هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

اعتماد NCAAA T3 2020

Program Specification

Program Name: BACHELOR OF SCIENCE (B.Sc.) IN CHEMISTRY	**Program**
Qualification Level : 6	**Qualificat**
Department: Department of Chemistry	**Departme**
College: College of Science	**College:**
Institution: Al Imam Mohammed Ibn Saud Islamic University	**Institution**

Content

A. Program Identification and General Information

1. Program Main Location:

Main Campus

2. Branches Offering the Program:

***Branch* 1.** Main Campus for the Male Section.

***Branch* 2.** 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.)

i. Economic reasons

Satisfy the consistent demand of the job market for students who can combine chemistry with other disciplines.

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.

ii. Social or cultural reasons

4. Communal awareness and safety education on hazardous materials affecting health and protection of the environment
5. 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: (140 Credit Hours**)**

5. Professional Occupations/Jobs:

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:

- **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

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

Major track/pathway	Credit hours (For each track)	Professional Occupations/Jobs (For each track)
1. Bachelor of Science in Chemistry	**140**	Education employers, government and Industrial areas

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

Intermediate exit points/awarded degree	Credit hours

Not Applicable.	

B. Mission, Goals, and Learning Outcomes

1. Program 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 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. Provide human cadres of specialists and researchers in chemistry

PG3. Provide scientific and technical aids to develop the faculty member convoying to the achievement of international quality standards.

PG4. Prepare national competencies to meet the needs of the labour market in the industry and teaching

PG5. Find the right environment to instil creative and innovative competition among students.

PG6. Prepare highly graduates qualified scientifically able to deal with the tools of modern technology with high efficiency in different areas of chemistry.

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.

3. 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	✓	✓				✓		✓	✓	✓
PG3-G6		✓	✓	✓				✓	✓	

4. Graduate Attributes:

BACHELOR OF SCIENCE (B.Sc.) IN CHEMISTRY	
5.Program learning Outcomes*	
Knowledge and Understanding	
K1	**Recall the fundamentals and application of all topics of chemistry and their relevant.**
K2	**Describe principals of different instruments and their functionality and applications.**
K3	**Identify and elucidate chemical compounds in terms of structures, reactivity and applications.**
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	**Utilize a well -developed skills for analysis and evaluation of the complex scientific problem**
S4	**Be updating for all advanced techniques and chemistry experiments performance added for developing solving solutions to complex problems related to a professional target. And applying all fundamental principles for the complex field tasks.**
Values	
V1	**Create awareness to maintain intellectual and scientific integrity during assignments, projects, and reports**
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)

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	10	16	11.4%
	Elective			
College Requirements	Required	6	17	12.1%
	Elective			
Program Requirements	Required	29	101	72.2%
	Elective	2	6	4.3%
Capstone Course/Project	-	-	-	-
Field Experience/ Internship	-	-	-	-
Others	-	-	-	-
Total		47	140	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)
Level 1	MAT 101	Calculus (1)	Required		4(3,0,2)	Mathematics and Statistics
	CHM 101	General Chemistry (1)	Required		4(2,2,2)	Chemistry
	PHY 101	General Physics (1)	Required		3(2,0,2)	Physics
	PHY 119	General Physics Laboratory (1)	Required	PHY 101[1]	1(0,2,0)	Physics
	عقد ١٣٣	توحيد	Required		2(2,0.0)	كلية أصول الدين
	قرأ ١٠١	قرآن (١)	Required		1(1,0,0)	كلية أصول الدين
Level 2	CHM 102	General Chemistry (2)	Required	CHM 101	4(2,2,2)	Chemistry
	MAT 103	Mathematics	Required	MAT 101	4(3,0,2)	Mathematics and Statistics
	CHM 121	Organic Chemistry (1)	Required	CHM 101	4(2,2,2)	Chemistry
	قرأ ١٥١	قرآن (٢)	Required		1(1,0,0)	كلية أصول الدين
	فقه ١٢١	فقه	Required		2(2,0,0)	كلية الشريعة
Level 3	CHM 211	Inorganic Chemistry (1)	Required	CHM 102	4(2,3,1)	Chemistry
	CHM 221	Organic Chemistry (2)	Required	CHM 121	4(2,2,2)	Chemistry
	CHM 241	Physical Chemistry (1)	Required	CHM 102	4(2,2,2)	Chemistry
	CHM 251	Software in Chemistry	Required	CHM 121	2(0,4,0)	Chemistry
	قرأ ٢٠١	قرآن (٣)	Required		1(1,0,0)	كلية أصول الدين
Level 4	CHM 212	Inorganic Chemistry (2)	Required	CHM 211	4(2,3,1)	Chemistry
	CHM 231	Analytical Chemistry	Required	CHM 102	4(2,3,1)	Chemistry
	CHM 242	Physical Chemistry (2)	Required	CHM 241, MAT 103	4(2,3,1)	Chemistry
	قرأ 251	قرآن (4)	Required		1(1,0,0)	كلية أصول الدين
	ترخ ١٠٢	تاريخ المملكة العربية السعودية	Required		2(2,0,0)	كلية العلوم الإجتماعية

[1] Co-requisite

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 5	CHM 325	Heterocyclic Chemistry	Required	CHM 221	4(4,0,0)	Chemistry
	CHM 332	Instrumental Analysis	Required	CHM 231	4(2,3,1)	Chemistry
	CHM 343	Electrochemistry and Corrosion	Required	CHM 242	4(2,3,1)	Chemistry
	STA 111	Introd. to Probability & Statistics	Required	MAT 101	3(2,0,2)	Mathematics and Statistics
	ترخ ١٠١	تاريخ المملكة العربية السعودية	Required		2(2,0,0)	كلية العلوم الإجتماعية
Level 6	CHM 224	Organic Compounds Spectroscopy	Required	CHM 221	3(3,0,0)	Chemistry
	CHM 313	Organometallic Chemistry	Required	CHM 212	4(4,0,0)	Chemistry
	CHM 333	Chemical Separation Methods	Required	CHM 332	4(2,3,1)	Chemistry
	CHM 346	Quantum Chemistry	Required	CHM 242	3(3,0,0)	Chemistry
	PHY 255	Introduction to Modern Physics	Required	PHY 101	2(2,0,0)	Physics
	ادب ١٠٢	التحرير العربي	Required		2(2,0,0)	كلية اللغة العربية
Level 7	CHM 326	Synthesis of Organic Compounds	Required	CHM 325	2(0,4,0)	Chemistry
	CHM 345	Colloids and Surface Chemistry	Required	CHM 242	4(2,2,1)	Chemistry
	CHM 434	Environmental Chemistry	Required	CHM 333	4(3,2,0)	Chemistry
	CHM 415	Nuclear and Radiation Chemistry	Required	CHM 313	3(3,0,0)	Chemistry
	نفس ٢٥١	علم النفس التربوى	Required		2(2,0,0)	كلية العلوم الاجتماعية
Level 8	CHM 327	Organic Reaction Mechanism	Required	CHM 224	3(3,0,0)	Chemistry
	CHM 414	Selected Course (1)	Upon specifying the course	Upon specifying the course	3(4)	Chemistry
	CHM 447	Heterogenous and Homogenous Catalysis	Required	CHM 345	2(2,0,0)	Chemistry
	CHM 448	Solid State and Material Scienec	Required	CHM 343	4(4,0,0)	Chemistry
	ENG 206	Technical Writting	Required		2(2,0,0)	College of Languages and Translation
Level 9	CHM 416	Selected Course (2)	Upon specifying the course	Upon specifying the course	3(2, 2, 0)	Chemistry
	CHM 428	Polymers & Petrochemicals	Required	CHM 325	2(2,0,0)	Chemistry
	CHM 429	Carbohydrates Chemistry and Natural Products	Required	CHM 327	4(2,3,1)	Chemistry
	CHM 449	Nanochemistry	Required	CHM 345	2(2,0,0)	Chemistry
	CHM 461	Graduation Project	Required		4(2,4,0)	Chemistry

* 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://drive.google.com/drive/folders/12TgVHHE268WXsRCxBmN252Cwj_mtTZ-B

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 code & No.	Program Learning Outcomes								
	Knowledge and understanding			Skills				Values	
	K1	K2	K3	S1	S2	S3	S4	V1	V2
MMT 101	I			I		I	I	I	
CHM 101	I	I		I	I	I	I	I	I
PHY 101	I	I		I		I	I	I	I
PHY 119		I				I	I	I	I
ترخ ١٠٢						I	I		
عقد ١٣٣						I	I		
قرأ ١٥١						I	I		
MMT 103	I			I		I	I	I	
CHM 102	I,A	I, A		I, A	I, A	I, A	I, A	I, A	I, A
STM 111	I			I		I	I	I	
CHM 121	I	I	I	I	I	I	I	I	I
فقه ٢٠٠				I			I		
قرأ ١٥١				I		I	I		
CHM 211	I	I	I	I	I	I	I	I	P
CHM 221	I, A	I, A	I, A	I, A	I, A	I, A	I, A	I, A	P, A
CHM 241	P	P		P	I	I	I	I	P
CHM 251				I		I	I	I	I
ترخ ١٠١				I		I	I	I	
قرأ ١٠٢				I		I	I	I	
CHM 212	P, A	P, A	I, A	P, A	P, A	I, A	I, A	I, A	P, A
CHM 224	P	P	P	P		I	I	I	
CHM 231	I	I	I	I	I	I	I	I	I
CHM 242	P, A	P, A	P, A	P, A	P, A	I, A	I, A	I, A	P, A
ادب ١٠٢				I		I	I		
قرأ ٢٥١				I		I	I	I	
PHY 255	P	P		P		M	P	P	
CHM 313		M	M	P	I	P	P	P	
CHM 325	M, A		M, A	P, A		P, A	P, A	P, A	
CHM 332	P	P	M	P	P	P	P	P	P
CHM 343	P	P	P	P	P	M		P	P
CHM 326	P	P	P	P	P	P	M	P	M
CHM 327	M		M	M	I	P	P	P	

Course code & No.	Program Learning Outcomes								
	Knowledge and understanding			Skills				Values	
	K1	K2	K3	S1	S2	S3	S4	V1	V2
CHM 333	P, A	P, A	M	P, A	I, A	P, A	P, A	P, A	P, A
CHM 345	M, A	P, A	M, A	P, A	P, A	P, A	P, A	P, A	P, A
CHM 346	M			M		P	P	P	
نفس ٣٠١						P	P	P	
CHM 428	M, A	P, A	P, A	P, A	M, A	P, A	M, A	P, A	
CHM 434	M, A	P, A	P, A	P, A	M, A	P, A	P, A	P, A	M, A
CHM 447	M		M	M	M	P	M	P	
CHM 448	M	P	M	M	P	P	P	P	
Selected (1)	M, A	P, A		P	M, A	P, A	P, A	P, A	M
ENG 206	I					I	I	P	
CHM 415	M, A	P, A	M, A	M, A	M, A	P, A	P, A	P, A	
CHM 429	M	P	M	P	M	P	M	P	M
CHM 449	M, A	P, A	M, A	M, A	M, A	P, A	P, A	P, A	
Selected (2)	M	P		P	M	P	P	P	M
CHM 461	M, A	M, A	M, A	M, A	M, A	M, A	M, A	M, A	M, A

* 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.

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 / Research project

3. **Skills**

- **Whiteboard solved exercises**
- **Brainstorming**
- **Mini and Research projects**
- **seminars**
- **Group competitions**
- **Laboratory sessions**
- **Group discussion and seminars**
- **Whiteboard solved exercises and Homework**
- **Case studies**
- **Demonstrations, virtual labs and laboratory manualsemonstrations, 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)**
- **Capstone Course or Research Project (CHM 698, or CHM 699)**
- **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:

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

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2. Guidance and Orientation Programs for New Students

- The successful students in the entry exam, will be directed to CGC to follow their registration process.
- Students will be assigned an academic advisor Chemistry Unergraduate Committee (UGC) to give them the appropriate academic counseling and support

Vice-Dean for Graduate Studies and Research will organize the guidance and advising the graduate students and responsible for Graduate Studies affairs.

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 and registration processes.
- 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.
- 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 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

For this program according to the Unified Policies of Graduate Studies in Saudi Universities (UGSP), lecturers will allow to teach some general courses also administrators can study the laboratory sections under supervising of staff (CHM 699).

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 Al Imam 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 small 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 CGC proceeds as following mechanism:**

STEP 1: For each course, the CGC 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: CGC 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 CGC 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

glasswares), and classrooms.

STEP 2: In the shortage case of supplies the CGC will report that to the Department Head in order to ask the College Dean to provide such supplies through the University Central Library and 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 an special arrangements in the laboratories section as the following:

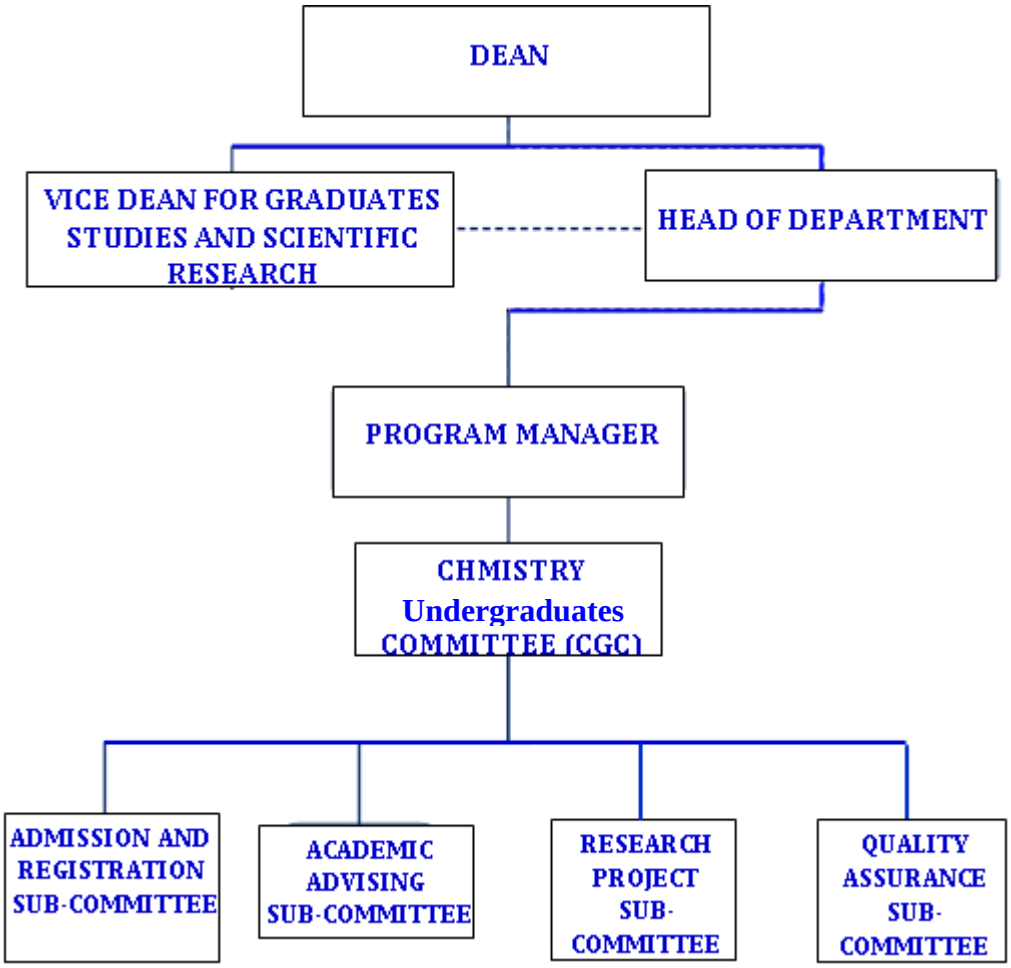
- **In each laboratory, a list of safety and precautions are provided.**
- **In each lab has proper ventilation, and well equipped with instruments.**
- **In each lab, containers for solid waste, liquid waste, and crushed glasses.**
- **Each lab has a small pharmacy for first aid in case of an accident**
- **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 [BScAM 5, MScMAT 5, BScPH 5, 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 [BScAM 5, MScMAT 5, BScPH 5, 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
- Google Classroom

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

Provide online link to quality assurance manual

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.

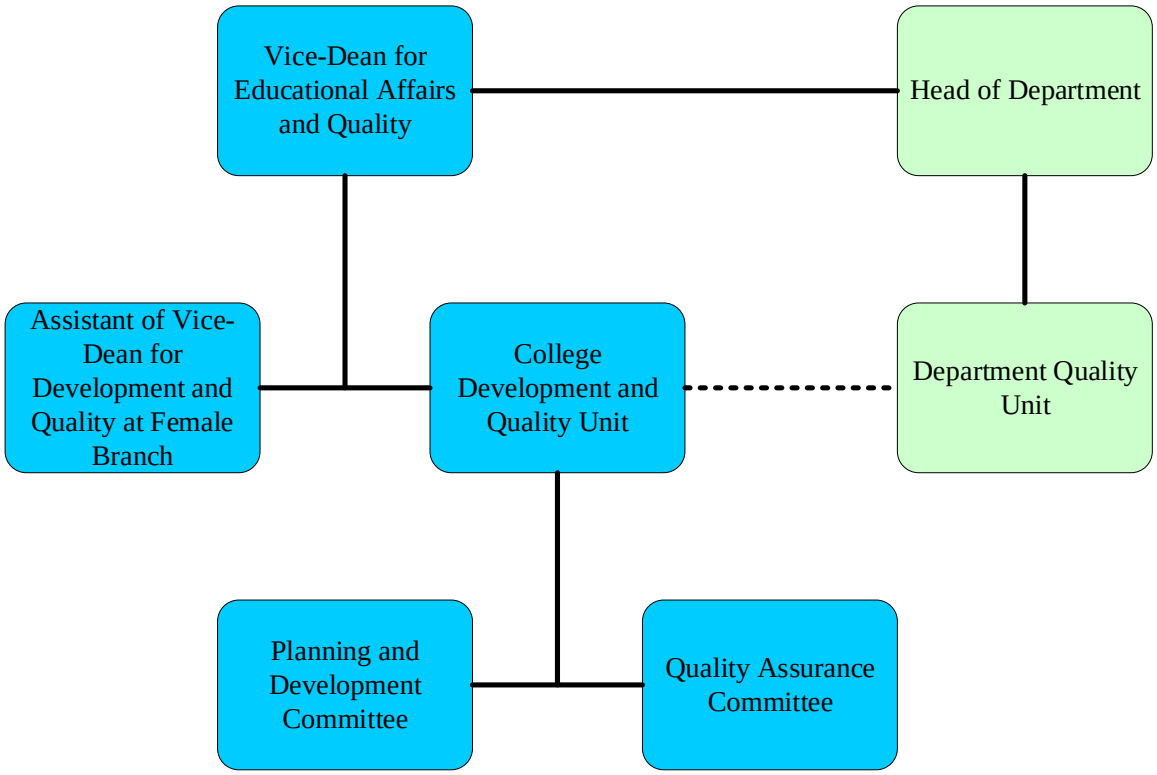


Figure 1 – Organizational Quality Management

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.

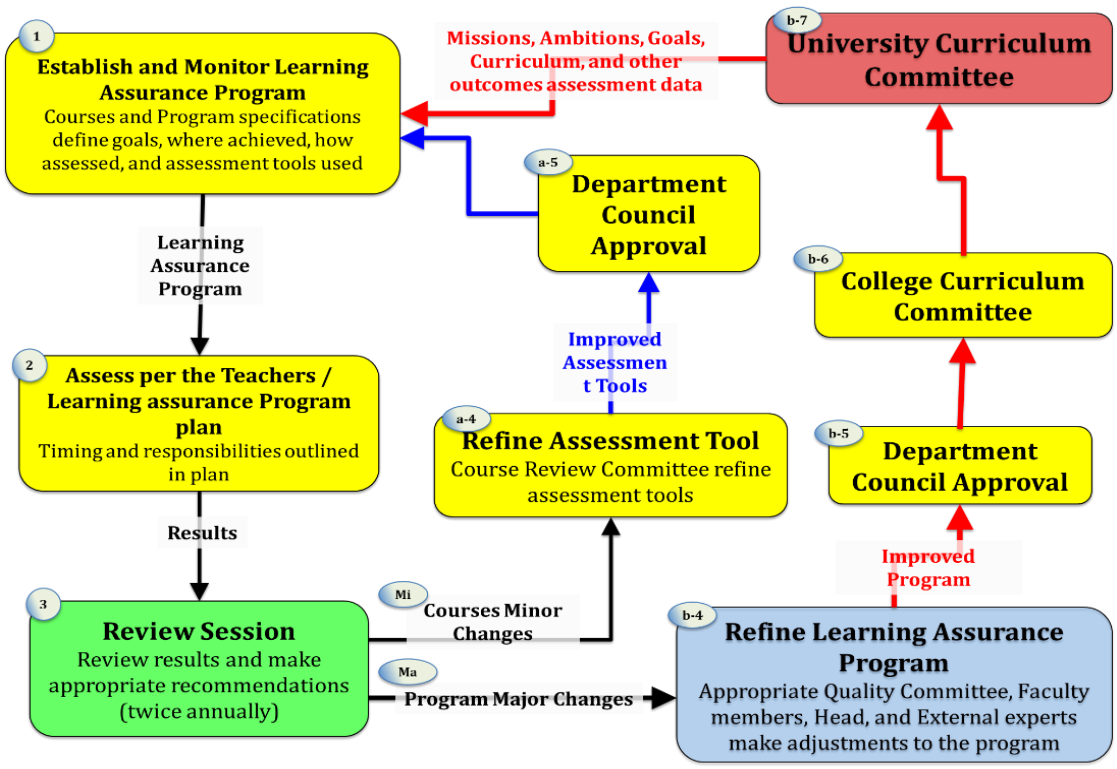
At the College, the quality management including quality assurance is governed by CDQU based on quality –oriented governance with continuous development and improvement. Globally, CDQU utilizes the following management approach: to plan; to coordinate; to implement; to assess and to orient all activities 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 461)***

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 graduation Project Report (GPR) 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 CGC, 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

Program Assessment Flow

1. Program Goals	
Goal Code	**Statement**
PG4-G1	**Provide universities, higher institutes and military academies with scientific excellence for continuing postgraduate studies.**
Specific LOs to be assessed	Recall the fundamentals and application of all topics of chemistry and their relevant.
	Describe principals of different instruments and their functionality and applications.
	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Demonstrates skills to participate in class by asking questions and giving answers and to do oral presentation in groups and individually.
	Appraise team work and management of resources and time.
	Demonstrate effective written, oral and network communication skills.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal 1 assessment flow

1. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 345*
CHM 221*		CHM 332		CHM 346
CHM 241		CHM 343		CHM 332
CHM 231	→	CHM 326	→	CHM 428*
		CHM 333*		CHM 434*
		CHM 461*		CHM 447
				CHM 448
				Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

2. Program Goals	
Goal Code	**Statement**
PG4-G2	**Provide human cadres of specialists and researchers in chemistry.**
Specific LOs to be assessed	Recall the fundamentals and application of all topics of chemistry and their relevant.
	Describe principals of different instruments and their functionality and applications.
	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Appraise team work and management of resources and time.
	Demonstrate effective written, oral and network communication skills.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal2 assessment flow

2. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 345*
CHM 221*		CHM 332		CHM 346
CHM 241		CHM 343		CHM 332
CHM 231	→	CHM 326	→	CHM 428*
		CHM 333*		CHM 434*
		CHM 461*		CHM 447
				CHM 448
				Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

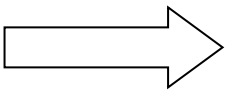
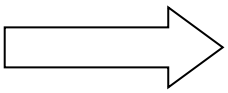
3. Program Goals	
Goal Code	**Statement**
PG4-G3	**Provide scientific and technical aids to develop the faculty member convoying to the achievement of international quality standards.**
	Describe principals of different instruments and their functionality and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Appraise team work and management of resources and time.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal1 assessment flow

3. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 346
CHM 221*		CHM 332		CHM 332
CHM 241		CHM 343		CHM 428*
CHM 231		CHM 326		CHM 434*
		CHM 333*		CHM 447
		CHM 461*		CHM 448
		CHM 345*		Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

4. Program Goals	
Goal Code	**Statement**
PG4-G4	**Prepare national competencies to meet the needs of the labour market in the industry and teaching.**
Specific LOs to be assessed	Recall the fundamentals and application of all topics of chemistry and their relevant.
	Describe principals of different instruments and their functionality and applications.
	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Demonstrates skills to participate in class by asking questions and giving answers and to do oral presentation in groups and individually.
	Appraise team work and management of resources and time.
	Demonstrate effective written, oral and network communication skills.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal4 assessment flow

4. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 345*
CHM 221*		CHM 332		CHM 346
CHM 241		CHM 343		CHM 332
CHM 231		CHM 326		CHM 428*
		CHM 333*		CHM 434*
		CHM 461*		CHM 447
				CHM 448
				Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

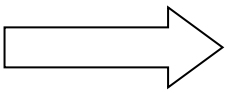
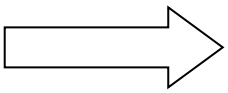
5. Program Goals	
Goal Code	**Statement**
PG4-G5	**Find the right environment to instil creative and innovative competition among students.**
Specific LOs to be assessed	Recall the fundamentals and application of all topics of chemistry and their relevant.
	Describe principals of different instruments and their functionality and applications.
	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Demonstrates skills to participate in class by asking questions and giving answers and to do oral presentation in groups and individually.
	Appraise team work and management of resources and time.
	Demonstrate effective written, oral and network communication skills.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal 5 assessment flow

5. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 345*
CHM 221*		CHM 332		CHM 346
CHM 241		CHM 343		CHM 332
CHM 231	→	CHM 326	→	CHM 428*
		CHM 333*		CHM 434*
		CHM 461*		CHM 447
				CHM 448
				Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

6. Program Goals	
Goal Code	**Statement**
PG4-G6	**Prepare highly graduates qualified scientifically able to deal with the tools of modern technology with high efficiency in different areas of chemistry.**
Specific LOs to be assessed	Describe principals of different instruments and their functionality and applications.
	Identify and elucidate chemical compounds in terms of structures, reactivity and applications.
	Develop skills in problem solving, critical thinking and scientific logical reasoning.
	Create awareness about the impact of chemistry on the society and environment. Develop research skills.
	Operate laboratory instruments and perform chemical experiments, handle chemicals and operate instruments during laboratory sessions.

Goal 6 assessment flow

6. Program Goals				
Introduced		**Practiced**		**Mastered**
CHM 101		CHM 241		CHM 313
CHM 102*		CHM 212*		CHM 325*
CHM 121		CHM 224		CHM 327
CHM 211		CHM 242*		CHM 345*
CHM 221*		CHM 332		CHM 346
CHM 241		CHM 343		CHM 332
CHM 231		CHM 326		CHM 428*
		CHM 333*		CHM 434*
		CHM 461*		CHM 447
				CHM 448
				Selected (1) *
				CHM 415*
				CHM 429
				CHM 449*
				Selected (2)

Program Assessment plan-based on courses

Course	When
CHM 102	**Every semester**
CHM 212	**Every first semester**
CHM 221	**Every first semester**
CHM 242	**Every first semester**
CHM 325	**Every second semester**
CHM 333	**Every first semester**
CHM 345	**Every second semester**
CHM 428	**Every second semester**
CHM 434	**Every second semester**
Selected (1)	**Every first semester**
CHM 448	**Every second semester**
CHM 415	**Every second semester**
CHM 461	**Every semester**

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**
-2- Teaching and Learning	**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**	**Each year**

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
				report	
	KPI-05	First-year students retention rate		Statics unit report	Each year
	KPI-05	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
-4- Teaching Staff	KPI-11	Ratio of students to teaching staff		• 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

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
-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 Chemistry Department**
Reference No.	**21**
Date	**29/7/1443**