,0,4)	Department
	CHM 1252	Lab. Safety and Management	Required	كيم 1101	2 (1,0,2)	Department
Level 5	CHM 1221	Organic Chemistry (2)	Required	كيم 1121	5 (4,0,2)	Department
	CHM 1241	Physical Chemistry (1)	Required	كيم 1102	5 (4,0,2)	Department
	STA 1111	Introd. to Probability & Statistics	Required	رياض 1103	4 (3,2,0)	College
Level 6	CHM 1236	Chemistry of Volumetric and Gravimetric Analysis	Required	كيم 1235	5 (4,0,2)	Department
	CHM 1242	Physical Chemistry (2)	Required	كيم 1241	5 (4,0,2)	Department
	CHM 1271	Biochemistry	Required	كيم 1101 -1221 حيا	3(2,0,2)	Department
	xxxx	University Requirement 3	Elective		2 (2,0,0)	Institution
EXIT POINT (88 Credit Hours and 50% of Program Plan)						

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 7	CHM 1311	Inorganic Chemistry (2)	Required	كيم 1211	5 (4,0,2)	Department
	CHM 1321	Heterocyclic Chemistry	Required	كيم 1221	5 (4,0,2)	Department
	CHM 1322	Organic compounds spectroscopy	Required	كيم 1221	3 (3,0,0)	Department
	xxxx	University Requirement 4	Elective		2 (2,0,0)	Institution
Level 8	CHM 1313	Organometallic Chemistry	Required	كيم 1311	3 (3,0,0)	Department
	CHM 1343	Electrochemistry and Corrosion	Required	كيم 1241	5 (4,0,2)	Department
	CHM 1332	Instrumental Analysis	Required	كيم 1236	5 (4,0,2)	Department
	قرأ 1001	القرآن الكريم (University Requirement 5)	Elective	كيم 1236	2(2,0,0)	Institution
Level 9	CHM 1341	Quantum Chemistry	Required	رييض 1107، كيم 1242	3 (3,0,0)	Department
	CHM 1348	Chemical Kinetics	Required	كيم 1241	4 (3,0,2)	Department
	xxxx	University Requirement 6	Elective		2 (2,0,0)	Institution
	(*)	Elective course (1)	Elective	Upon specifying the course (*)	3 (3,0,0)	Department
	xxxx	Free course 1 (**)	Elective			Institution
Level 10	CHM 1421	Chemistry of Natural Products	Required	كيم 1321	2 (2,0,0)	Department
	CHM 1446	Catalysis & Surface Chemistry	Required	كيم 1242	3 (3,0,0)	Department
	CHM 1428	Polymers and Petrochemicals	Required	كيم 1321	3 (3,0,0)	Department
	(*)	Elective Course (2)	Elective	Upon specifying the course(*)	3 (3,0,0)	Department
	xxxx	University Requirement 7	Elective		2 (2,00)	Institution
Level 11	CHM 1438	Chemical Separation Methods	Required	كيم 1236	5 (4,0,2)	Department
	CHM 1422	Organic Reactions Mechanism	Required	كيم 1321	3 (3,0,0)	Department
	CHM 1411	Solid state chemistry	Required	كيم 1311	3 (3,0,0)	Department
		University Requirement 8	Elective		2 (2,0,0)	Institution
		Free course 2 (**)	Elective			Institution

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 12	CHM 1497	FIELD TRAINING	Required	موافقة القسم	4 (4,0,0)	Department
	CHM 1499	Graduation Project	Required		4 (1,6,0)	Department
	xxxx	University Requirement 9	Elective		2 (2,0,0)	Institution
	xxxx	University Requirement 10	Elective		2 (2,0,0)	Institution
	xxxx	Free course (**3)	Elective			Institution

(**) Total Credit Hours of Free Courses 6 Hours, **Mandatory** to end the Program.

List of elective courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Elective courses (1)						
Level 9	CHM 1323	Medicinal Chemistry	Elective	CHM 1321	3(3,0,0)	Department
	CHM 1326	Food Chemistry	Elective	CHM 1321	3(3,0,0)	Department
	CHM 1312	Industrial Inorganic Chemistry	Elective	CHM 1313	3(2,0,2)	Department
	CHM 1344	Material Science	Elective	CHM 1242	3(2,0,2)	Department
	CHM 1334	Enviromental Chemistry	Elective	CHM 1332	3(2,0,2)	Department
Elective courses (2)						
Level 10	CHM 1449	Nanochemistry	Elective	CHM 1341	3(3,0,0)	Department
	CHM 1415	Nuclear and Radiation chemistry	Elective	CHM 1343	3(3,0,0)	Department
	CHM 1444	Chemistry of Colloids	Elective	CHM 1343	3(3,0,0)	Department
	CHM 1445	Photochemistry	Elective	CHM 1341	3(3,0,0)	Department
	CHM 1442	Renewable Energy	Elective	CHM 1343	3(3,0,0)	Department
	CHM 1424	Bioorganic Chemistry	Elective	CHM 1321	3(3,0,0)	Department

University Requirements courses from (1) to (10)

University Requirements courses (1)-(10) should be chosen from the following packages and the following the appropriate rules indicated inside the table:

<i>Packages</i>	<i>Course Code</i>	<i>Course Name</i>	<i>Credit Hours</i>	<i>Rules</i>
Islamic knowledge and values	QUR 1001	Quran	2	The student chooses two courses, one of which should be the Quran course.
	HAD 1001	Studies in the Sunnah	2	
	JRS 1001	Objectives of Shariah	2	
	IDE 1001	Creed	2	
	JR 1001	Jurisprudence of Worship and Family	2	
Historical, national, and social knowledge and values	HST 1001	Studies in the Prophet's biography	2	The student chooses two courses.
	HST 1002	National History	2	
	SOS 101	Voluntary Work Skills	2	
	CUL 1001 CIS 101	Jurisprudence of Rights and Duties	2	
	GEO 1011	Environment and Sustainable Growth	2	
Professional skills and labor market	RHB 1001	Work Value and Ethics	2	The student chooses two courses.
	BUS 1001	Innovation and Entrepreneurship	2	
	EDM 1001	Leadership Skills	2	
	FIN 1001	Financial Planning Skills	2	
	ENG 1001	English Language Skills	2	
Communicative and personal skills	BC 1001	Communications Skills	2	The student chooses two courses.
	ARB 1001	Linguistic Skills	2	
	ART 1001	Editing and Speech Skills	2	
	PSY 1001	Mental Health	2	
	BIO 1001	General Knowledge of Health Care	2	
Academic skills	TCM 1001	University Education Skills	2	The student chooses two courses.
	RHE 1001	Reading Skills	2	
	IT 1001	Technical Skills	2	

Packages	Course Code	Course Name	Credit Hours	Rules
	EDP 1001	Thinking Skills	2	
	STA 1001	Basics of Statistics	2	

3. Course Specifications

Insert hyperlink for all course specifications using NCAA template

https://imamuedusa-my.sharepoint.com/:f:/g/personal/mkomran_cloud_imamu_edu_sa/Eh5m-eK5yrBNmsZkJUEXVt4BJS4JetdvaJADUDrVOJiaOg?e=Zd3JLu

4. Program learning Outcomes Mapping Matrix

Align the program learning outcomes with program courses, according to the following desired levels of performance (I = Introduced P = Practiced M = Mastered)

* Add a table for each track (if any)

Course code & No.	Course name	Program Learning Outcomes									
		Knowledge and understanding				Skills				Values	
		K1	K2	K3	K4	S1	S2	S3	S4	V1	V2
Bio1101	General Biology	I				I	I			I	I
CHM1101	General Chemistry 1	I			I	I		I	I	I	I
ENG 1140	English 1					I		I		I	I
MAT1101	Calculus 1					I		I		I	I
CHM1102	General Chemistry (2)	I			I	I		I	I	I	I
ENG 1195	English 2					I		I		I	I
CHM1252	Lab. Safety and Management		I		I	I	I	I	I	I	I
CHM1121	Organic Chemistry (1)	I	I		I	I	I	I	I	I	I
MAT1107	Mathematics for Chemistry					I		I	I	I	I
PHY1101	General Physics (1)					I		I	I	I	I
CHM1211	Inorganic Chemistry (1)	I		I	I	I		I	I	I	I
CHM1235	Fundamentals of Analytical Chemistry	I	I		I	I		I	I		
CHM1251	Computer Application in Chemistry	I		I		I	I	I	I	I	P
CHM1221	Organic Chemistry (2)	I	I	I	I	I	I	I	I	I	P
CHM1241	Physical Chemistry (1)	P	P		P	P	I	I	I	I	P
STA1111	Introd. to Probability & Statistics					I		I	I	I	I
CHM1236	Chemistry of Volumetric and Gravimetric Analysis	P	P	P	P	P	I	I	I	I	P
CHM1242	Physical Chemistry (2)	P	P	I	P	P	P	I	I	I	P
CHM1271	Biochemistry	I	I	I		I	I	I	I	I	I
CHM1311	Inorganic Chemistry (2)	P	P	P	P	P	P	I	I	I	I
CHM1321	Heterocyclic Chemistry	P	P	P	P	P	P	I	I	I	P
CHM1322	Organic compounds spectroscopy	P	P	P		P	P	I	I	I	I

Course code & No.	Course name	Program Learning Outcomes									
		Knowledge and understanding				Skills				Values	
		K1	K2	K3	K4	S1	S2	S3	S4	V1	V2
CHM1313	Organometallic Chemistry	P	P			P		M	P	P	
CHM1343	Electrochemistry and Corrosion		M	M	M	P	I	P	P	P	
CHM1332	Instrumental Analysis	M		M	M	P		P	P	P	
CHM1441	Quantum Chemistry	P	P	P		P	P	M		P	P
CHM1348	Chemical Kinetics	P	P	P	M	P	P	P	M	P	M
CHM1328	Polymers and Petrochemicals	M	P	M		P	P	P	P	P	P
CHM1421	Chemistry of Natural Products	M	P	M	M	P	P	P	P	P	P
CHM1411	Solid state chemistry	M	P	M		P	P	P	P	P	P
CHM1446	Catalysis & Surface Chemistry	M	P	P		P	M	P	M	P	
(*)	Elective Course (2)	M	P	P		P	M	P	P	P	M
CHM1438	Chemical Separation Methods	M	P		M	P	M	P	P	P	M
CHM1422	Organic Reactions Mechanism	M	M	M		M	M	M	M	M	
CHM1497	Field Training	M	P	M	M	P	M	P	P	P	M
CHM1499	Graduation Project	M	M	M		M	M	M	M	M	M
xxxx	University Requirements (26 hours)		I			I	I	I		I	I

5. Teaching and learning strategies to achieve program learning outcomes

Describe policies, teaching and learning strategies, learning experience, and learning activities, including curricular and extra-curricular activities, to achieve the program learning outcomes.

The policy of Teaching and learning should be planned, delivered and followed-up by the values and principles achieving outstanding teaching and learning practices:

- Academic staff share and uphold the values and principles set out in the planned teaching and learning as well delivered to achieve the outstanding teaching and learning strategies
- Academic staff receives training, guidance, and support, enabling them to contribute to the provision of outstanding teaching and learning practices.
- Students are encouraged and motivated to behave in a manner that facilitates their learning, development, and progression.

The learning experiences and learning activities:

Teaching and learning should be a professional, and motivating partnership between students and teachers

- Teachers should have certain that their students understand and realized the learning objectives of their studies.
- Students should develop their progress in achieving their goals with sharing responsibility for their learning outcomes as the main target.
- Teachers should develop the skills, confidence, and encouragement the students to become successful independent learners and preparing for practical life.
- Teachers should achieve the teaching and learning strategies with actively seeking new methods and approaches to motivate students to use and apply the technologies and other resources available to them to enhance the teaching and learning experience.
- The students and teachers should be supported with all the opportunities, and resources, to improve and develop their academic and teaching potential respectively.

Teachers are encouraged to work together to share best practice and support each other's development.

1. *Knowledge*

- Lecturing and tutorials
- Group discussion
- Laboratories experiments
- Homework and assignments
- Oral presentation / Mini-projects / Graduation Project

2. *Skills*

- Whiteboard solved exercises
- Brainstorming
- Mini and Graduation Project
- Seminars
- Group competitions
- Laboratory sessions
- Group discussion and seminars
- Whiteboard solved exercises and Homework
- Case studies
- Demonstrations, virtual labs and laboratory manuals demonstrations, virtual labs and laboratory manuals
- Encourage students to use network communication to submit homeworks and assignments

3. *Values*

- Group discussion and assignments
- Homeworks and mini-reports

6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure achievement of program learning outcomes in every domain of learning.

Direct Assessment Methods

- National or regional exam results (developed outside the institution for use by a broad group of students using national or regional norms)
- Graduation Project (CHM 1499)
- Entrance/Exit Interviews/exams
- Performance (participation in campus and/or community events, volunteer work, presentations, etc).
- Course e-Portfolio

Indirect Assessment Methods

- Alumni Survey
- Course Evaluation Survey
- Employer/industry Survey
- Program Advisory Committee minutes
- Teaching staff surveys on the program.
- Observations (Information can be collected while observing "events" such as classes, social gatherings, activities, group work, study sessions, etc. Observation can provide information on student behaviours and attitudes)

- Syllabus Review
- Second Examiner checklist

D. Student Admission and Support:

1. Student Admission Requirements

An applicant to the Bachelor Program in Chemistry should fulfill the requirements in the following link

<https://imamu.edu.sa/admissions/regular-education/Pages/default.aspx>

1. Admission Guide Imam Muhammad bin Saud Islamic University 1444
2. The applicant must have a high school diploma from the general secondary school or its equivalent from inside or outside the Kingdom
3. The applicant must be of good conduct and behavior.
4. The applicant must be medically fit.
5. The applicant must obtain approval from his reference to study if he works in any governmental or private entity.
6. To successfully pass any test or personal interview deemed by the University Council.
7. Admission is limited to high school graduates / natural sciences track.
8. The calculation of compound ratios is as follows

وضوابط القبول الحصول على نسبة موزونة لا تقل عن ٨٠% يتم حسابها وفق النسب التالية:

٣٠%	القانونية العامة
٣٠%	اختبار القدرات العامة
٤٠%	الاختبار التحصيلي

10

2. Guidance and Orientation Programs for New Students

The Chemistry Program provides comprehensive orientation for new students. It holds an orientation week for new students in the beginning of every academic year. During the orientation week, students have the opportunity to:

- Meet other new students, current student leaders, faculty, and staff.
- Learn their way around campus.
- Find out about all the student services and academic programs at the University of Imam Mohammad Ibn Saud Islamic University.
- Address their individual needs and get their questions answered.

During the orientation week, students are given manuals and brochures which help them to understand and to familiarize themselves with the university environment, programs, services, facilities, rights, and duties. In addition to the orientation week, an orientation meeting is held for new students at the beginning of each semester. In this meeting, new students are provided with the necessary information they need during their years of study. This meeting is attended by all the new students as well as the College Dean, Vice Dean for Academic affair and the department academic advisor. During this meeting, the chair of the department, the department's coordinator of academic advising and the department's coordinator of academic affairs address the new students and give them all the necessary academic information they need. Moreover, they answer

all the questions raised by the students during the meeting. In addition, the University Deanship of Student Affairs provides new students with the necessary guidance and orientation programs.

3. Student Counseling Services

(academic, career, psychological and social)

- Students counselling and advice is done by an academic advisor from the department staff. The faculty members make sure that students understand the program requirements.
- Student admitted to the bachelor program will be assigned an academic advisor, responsible for pastoral support, guidance and counseling.
- Every student will be required to meet the academic advisor of the chemistry two times per semester at least at the beginning of each semester and during the registration period (first two weeks).
- The lecturer for each course allocates 2 office hours per week advertised on his /her timetable and reserved as part of his/her teaching schedule to help the students on any academic problems/difficulties.
- Student is able to get individual consultation and academic advice appointment with teaching staff via e-mail or phone calls.
- A list of teaching staff members with their room numbers, their phone numbers and their e-mail addresses is given in the Bachelor's Chemistry Handbook and Department website.
- Visiting the University website, students get some guidance and advice on their academic queries.
- University support services include careers, financial advice, housing, counselling, etc.
- Excellent library and digital library facilities.
- University, college and department handbooks provide information about the courses structures and University regulations etc.
- Feedback is provided for all assessments.

4. Special Support

(low achievers, disabled, gifted and talented)

The Chemistry Program (via the head of the department) and the University of Imam Mohammad Ibn Saud Islamic University provide care and support for low achievers and disabled students. Furthermore, the Vice- deanship for academic affairs has established a Center for Special Needs Services (CSNS). As for the underachieving students, they are identified and provided with remedial programs to help them overcome the difficulties hindering their progress into the program. These students are distributed among the academic advisors in the department and are given due interest. They are met on regular basis by their academic advisors who are asked by the academic advising coordinator (after the coordination with the CSNS) to take an appointment. During these meetings, the students are provided with advice, and guidance to help the students make decisions, related to registration decisions, deletion, addition, grievance, or even transfer to another program. Furthermore, the program has monitored underachieving students to help and advise them that they can finish their graduation requirements and catch up with their colleagues. These students are also offered several programs, lectures, and workshops on selected topics in which they can develop and strengthen their knowledge and language skills. This process of following up with these underachieving students continues until their graduation.

Both program and institution pay due attention to students of special needs (e.g. disabled students). They are provided with special care. Their special needs are taken into consideration for the access of the building and specially during the exams.

For the gifted and talented students, the university has established a department for creativity and talent to identify and to develop the abilities of these students named Department of Gifted and Talented Care. This is achieved through holding several extracurricular activities to attract and to encourage the talented students to develop their abilities and gifts.

The main building of the College is designed to meet with the necessities of students with special needs and offer facilities such as:

- Six car parking
- Special pathway
- 8 lifts in each floor
- Ten toilets.

E. Teaching and Administrative Staff

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professors	Chemistry	Organic Chemistry		2	-	2
Associate Professors		Physical Chemistry		2	-	2
Assistant Professors		Analytical Chemistry		-	1	1
Lecturers		Inorganic Chemistry		1	-	1
Teaching Assistants	Chemistry	Organic Chemistry		3	1	4
Technicians and Laboratory Assistants		Physical Chemistry		2	-	2
Administrative and Supportive Staff		Analytical Chemistry		2	-	2
Others (specify)		Inorganic Chemistry		3	-	3

2. Professional Development

2.1 Orientation of New Teaching Staff

Describe briefly the process used for orientation of new, visiting and part-time teaching staff

A. 1- For Saudi staff

The department usually studies the need for recruiting new teaching staff every year. Vacant positions are publicly advertised at The electronic Gate of University for jobs (<https://jobs.imamu.edu.sa/>), Appropriate applicants (are they selected according to Regulations Governing the Affairs of the Employees of Saudi Universities of faculty members) will be invited to give a scientific lecture in his topics. Then, he will be interviewed twice, the first one by a selected panel includes three academics in his specialist for scientific discussion to evaluate his background. The second interview undergoes specific evaluation criteria. For example, the applicants are being evaluated on their communication skills, self-confidence,

general and knowledge. The applicant has to achieve at least 80 % of the criteria to be eligible for the position.

2- For Non Saudi staff:

In case of absence of Saudi staff in some special topics, Decisions and recommendations are then reported to the university-wide Deanship of Faculty and Staff Affairs through the Dean of the College. Available positions are advertised by the Cultural Attaches in the approved countries and the University website. Applicants are interviewed by a selected panel. After checking and evaluating the applicant's documents, the panel will give an initial contract offer to the successful nominees. When the applicant accepts the offer, the University send visas to the Cultural Attachés. Upon arrival at the University, the new staff will sign the final contract.

B. The process used for the orientation of visiting Professor according to the Imam Mohammad Ibn Saud Islamic University process and policies

(See

<https://units.imamu.edu.sa/colleges/science/FilesLibrary/Documents/%D9%86%D9%85%D9%88%D8%B0%D8%AC%20%D8%A7%D8%B3%D8%AA%D9%85%D8%A7%D8%B1%D8%A9%20%D8%B7%D9%84%D8%A8%20%D8%A7%D8%B3%D8%AA%D8%A7%D8%B0%20%D8%B2%D8%A7%D8%A6%D8%B1.pdf>)

2.2 Professional Development for Teaching Staff

Describe briefly the plan and arrangements for academic and professional development of teaching staff (e.g., teaching & learning strategies, learning outcomes assessment, professional development, etc.)

A. Improvement of skills in teaching and & learning strategies, learning outcomes assessment

All Department staff are encouraged to

- Regularly attend training and professional development workshops held within the University as the following:
- University Teaching and Learning (UTL)
- Teaching Assistant Training Program (TAT)
- Problem-based learning (PBL)
- Development of academic leadership
- Recent trends in student assessment
- Student-centered learning
- Measuring the educational outcomes in programs and courses
- Use of modern technologies in university teaching
- Construction achievement tests
- Active learning and its uses in university teaching
- Career and personal development programs at the University provide opportunities to build productive and satisfying careers while contributing to the achievement of the University's mission.
- Consultation and coordination in teaching are conducted throughout the academic year among the faculty members teaching the same courses.
- Regular meeting held within the Course Responsible and staff members of the same relevant courses to discuss and exchange ideas for improving teaching and learning strategies.

In addition, The strategies adopted in the department to improve the quality of teaching are:

- Modern technology and methods of teaching are used to illustrate the content of the courses through data show

- The use of blackboard, where a support course materials will be provided to the students: syllabus, teacher timetable, exercises lists, home-works, solutions of tests and exams, samples of previous, etc... Also the students can use these folders to submit their home works and projects.
- Distributing updated edition of textbooks at the beginning of each semester.
- Participation in some training courses organized by the University under the, "Development project, creativity and excellence"
- Monitoring the performance of a faculty member through the course folder, the shared folder file, the report of the Course Responsible, the course report, the students' feedback.
- Most of classrooms for teaching purpose are equipped with network connections, smart board and data show

B. Other professional development including knowledge of research and developments in their field of teaching specialty?

- Teaching staff members are encouraged to develop on their teaching and research, for innovation new teaching methods and achieve international standards of scientific research.
- The Deanship of Scientific Research annually announces research projects to promote the scientific research of the faculty members and enforce the participation of students in these projects as an option, which helps to develop the skills of research, learning, and communication for students.
- Indeed, each year University awards are presented to academic staff for outstanding contributions to teaching, research supervision, and publishing as the following,
- Award of the IMSIU Rector for Creativity in University teaching
- Research Excellence Award
- World Publishing Program.

F. Learning Resources, Facilities, and Equipment

1. Learning Resources.

Mechanism for providing and quality assurance of learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.)

- Teaching and learning resources are provided via the central library
- For the planning and acquisition of learning resources the department proceeds as following mechanism:

STEP 1: For each course, the department assigned a faculty members committee which heading by Course Responsible to provide the followings:

- Course description (preliminary syllabus),
- Recommend Lists of Required Textbooks, Essential References Materials (Journals, Reports, etc.), Recommended Textbooks and Reference Material (Journals, Reports, etc.), Electronic Materials (eg. Web Sites, Blackboard, etc.)

STEP 2: department collects learning resources of all courses and submits the required lists to the Head of the department to get the approbation of the department council.

STEP 3: After the department council approbation the Department Head asks the College Dean to provide the Required lists of Learning Resources through the University Central Library, and from Central Chemical Stores for chemicals and laboratory requirements.

2. Facilities and Equipment

(Library, laboratories, medical facilities, classrooms, etc.).

For the planning and acquisition resources for library, laboratories, and classrooms the department acts as following:

STEP 1: Evaluation of the locals assigned for graduated programs: Library (equipped with textbooks and references provided by the Central Library), Laboratories (equipped with appropriate instruments, chemicals and glassware), and classrooms.

STEP 2: In the shortage case of supplies the department council approbation the Department Head asks the College Dean to provide the Required lists of Learning Resources through the University Central Library, and from Central Chemical Stores for chemicals and laboratory requirements.

Step 3: Using Blackboard for distance learning.

3. Arrangements to Maintain a Healthy and Safe Environment (According to the nature of the program)

The Bachelor Program in Chemistry has a special arrangements in the laboratories section as the following:

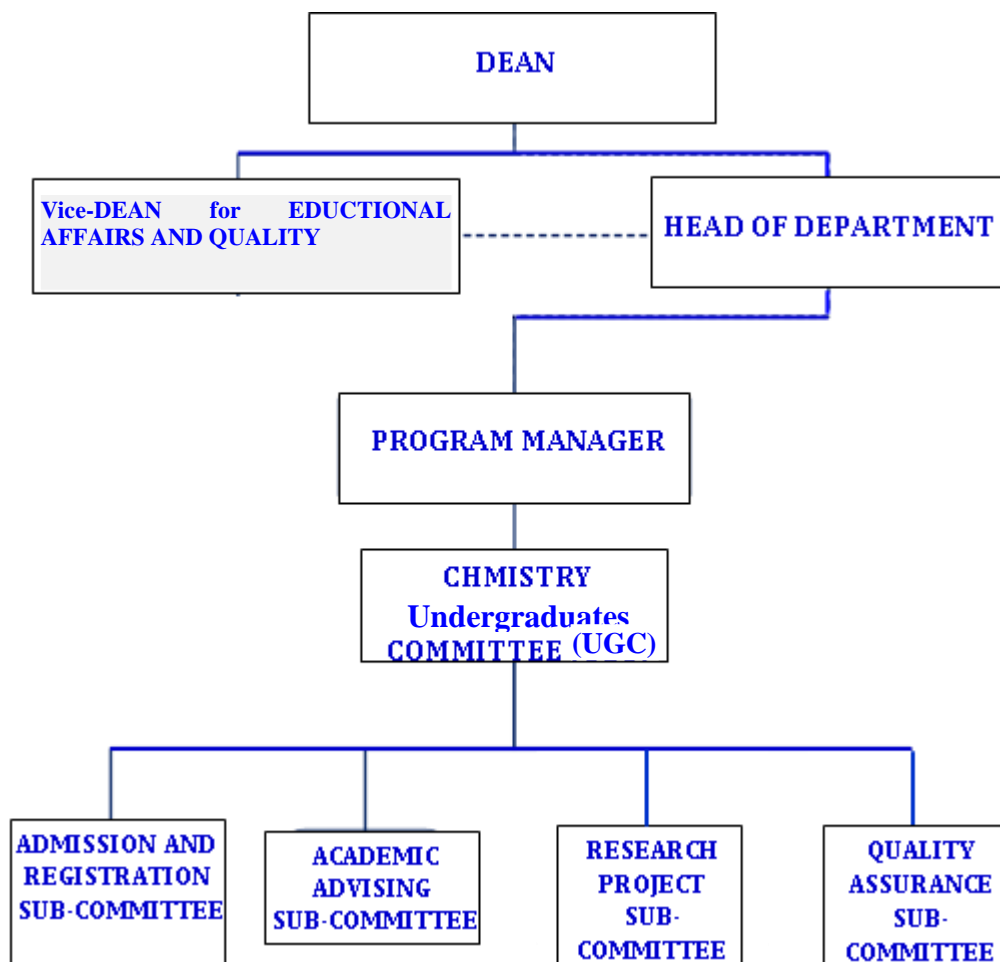
- In each laboratory, a list of safety and precautions are provided.
- In each lab has proper ventilation, and well equipped with instruments.
- In each lab, containers for solid waste, liquid waste, and crushed glasses.
- Each lab has a small pharmacy for first aid in case of an accident
- In the entry of each lab and inside the lab, a table contains the phone number for:
 - a, Medical Centre
 - b, Safety and protection
 - c, Ambulance
 - d, Head of Department
- In each lab, the rules, conditions, and safety mechanism as well list of Risk, Safety precautions according to Merck Catalogue are hanging in the labs.
- A plan has been designed for students escaping from the labs. If any accident happened (fire, explosion, chemical bottle break, chemical hazard compound falls etc....)
- An emergency tools inside each labs.

G. Program Management and Regulations

1. Program Management

1.1 Program Structure

(including boards, councils, units, committees, etc.)



1.2 Stakeholders Involvement

Describe the representation and involvement of stakeholders in the program planning and development. (students, professional bodies, scientific societies, alumni, employers, etc.)

The program includes an advisory committee composed of representatives from the scientific research sector and industrial companies such as water companies, pharmaceuticals and cement industries, representatives of students studying in the program and graduates.

The departmental advisory committee can

- Contribute in the formulation of the general economic, knowledge and provisional specification or qualification of the program graduate by Saudi Vision 2030.
- Ensure that the program content meets stockholders needs as defined by research, industry and education.
- Identify the program requirements and determine imminent priorities.
- Periodically evaluate the effectiveness of the program SWAT.
- The advisory committee does NOT make policy or procedures; only recommendations that the governing body has the authority to review and accept or reject.

2. Program Regulations

Provide a list of related program regulations, including their link to online version: admission, study and exams, recruitment, appeals and complaint regulations, etc.)

Internal Policies and Regulations

Consistently with [OTH 1], IMSIU has written policies applying to students [IMSIU 3-5, 19-22, 26, 29, 31-34], faculty members [IMSIU 6-10, 12, 14, 31-32,] and other employees [IMSIU 17, 39-40, 42] that are clear and fair; these are detailed and explain the processes for almost all issues and concerns. Policies and regulations are regularly updated to reflect IMSIU's mission [IMSIU 1], and any policy changes are thoroughly discussed before being approved by the University Council.

Organization of exams (letter of Dean)

Course specification document provides detailed information about examination methods, date, duration and topics whose will be covered/ midterms, lab exams, quizzes and homeworks and mini/project. The syllabus is given to students at the beginning of class and it is published in Google Classroom and College website. Also the course syllabus gives more details on: learning outcomes, material, topic outlines, exams and grading system, student attendance\absence, Executive Rules for Study Regulations and Exams [BScCH 5]. However, the final examination are specified with University's calendar and it is published in form of table regrouping all course examinations through College website.

The examination event are managed by:

- follow up and exam unit
- departmental exam committee
- vice-deanship of graduate studies and scientific research
- College Scoring Committee
- Second examiners

Assessment Forms

The assessment forms are basically aimed to intensively, continually and compressively cover course learning objectives in order to monitor the individual student's achievement. Most of forms of the assessment are the final exam, as well as a multitude of other assessment forms a (midterm(s), lab exam, quiz, homework, participation, mini-project,...), and during the semester intensively, comprehensively and continuously (see subsection C.5 of course specifications [BScCH 5] for the forms of exams .

Students are informed at the beginning of semester about examination requirements and forms through:

- Syllabus
- College website page
- Blackboard (lms.imamu.edu.sa)

Final exams and University calendar

Final Examination timetables are published and available for each semester including summer session [CS 9]. However course syllabi specify the midterms and lab-exams during the first class. The final exam timetable is released four weeks before the examination period information regarding these timetables will not be available before these dates.

The exam timetables can be accessed via the College website [CS 10-11].

The College equivalency committee was established to verify documents of student (official transcript with student assignment completed out-side of the university) with respect to quality assurance and level of compliance to quality with the quality expectation [CS 57].

Exams Regulations

Exam regulations are governed by "*Rules and Regulations for Undergraduate Studies and Exams*" amended by the decision of the Higher Education Council No. 33/45/1428 as well as the Executive Rules of IMSIU No. 2401-1432 / 1433H, (2012 G.) [IMSIU 3-4].

If a candidate is not able to assist to a final exam due to chronic illness or physical disability [CS 42], the College council may allow the candidate to take an alternative exam provide a medical certificate as evidence for his/her conditions.

[IMSIU 3] Study and examination regulations for Bachelor degrees.
<https://units.imamu.edu.sa/deanships/GRADUATE/Academic/Pages/default.aspx>

[IMSIU 33] Student Affairs Regulations and Forms (Sport, Student Fund, Housing, Employment...).
<https://units.imamu.edu.sa/deanships/sa/fileslibrary/Pages/default.aspx>

[CS 18] Regulations concerning academic and student affairs at the University.
<https://units.imamu.edu.sa/colleges/science/StudentsAffairs/Pages/default.aspx>

Recruitment

The administration staff is appointed by the university after running a competition among the applicants. For the academic staff, jobs are advertised nationally and internationally through all kinds of media (like internet, newspapers and magazines) or through the Saudi Cultural Attaché's Office. Next the Recruitment Committee appointed by the department examines submitted applications and classifies them, those to be considered for a position and those who do not meet the academic standards of the department. Some of the candidates applicants are interviewed via the online process (Skype) and others (particularly for the candidates in Saudi Arabia and neighbouring countries) are interviewed personally by the college recruitment committee which includes the head of the department. The Saudi assistants are appointed by the Recruitment Committee after selection and passing a writing exam.

The responsible for the degree programme recognize that the number and the academic qualification of the teaching staff are sufficient for teaching and supervision:

1. Through the recruitment processes:

a. For Saudi PhD owners: They are invited to do a presentation in the corresponding department and a personal interview with the department recruitment committee.

b. For Non-Saudi PhD owners: They are invited via a web announcement to send their CVs. If they are selected, they will have a personal interview with the department recruitment committee via Skype application.

c. For Saudi BSc or MSc owners: They are invited to do a written exam according to their specialties via a web announcement. If they are selected, they will.

H. Program Quality Assurance

1. Program Quality Assurance System

https://imamuedusa-my.sharepoint.com/:b:/g/personal/alakhalil_cloud_imamu_edu_sa/EVPGffZshIIotwp896mzTTEB23Z71rrZAk1fVIXqUH-cHA?e=o2rclD
https://imamuedusa-my.sharepoint.com/:b:/g/personal/alakhalil_cloud_imamu_edu_sa/EZA2RBjov-dFj1uzGyvHQ8BxmRp20mCEwZ1oWr8wJsbvQ?e=MhYenb

Purpose

The purpose of the College Development and Quality Unit (CDQU) is to be responsible for the monitoring of quality assurance process covering: planning, implementation and procedures, assessment, and improvement according to both NCAAA and University quality requirements within the College community.

On behalf of vice-deanship for academic affairs and quality, CDQU is accountable to the College Board for all aspects of academic quality assurance: the coordination, maintenance and enhancement of quality and academic standards within College. CDQU shall supervise all committees of accreditation of departments committees and related working teams.

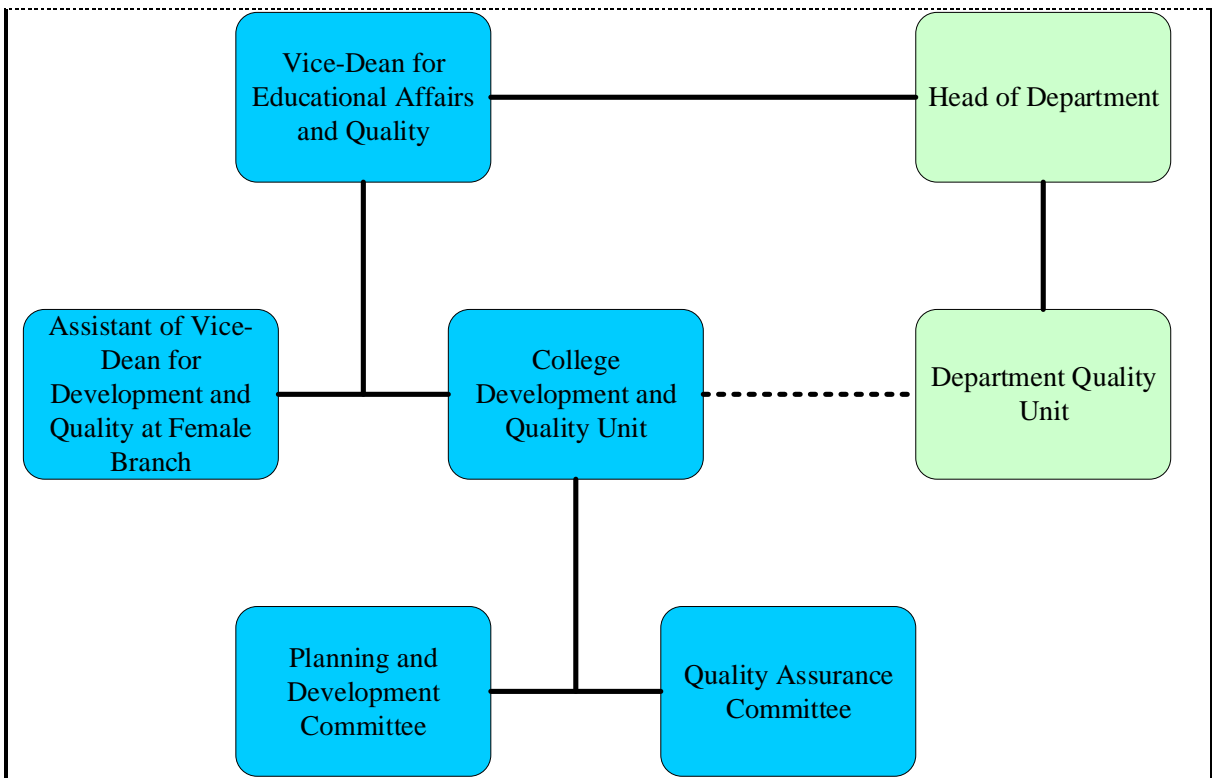


Figure 1 – Organizational Quality Management

Membership

The number of members will be variable depending on the body structure and size of the College. CDQU (head, designed by the dean of the college of science). The current membership is as follows:

- Head of the College Development and Quality Unit;
- Assistant of the Vice-Dean for Female Affairs;
- Assistant of the Vice-Den for Educational Affairs and Quality;
- Heads of Department Quality Units;
- Head of Statistical and Data Analysis Unit;
- Head of the College Training Unit;
- College Academic Advisors;
- Representatives of Departmental Quality Units at the Female Branch;
- Head of the Follow-up and Examinations Unit.

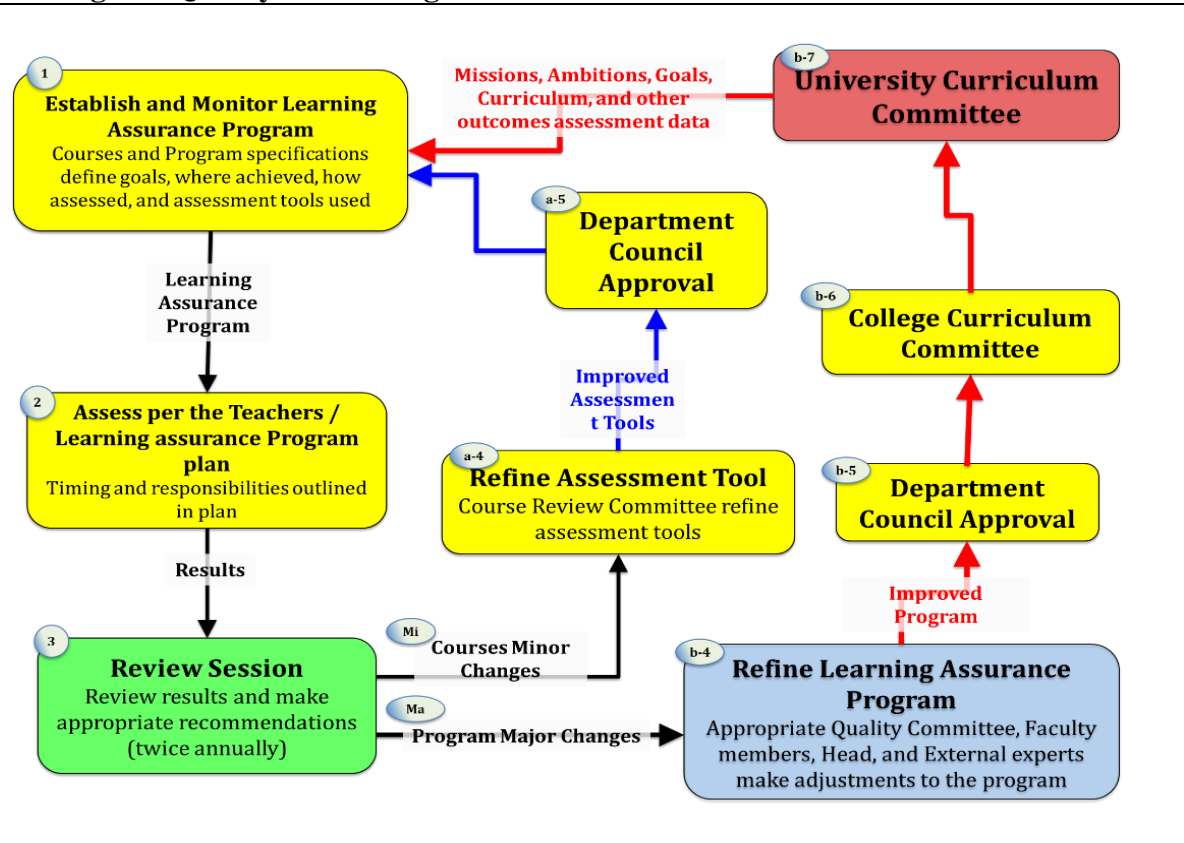
At the College, the quality management including quality assurance is governed by CDQU based on quality –oriented governance with continuous development and improvement. Globally, CDQU utilizes the following management approach: to plan; to coordinate; to implement; to assess and to orient all activities in the College towards compliance with the vision of the College and to convey its strategic goals.

At each department a quality unit is established. However, CDQU unites all procedures, methods and tools to ensure an integrated cyclical quality process over whole the College and its academic programs including teaching\learning quality.

The College considers a degree program itself as qualification process. The precise definitions and descriptions of the level, goals, objectives and learning outcomes of a

program are specified in each program specification document [BScAM 2, MScMAT 2, BScPH 2, BScCH 2] and they are based on NQF [EEC 1]. In addition, handbook [EEC 2-5 and templates of NCAAA [EEC 6-12] are used. Programs and courses specifications [BScAM 4, MScMAT 4, BScPH 4, BScCH 4] and related reports are the central references to ensure ongoing monitoring and systematic improvement.

2. Program Quality Monitoring Procedures



3. Arrangements to Monitor Quality of Courses Taught by other Departments.

All the courses are ensured by the department, except in case a cooperation initiated with another department or institute in Graduation Project (CHM 1499)

The mechanism for monitoring the quality of the *Graduation Project* taught and carry out by other departments,

1. Strategies for Obtaining the Student Feedback on the Effectiveness of Teaching: Students are asked to submit the first report at the first fifth weeks about the progress in the research project, and the second one in the eleventh week.
2. The student will invite to present a lecture on his progress in the research project in the eighth week.
3. The instructor (supervisor of the *Graduation Project*) will submit a final version to *Graduation Project* Committee with evaluation reports and a list of 5 examiners (at least 2 of them outside his institution).
4. The Department will follow the proposed regulation of Quality and Development Unit to recommend the submission of the research project to the judgment. (see attachment 1)
5. The *Graduation Project* Committee will propose a peer committee to the head of department for approval
6. The peer committee will review the research projects with applying all criteria in attachment 1, (Ethical standards, Language Conventions, Style, layout)
7. The accepted Research Project Report (RPR) will forward for final evaluations.

8. The written project RUBRIC and the oral presentation RUBRIC can be considered a tool and indicator for the Quality of the *Graduation Project* Course, in combination with students, feedback and *Graduation Project* Committee
9. Other Strategies for Evaluation of Teaching by the Program/Department Instructor: At the end of each semester the course instructor should complete a report, including a summary of student questionnaire responses appraising progress and identifying changes that need to be made if necessary.
10. Processes for Improvement of Teaching: Student evaluations and the supervisor's course report will be used to decide improving parameters. Benchmarking with similar programs in other universities inside and outside the Kingdom of Saudi Arabia.
11. Planning arrangements for periodically reviewing course effectiveness and planning for improvement: Twice annually following the Teaching and Learning Assessment Process adopted by the Department Council.

4. Arrangements Used to Ensure the Consistency between Main Campus and Branches
(including male and female sections)

The Department of Chemistry adopted the following processes Ensure the Consistency between Main Campus and Branches

- There is a Course Responsible (CR) and course coordinator who is responsible for management, delivery, and assessment of the courses in both branches.
- The main duties of CR is ensuring the course delivery conforms the requirements of the course specifications and the course common syllabus in both branches.
- For each course, there is a second examiner for the final exam who follows a form adopted in the department council
- The final exam for each course is common for ALL SECTIONS including female sections;
- A course report is written by the teacher and submitted Course Responsible to write a global Course reports, supported with recommendations about the strength or weakness (based on student feedback, external assessor report, current and previous course reports, any other feedback) in both branches.
- The Program manager follows all the process through UGC, and Course Responsible jointly.

5. Arrangements to Apply the Institutional Regulations Governing the Educational and Research Partnerships (if any).

Not applicable

6. Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using its Results in the Development Processes

Assessment Plan for Program Learning Outcomes (PLOs) are given below
First, it "Mastered" level of performance with be a node of assessment of opportunity. The Mechanism, for demonstrating achievement of the learning outcomes, is an ongoing process which consists seven phases:
Phase 1. Data-collection Methodology: Direct and Indirect (listed in Section C.6. above)
Phase 2. Benefits and Drawbacks of Data-collection Methods
Phase 3. Evaluate the Choice of Data-collection Method
Phase 4. Collect data
Phase 5. Interpret evidence
Phase 6. Report the resulting information and document the analysis.
Phase 7. Identify Areas for Improvement and Enhancement.

At each stage (cycle of assessment), we use the resulting information in form of report into account to document, analyze, and improve the all components of the program based on the appropriate key performance indicators (KPIs). As follows a table summing the long run plan for assessing each track and All PLOs.

PLOs	Stage 1 (one year)	Stage 2 (one year)	Stage 3 (one year)	Stage 4 (one year)
	هـ 1445 - 1444	هـ 1446 - 1445	هـ 1447 - 1446	هـ 1448 - 1447
	م 2024-2023	م 2025 -2024	م 2026-2025	م 2027-2026
K1				
K2				
K3				
K4				
S1				
S2				
S3				
S4				
V1				
V2				

7. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Program Leader	Responsible Course Report	Direct: Course e-Portfolio Indirect: Course Report	beginning of Second semester
effectiveness of teaching & assessment	Students	Direct: Questionnaire	beginning of Second semester
	Course Responsible	Direct: Course e-Portfolio Indirect: Second Examiner Checklist- Course Report	
	Program Leader	Direct: Course e-Portfolio Indirect: External Assessor Report	
	Independent Reviewers	Indirect: Exams	
learning resources	Students	Direct: Questionnaire	end of academic year
	Course Responsible	Direct: Course e-Portfolio Indirect: Second Examiner Checklist- Course Report	
	Program leaders	Direct: Course e-Portfolio Indirect: Course Evaluation Survey	

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, partnerships, etc.)

Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others (specify))

Evaluation Methods (e.g., Surveys, interviews, visits, etc.)

Evaluation Time (e.g., beginning of semesters, end of academic year, etc.)

8. Program KPIs*

The period to achieve the target (.....) year.

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time	
-1- Mission and Goals	KPI-01	Percentage of achieved indicators of the program operational plan objectives		• Course Evaluation Survey	At four years	
	KPI-02	Students' Evaluation of quality of learning experience in the program		• Course Evaluation Survey	Each year	
	KPI-03	Students' evaluation of the quality of the courses		• Course e-Portfolio Course reports	Each semester	
	KPI-04	Completion rate		• Course e-Portfolio Statics unit report	Each year	
	KPI-05	First-year students retention rate		Statics unit report	Each year	
	-2- Teaching and Learning	KPI-06	Students' performance in the professional and/or national examinations		• Employer/industry Survey Statics unit report	Each year
		KPI-07	Graduates' employability and enrolment in postgraduate programs		• Employer/industry Survey Statics unit report	Each year
		KPI-08	Average number of students in the class		Course reports	Each year
		KPI-09	Employers' evaluation of the program graduates proficiency		• Employer/industry Survey • Alumni Survey	Each 2 year
	-3- Students	KPI-10	Students' satisfaction with the offered services		Alumni Survey	Each year

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
-4- Teaching Staff	KPI-11	Ratio of students to teaching staff		<ul style="list-style-type: none"> • Course Evaluation Survey • Teaching staff surveys on the program. 	Each year
	KPI-12	Percentage of teaching staff distribution		Teaching staff surveys on the program.	Each year
	KPI-13	Proportion of teaching staff leaving the program		• Scientific committee reports	Each year
	KPI-14	Percentage of publications of faculty members		• Scientific committee reports	Each year
	KPI-15	Rate of published research per faculty member		• Scientific committee reports	Each year
	KPI-16	Citations rate in refereed journals per faculty member		• Scientific committee reports	Each year
-6- Learning Resources, Facilities, and Equipment	KPI-17	Satisfaction of beneficiaries with the learning resources		• Alumni Survey	Each year

* including KPIs required by NCAAA

I. Specification Approval Data

Council / Committee	COUNCIL OF DEPARTEMENT OF CHEMISTRY
Reference No.	10 (NO. 1/10)
Date	21/04/1444- 15/11/2022