Program Specification

Program Name: Chemistry
Qualification Level: Bachelor of Science in Chemistry.
Department: Chemistry.
College: College of Science Al-Zulfi.
Institution: Almajmaah University

Content

A. Program Identification and General Information

1. Program Main Location:
Chemistry Program –College of Science Al-Zulfi main campus.
2. Branches Offering the Program:
Branch 1. Chemistry Program –College of Science Al-Zulfi main campus. Branch 2. Chemistry Program –College of Science, Al-Zulfi female section.
3. Reasons for Establishing the Program: (Economic, social, cultural, and technological reasons, and national needs and development, etc.)
- Lack of specialized programs in Chemistry at the College of Science in Zulfi province. - Coverage of the college and the needs of the region and the labor market majoring in Chemistry in different areas. - Support the labor market. - To keep pace with the requirements of development in the Kingdom in basic sciences. - Graduating excellence students to support the process of building the KSA and keep up with changes in the field of specialization - Develop the ability of learners in the chemical sciences environment through effective use and combining acquired knowledge and skills in different parts of the program - Provide opportunities for learners to develop a set of skills, techniques and basic qualities for successful performance in the working life - Keeping pace with the Kingdom's development requirements in basic sciences. - Graduating distinguished students to support the process of building the country and keeping pace with changes in the field of specialization. - Develop the capacity of learners in the chemical sciences' environment through effective use and combining knowledge and skills acquired in different parts of the program. - Provide opportunities for learners to develop a set of skills, techniques and basic qualities for successful performance in the working life.
4. Total Credit Hours for Completing the Program: (136)
136 hours, 8 semesters (4 years).
5. Learning Hours: (…….) The length of time that a learner takes to complete learning activities that lead to achievement of program learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times)
8 semesters (4 years).
6. Professional Occupations/Jobs:
-The field of education and higher education

-Continue higher educations in Chemistry and leading to M.Sc. or PhD.
- Work in research centers and universities.
- Work in public and private sectors of education.
- Ministry of Education as teachers.
- Working with oil and petrochemical companies, drinking water companies and electricity companies.
- Fertilizer plants.
- Pharmaceutical factories.
- Textile factories.
- Sugar factories.
- Soap and detergents factories.
- Plastic factories.
-Analysis Labs.

7. Major Tracks/Pathways (if any)**:**

Major track/pathway	Credit hours (For each track)	Professional Occupations/Jobs (For each track)
1. Chemistry	136	The field of education and higher education -Continue higher educations in Chemistry and leading to M.Sc. or PhD. - Work in research centers and universities. - Work in public and private sectors of education. - Ministry of Education as teachers. - Working with oil and petrochemical companies, drinking water companies and electricity companies. - Fertilizer plants. - Pharmaceutical factories. - Textile factories. - Sugar factories. - Factories Soap and detergents. - Plastic factories. -Analysis Labs.

8. Intermediate Exit Points/Awarded Degree (if any)**:**

Intermediate exit points/awarded degree	Credit hours
1. Not applicable	
2.	
3.	

B. Mission, Goals, and Learning Outcomes

1. Program Mission:

Preparing and qualifying innovative and distinguished cadres in the field of Chemistry and its applications. They should be able to compete in Work Market to meet needs of

development, improve the Scientific Research System and participate in Community Service.

2. Program Goals:

- Preparing experts and scientifically qualified pioneers in Chemistry and its applications to satisfy the needs of development plans and work Market in KSA.
- Prepare students for intellectual creativity in the field of chemistry and related fields through the use of modern technology
- Supporting and encouraging scientific research through the communication among public and private institutions especially those that support and fund scientific research.
- Participating in spreading scientific culture and offering consultations in Chemistry for both public and private institutions.

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

The mission of Majmaah University is to offer educational programs with high quality as well as funding all types of research projects and social initiatives that contribute in achieving the sustainable development. We also committed to instill the concept of patriotism and educate students about the culture and heritage of the country.				Message key Words
A stimulating academic and research environment and distinct and accredited programs.	and contribute to scientific research and community service	Able to compete in the labor market and meet the requirements of sustainable development	Preparation and qualification of national cadres	
X			X	Preparing and qualifying distinguished and innovative cadres.
		X		Able to compete in the labor market to meet the requirements of development
	X			Upgrading the scientific research system
	X			Contributing to community service

4. Graduate Attributes:

5.Program learning Outcomes*

Knowledge :

K1	Recognize the fundamental concepts, basic principles and theories related to chemistry
K2	Describes basic concepts and laws in chemistry and related sciences
K3	Analysis of scientific facts and theories related to the science of chemistry.
K4	Evaluate the results and provides innovative solutions to solve problems according to the foundations of chemical theories.
K5	Link between the knowledge and skills acquired academic and professional contexts related to the science of chemistry.
Skills	
S1	Apply the safety principles when dealing with laboratory tools, devices and chemicals.
S2	Communicate effectively orally and written using appropriate presentation formats for different issues with recipients of different types.
S3	Demonstrate the ability to use modern technology and statistical applications that are used in the various fields of chemistry
S4	Perform the Laboratory experiments using the right scientific methods
Competence	
C1	Dealing honestly and professionally with peers and in writing the reports
C2	Shows the ability to deal with difficult situations and work under pressure.
C3	Demonstrates the ability to teamwork and lead the team and perform the tasks entrusted to him professionally

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

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	**4**	8	5.88 %
	Elective	**2**	4	2.94 %
College Requirements	Required	**6**	18	13.24 %
	Elective	**1**	2	1.47 %
Program Requirements	Required	**28**	87	62.94 %
	Elective	**6**	12	8.82 %
Capstone Course/Project	Required	**2**	**4**	2.94 %
Field Experience/ Internship	Required	**1**	**1**	**0.75**
Total		**13**	**136**	**100 %**

* 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)
		متطلب جامعة اختياري مجموعة1 Uni. Elective/ group 1	Elective	-	2	-
Level		متطلب جامعة اختياري مجموع3	Elective	-	2	-

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
1		Uni. Elective/ group 3				
	SENG101	لغة إنجليزية علمية Scientific English	Required	-	2	-
	BIOL101	أحياء عامة General Biology	Required	-	3	-
	CSI101	مقدمة في الحاسب الآلي Introduction to Computer Science	Required	-	3	-
	CHM101	كيمياء عامة-1 General Chemistry-1	Required	-	3	-
Level 2	PHYS101	فيزياء عامة-1 General Physics-1	Required	-	3	-
	MTH231	أسس الرياضيات Basis of Mathematics	Required	-	3	-
	CHM102	كيمياء عامة -2 General Chemistry-2	Required	CHM101	3	-
	CHM111	كيمياء تحليلية- 1 Analytical chemistry-1	Required	CHM101	3	-
	CHM121	كيمياء عضوية -1 Organic chemistry-1	Required	CHM101	4	-
	CHM131	أطوار المادة والمحاليل Phases of Substances and Solutions	Required	CHM101	2	-
Level 3		متطلب جامعة اختياري مجموع2 Uni. Elective/ group 2	Elective	-	2	-
	CHM212	كيمياء تحليلية -2 Analytical chemistry2	Required	CHM 111	3	-
	CHM222	كيمياء عضوية -2 Organic chemistry-2	Required	CHM121	4	-
	CHM241	كيمياء مجموعات رئيسية Main Group Chemistry	Required	CHM102	2	-
	MTH101	حساب تفاضل وتكامل-1 Calculus-1	Required	-	3	-
	PHYS 213	فيزياء عامة-2 General Physics-2	Required	PHYS101	3	-
Level 4		متطلب جامعة اختياري مجموعة1 Uni. Elective/ group 1	Elective	-	2	-
		متطلب جامعة اختياري مجموعة2 Uni. Elective/ group 2	Elective	-	2	-
		متطلب كلية اختياري Elective college requirements	Required	-	2	-
	CHM223	كيمياء عضوية حلقية غير متجانسة Heterocyclic organic chemistry	Required	CHM222	3	-
	CHM242	كيمياء العناصر الانتقالية والتناسقية Transition metals and Coordination Chemistry	Required	241 CHM	3	-
	CHM232	كيمياء ديناميكا حرارية	Required	MTH101	3	-

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
		Thermodynamic Chemistry				
	CHM251 **CHM244**	متطلب قسم اختياري Elective department requirement	Elective		2	-
Level 5		متطلب جامعة اختياري مجموعة 1 Uni. Elective/ group1	Elective	-	2	-
	CHM324	كيمياء البوليمرات والبتروكيماويات Polymers & Petrochemicals Chemistry	Required	CHM222	2	-
	CHM333	كيمياء السطوح والغرويات والحفز Surface, Colloids and Catalysis Chemistry	Required	CHM232	3	-
	CHM343	كيمياء الكم Quantum chemistry	Required	MATH101	3	-
	CHM345	كيمياء العضومعدنية Organometallic chemistry	Required	CHM242	2	-
	CHM361	كيمياء حيوية-1 Biochemistry-1	Required	CHM222	3	-
Level 6	**CHM325**	كيمياء فراغية Stereochemistry	Required	CHM222	2	-
	CHM334	كيمياء كهربية Electrochemistry	Required	PHYS213	3	-
	CHM335	كيمياء حركية Kinetic chemistry	Required	CHM232	3	-
	CHM362	كيمياء حيوية-2 Biochemistry-2	Required	CHM361	3	-
		مقرر حر اختياري Free elective course	Elective	-	3	-
	CHM363	متطلب قسم اختياري Elective department requirement	Elective	CHM361	2	-
	CHM336			-		-
Level 7	CHM413	التحليل الطيفي والكهربي Spectroscopic & electric analysis	Required	CHM334	3	-
	CHM426	كيمياء النواتج الطبيعية Natural products chemistry	Required	CHM223	3	-
	CHM437	كيمياء نووية واشعاعية Nuclear and radiochemistry	Required	CHM242	3	-
	CHM453	كيمياء النانو Nano Chemistry	Required	CHM333	2	-
		مقرر حر اختياري Free elective course	Elective	-	3	-
	CHM472	(خطة اعداد 1مشروع تخرج البحث) Graduation project (theoretical part)	Required	Complete 80 credit hours	2	-
	CHM452 CHM463	متطلب قسم اختياري Elective department requirement	Elective	-	2	-
	CHM414	طرق الفصل الكروماتوجرافي	Required	CHM333	3	-

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 8		Methods of chromatographic analysis				
	CHM427	ميكانيكية التفاعلات العضوية Mechanisms of organic reactions	Required	CHM325	2	-
	CHM428	أطياف المركبات العضوية Spectroscopy of organic compounds	Required	CHM413	3	-
	CHM438	كيمياء كهربية متقدمة Advanced electrochemistry	Required	CHM334	3	-
	CHM454	الكيمياء الخضراء Green chemistry	Required	-	2	-
	CHM455	كيمياء عضوية تطبيقية Applied organic chemistry	Required	CHM222	3	-
	CHM473	مشروع تخرج 2 (الجزء العملي) Graduation project-2 (practical part)	Required	CHM472	2	-

* Include additional levels if needed
** Add a table for each track (if any)

3. Course Specifications

Insert hyperlink for all course specifications using NCAAA template

https://majmaah.sharepoint.com/sites/courseportfolio
In the previous link we can find all course, specifications using NCAAA template 2018 also we can find complete course portfolio for current courses.

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)**

course name	Course code	NQF Learning Domains and Learning Outcomes										
		Knowledge					*Skills*				*Competences*	
		K.1	K.2	K.3	K.4	K.5	S.1	S.2	S.3	S.4	C.1	C.2	C.3
General biology	BIOL 101		I	I				I				I	
Introduction in computer science	CSI 101		I	I				I					I
Scientific English	SENG 101		I	I				I				I	
Basic math.	MTH 231		I	I				I					I
Calculus 1	MTH 201		I	I				I				I	
General physics	PHYS 101		I	I				I					I
General physics 2	PHYS 218		I	I				I				I	
General Chemistry-1	CHM 101	I	I						I			I	

course name	Course code	NQF Learning Domains and Learning Outcomes										
		Knowledge					*Skills*				*Competences*	
		K.1	K.2	K.3	K.4	K.5	S.1	S.2	S.3	S.4	C.1	C.2	C.3
General Chemistry-2	CHM-102	I		I		I		I					I
analytical chemistry 1	CHM-111		I	I		I		I					I
Organic chemistry-1	CHM-121	I	I	I			I	I					I
Phases of Substances and Solutions	CHM-131	I			I		I	I					I
analytical chemistry 2	CHM-212	P		P	P				P		P		
Organic chemistry 2	CHM-222	P		P			P						P
Main Group Chemistry	CHM -241		P	P	P			P				P	
Heterocyclic organic chemistry	CHM-223	P		P	P					P		P	
Chemistry of Transition Elements	CHM-242	P	P		P			P					P
Chemistry of Thermodynamics	CHM-232	I		I						I			I
Environmental chemistry	CHM-251	I	I			I					I		
Water analysis	CHM-244		I			I		I				I	
Chemistry of Polymers & Petrochemicals	CHM-324	M				M			M				M
Surface, colloids and catalysis chemistry	CHM-333		P	P	P					P			P
Quantum chemistry	CHM-343	P	P					P					P
Organometallic Chemistry	CHM-345		P	P	P			P		P			P
Biochemistry-1	CHM-361	I		I						I		I	
stereo chemistry	CHM-325	P				P			P				P
Electrochemistry	CHM-334		P	P	P		P					P	
Kinetic chemistry	CHM-335	P		P						P	P		
Biochemistry-2	CHM-362	P	P	P						P			P
Analytical Biochemistry	CHM-363		M	M	M				M		M		
Photochemistry	CHM-336		P			P		P					P
Summer Training	CHM-471							P	P			P	P
Spectroscopic & electric analysis	CHM-413		M	M	M				M	M	M		
Natural products chemistry	CHM-426	P	P			P		P					
Nuclear and radiochemistry	CHM-437		P			P			P				P
Nano Chemistry	CHM-453	P				P		P				P	
Graduation project (theoretical part)	CHM-472			P		P			P				P
Industrial chemistry	CHM-452	P	P			P		P				P	
Inorganic biochemistry	CHM-446		P	P		P		P					P
Methods of chromatographic analysis	CHM-414	M	M	M					M				M

course name	Course code	NQF Learning Domains and Learning Outcomes										
		Knowledge					*Skills*				*Competences*	
		K.1	K.2	K.3	K.4	K.5	S.1	S.2	S.3	S.4	C.1	C.2	C.3
Mechanisms of organic reactions	CHM-427	M	M	M	M				M				M
Spectroscopy of organic compounds	CHM-428	M	M			M			M		M		
Advanced electrochemistry	CHM-438		M	M	M			M			M		
Green chemistry	CHM-454		M		M			M				M	
Applied organic chemistry	CHM-455	M		M						A			A
Graduation project (practical part)	CHM-473				M	M	M			M		M	
Advanced chemistry laboratory	CHM-356	M	M	M				M			M		
Computational chemistry	CHM-357			P		P			P			P	
Medical chemistry	CHM-464	P		P		P			P			P	
Chemical toxicology	CHM-465		P			P		P					P

* Add a table for each track (if any)

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.

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	At the end of the program the student is able to: Recognize the fundamental concepts, basic principles and theories related to chemistry	-Lectures. - Conduct scientific research. - Seminars. -Discussions -Brainstorming	-Theoretical tests (Quarterly and final) - Short tests -Quizzes. - Homework - Class exercises - Evaluation of research
1.2	Describes basic concepts and laws in chemistry		
1.3	Know the concepts and theories of science related to chemistry		
2.0	**Cognitive Skills**		
2.1	Analysis information and scientific facts and theories related to the science of chemistry.	-Active learning - E-learning -Self-learning -Cooperative Education -Examinations	-Theoretical tests (Quarterly and final) - Short tests -Quizzes. - Homework
2.2	Explains the results and understands how to analyze and critique them		
2.3	apply creative thinking skills and analytical thinking skills and provides		

	innovative solutions to solve problems according to the foundations of chemical and mathematical theories and skills		- Class exercises - Evaluation of research
2.4	Link between the knowledge and skills acquired academic and professional contexts related to the science of chemistry.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Demonstrates the ability to teamwork and lead the team and perform the tasks entrusted to him professionally	-Cooperative learning -Problem Solving - Interactive teaching - Discussion and dialogue - Active Learning - Peer Learning -Encourage students to work in a group	-Reports - Evaluate offers - Practical tests -Note.
3.2	Dealing honestly and professionally with peers and in writing the reports		
	Shows the ability to deal with difficult situations and work under pressure.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Communicate effectively orally and written using appropriate presentation formats for different issues with recipients of different types.	-Self-education - Competitive learning - e-learning system -Library. -Internet.	-Theoretical tests (Quarterly and final) - Evaluation of summer training - Evaluation of graduation project -Note card
4.2	Demonstrate the ability to use modern technology and its applications that are used in the various fields of chemistry		
4.3	Use statistical and mathematical methods when studying issues and problems, applying them creatively, and proposing solutions.		
5.0	**Psychomotor**		
5.1	Perform the Laboratory experiments using the right scientific methods	-Simulation programs - Cooperative work - Working in groups	-Practical tests - Practical reports - Note card - Research papers
5.2	Apply the safety principles when dealing with laboratory tools, devices and chemicals.		

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.

1- Direct assessment method

All the courses link with program outcomes and the questions match with KPI so, we can directly measure outcomes.

2- Direct assessment method

Application of program evaluation questionnaires for graduates, students, Employer and stockholders

D. Student Admission and Support:

1. Student Admission Requirements
1- He holds a high school diploma or its equivalent from inside the kingdom or outside. 2- He should have received his high school diploma or its equivalent for five years or less. 3-He must be of good conduct. 4-He must get a study approval in case he works for a governmental or private hand. 5- He must be medically fit. 6- He should meet any other conditions specified by the University Council. 7-He must succeed any test/ interview appointed by the university. 8- He should not be expelled from another university for disciplinary or educational reasons. 9- It is not permitted to accept students obtaining a bachelor's degree. 10- It is not permitted to accept students enrolled in another university degree to get another bachelor's degree from the same university or another.
2. Guidance and Orientation Programs for New Students
Program manage the first week in each semester to guide and orient the student, and the study plan was available for all student. Also university and department rules are available in department website.
3. Student Counseling Services (academic, career, psychological and social)
- The department at the beginning of the semester forms the academic guidance committee. -Introductory meetings are held for new students in the first and second semesters, where identification guides are distributed to the academic system, activities and students' rights. Students are also, introduced to the study system and regulations of the college. -At the beginning of the semester, the list of students' names is updated at each of the academic advisors in the department. -Guidance sessions for many students with their academic mentors during the period of deletion and addition to help students choose the appropriate courses for them from the study plan. -Helping students to achieve maximum psychological, social and academic compatibility. -Providing educational and psychological care and academic excellence for students who fail to enable them to overcome the problems that led to academic stumbling. -Follow up the academic achievement of students who fail to upgrade the academic level. -Providing outstanding educational care for outstanding and talented students in order to maintain excellence and talent and to direct abilities and talents so that they can be utilized to the maximum extent possible. -Direct communication between the faculty and students in order to identify the most important problems experienced by students. It is also, achieved through the academic system. -A program to connect with the community and develop the spirit of community and enrich programs for community service through students. -Limiting the problems of students through the reports submitted by faculty members of the department and work to solve them. -Academic guidance hours are announced in the members' tables as well as on their personal sites and in the bulletin board of the department. -Students are surveyed through the evaluation of the academic guidance in the activities and programs of guidance, -A quarterly and annual report on the process of academic guidance in the department. Improvement plans developed to improve the process of academic guidance in the department.
4. Support for Special Need Students

(low achievers, disabled, gifted and talented)

1- For low achievers student
   - Direct communication between the faculty and students in order to identify the most important problems experienced by students. It is also, achieved through the academic system.
   - Department setup database for low achievers student, and each of them has an academic advisor.

2- For disabled students in the department
   No disabled student

3- For gifted and talented
   - Honoring talented students in every semester
   - Training two excellent students during is full semester after graduating and giving them a certificate in practical experiences.

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	Physical chemistry	Physical chemistry		1	1	2
Associate Professors	Biochemistry	Biochemistry		1	1	2
Assistant Professors	-	-	-	-	-	-
Lecturers	-	-	-	-	-	-
Teaching Assistants	Organic chemistry			1	1	2
Technicians and Laboratory Assistants	Chemistry	Chemistry		3	0	3
Administrative and Supportive Staff	-	-	-	-	-	-
Others (specify)	-	-	-	-	-	-

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

- Organizing courses and workshops through the Deanship of Quality and Skills Development and Deanship of e-learning.
- Introducing the department, its achievements, numbers of students, learning resources, equipment and facilities.
- Definition of the program's description and objectives, recommended teaching strategies, methods and methods of student assessment

- The definition of the system of higher education in the Kingdom for Saudis and non-Saudis as well as internal regulations and laws to know the rights and duties of members
- Distribution of the department manual to new members.

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 student assessment?

-Holding training courses at the college and university levels.
- Encouraging faculty members to attend training courses - seminars - conferences and workshops in the specialization
- Allow members to attend international conferences to view the new research and developments in the specialization and support financially from university.
- Organization of training courses for the development of teaching skills for members, especially newcomers in the department.
- Attend faculty member's lectures to members of teaching experience and recognized for their competence and excellence.
- Providing the opportunity for members to attend the digital library courses on line.
- Providing modern and developed educational resources.

b. Other professional development including knowledge of research?

- Developing scientific research and providing opportunities for internal and external scholarships,
- Encouraging collective and individual scientific research for faculty members.
- Encouraging faculty members to attend conferences and scientific seminars financially and academically.
- Providing opportunities for partnership with local and international universities and inviting experts and professors in the specialization.
- Activating research groups.
- Participation in research supported.

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.)

-A list of the required books and references recorded by the committee.

-The list of books and references is a certified by the Chemistry Program Council

-The a certified list of books and references is submitted to concerned authorities.

-These references are available in time before the beginning of the semester.

-Some internationally approved books are translated by faculty members.

2. Facilities and Equipment

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

- Faculty and teaching staff followed a process for planning and acquisition resources for library, laboratories, and classrooms.

-Specialized committees are formed in the program to determine the names of the books and references prescribed for all courses and the quantity required of each according to the student's number.

-A list of the required books and references recorded by the committee.

-The list of books and references is a certified by the Chemistry Program Council

-The a certified list of books and references is submitted to concerned authorities.

-These references are available in time before the beginning of the semester.

-Some internationally approved books are translated by faculty members.
- The public library of the university is available for all.
- Participate in the university database, which provides access to most international publishers.

- The participation in the Saudi Digital Library is allow for all program members.

- Evaluate program laboratories, and monitor materials, equipment and tools that need to provide before the beginning of each semester.

The faculty members of the program toured all the designated classrooms of the program and identified the needs before the beginning of the semester.

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

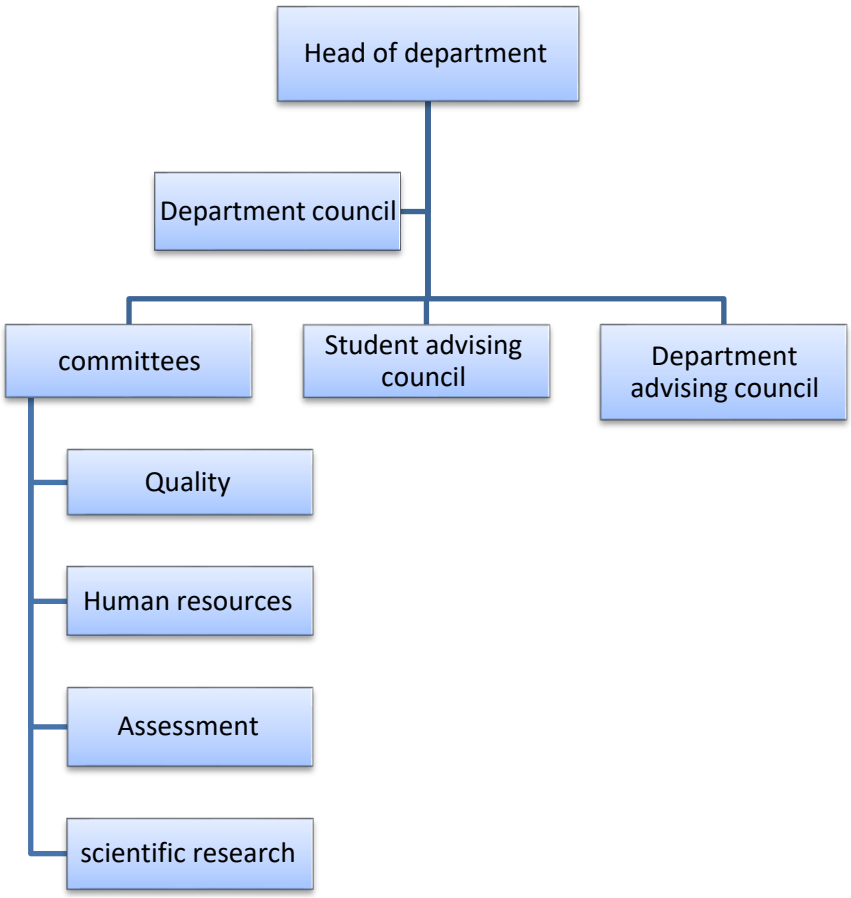
- Department council adapted the safety policy of chemistry labs.
- Department council adapted chemical spills
- The entire experimental test takes place in fume hood.

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.)

- QA procedures for developing and assessment of learning outcomes were achieved by Program reports, the questionnaires evaluation of courses, Self-evaluation of the program and eport of independent auditors.
- Some processes are used for evaluating the skills of faculty and teaching staff which used in the planned strategies namely:

  1- Forming an internal audit committee in the department, follow-up and implementation of students' assessment report of courses and program.

  2- Follow-up and implementation of the assessment report of the recruitment of new graduates

Analyzing the results of surveys and questionnaires, maximizing strengths and improving weaknesses and evaluation of members by the head of department.

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.)
https://majmaah-my.sharepoint.com/:f:/g/personal/a_algohary_mu_edu_sa/Eoddm8bpF6RNkYbe3NOKh_IB8NXH04gLIW71kgZ65eDkOg?e=cPLqxq

H. Program Quality Assurance

1. Program Quality Assurance System Provide online link to quality assurance manual
https://majmaah-my.sharepoint.com/:f:/g/personal/a_algohary_mu_edu_sa/EqGsgtgRKntGmYztB0zUH10BbDn5lBpH32bEgxr_SFFMRQ?e=EOQyG8
2. Program Quality Monitoring Procedures
- Program reports. - The questionnaires evaluation of courses. - Self-evaluation of the program. - Report of independent auditors. -Forming an internal audit committee in the department. - Follow-up and implementation of students' assessment report of courses and program. - Follow-up and implementation of the assessment report of the recruitment of new graduates. - Analyzing the results of surveys and questionnaires, maximizing strengths and improving weaknesses. - Evaluation of members by the head of department.
3. Arrangements to Monitor Quality of Courses Taught by other Departments.
Not applicable
4. Arrangements Used to Ensure the Consistency between Main Campus and Branches (including male and female sections)
Only female section started and male section will be started in the next semester
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
https://majmaah-my.sharepoint.com/:w:/g/personal/a_algohary_mu_edu_sa/EQINAoaz2t1FkwYO64M7pUMBV7EtKmmaLQUOo4_tUaQGng?e=mxUlEm

7. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Program	Questionnaire	program evaluation questionnaires for graduates	End of each semester
Program	Questionnaire	Apply the Employer surveys	End of each semester
Program	Questionnaire	Applying student satisfaction questionnaire for services, facilities and equipment	End of each semester
Program	Questionnaire	Program evaluation questionnaire for students	End of each semester
Program	Questionnaire	independent advisors and/or evaluator	End of each semester
Program	Questionnaire	Self-evaluation of the program	End of each semester
Courses and program	Assessment tools	Direct assessment	End of each semester

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 (4) year.

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
1-	K1.1	K1.1	75 %	Direct assessment	End of each semester
2-	K1.2	K1.2	75 %	Direct assessment	End of each semester
3-	K1.3	K1.3	75 %	Direct assessment	End of each semester
4-	K2.1	K2.1	75 %	Direct assessment	End of each semester
5-	K2.2	K2.2	75 %	Direct assessment	End of each semester
6-	K2.3	K2.3	75 %	Direct assessment	End of each semester
7-	K3.1	K3.1	75 %	Direct assessment	End of each semester
8-	K3.2	K3.2	75 %	Direct assessment	End of each semester
9-	K3.3	K3.3	75 %	Direct assessment	End of each semester
10-	K4.1	K4.1	75 %	Direct assessment	End of each semester
11-	K4.2	K4.2	75 %	Direct assessment	End of each semester
12-	K4.3	K4.3	75 %	Direct assessment	End of each semester
13-	K5.1	K5.1	75 %	Direct assessment	End of each semester
14-	K5.2	K5.2	75 %	Direct assessment	End of each semester
15-	K5.3	K5.3	75 %	Direct assessment	End of each semester
16-	S1.1	S1.1	75 %	Direct assessment	End of each semester
17-	S1.2	S1.2	75 %	Direct assessment	End of each semester
18-	S1.3	S1.3	75 %	Direct assessment	End of each semester
19-	S2.1	S2.1	75 %	Direct assessment	End of each semester

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
20-	S2.2	S2.2	75 %	Direct assessment	End of each semester
21-	S2.3	S2.3	75 %	Direct assessment	End of each semester
22-	S3.1	S3.1	75 %	Direct assessment	End of each semester
23-	S3.2	S3.2	75 %	Direct assessment	End of each semester
24-	S3.3	S3.3	75 %	Direct assessment	End of each semester
25-	S4.1	S4.1	75 %	Direct assessment	End of each semester
26-	S4.2	S4.2	75 %	Direct assessment	End of each semester
27-	S4.3	S4.3	75 %	Direct assessment	End of each semester
28-	C1.1	C1.1	75 %	Direct assessment	End of each semester
29-	C1.2	C1.2	75 %	Direct assessment	End of each semester
30-	C1.3	C1.3	75 %	Direct assessment	End of each semester
31-	C2.1	C2.1	75 %	Direct assessment	End of each semester
32-	C2.2	C2.2	75 %	Direct assessment	End of each semester
33-	C2.3	C2.3	75 %	Direct assessment	End of each semester
34-	C3.1	C3.1	75 %	Direct assessment	End of each semester
35-	C3.2	C3.2	75 %	Direct assessment	End of each semester
36-	C3.3	C3.3	75 %	Direct assessment	End of each semester

* including KPIs required by NCAAA

I. Specification Approval Data

Council / Committee	**CHEMESTRY DEPARTMENT COUNCIL**
Reference No.	**MUNITS 15**
Date	**4/6/1441 H**