

Republic of Iraq
Ministry of Higher Education & Scientific Research Supervision
and Scientific Evaluation Directorate Quality Assurance and
Academic Accreditation

Academic Program Specification Form for The Academic

University: Anbar
College: Science
Department: **Chemistry**
Date of Form Completion: 4 - 9 - 2022



Dean's Name

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Date: 15/9/2022



Dean's Asst. for Scientific Affairs

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Date: 15/9/2022



Quality Assurance and University Performance Manager

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TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	University of Anbar
2. University Department/Centre	chemistry
3. Program Title	Bachelor
4. Title of Final Award	Bachelor - chemistry
5. Modes of Attendance offered	Semester
6. Accreditation	chemistry
7. Other external influences	Field work and scientific trips to rock outcrops , geological sites and institutions
8. Date of production/revision of this specification	4 – 9 - 2022
9. Aims of the Program	
Providing relevant institutions and departments with technical and scientific cadres of recent graduates.	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1. Choosing the best modern scientific methods in delivering information to students through a professional teaching staff.

A2. Providing students with scientific and practical chemistry experiences in all its branches through practical application in the department's laboratories and multiple field trips.

B. Subject-specific skills

The department aims to graduate scientific cadres working in the following:

B 1. Health and educational institutions

B2. Develop the student's research and analytical ability.

B 3. Develop the deductive side of the students.

B4. Learn how to work with scientific instruments

Teaching and Learning Methods

- Surprise daily tests (Quizzes) and weekly continuous exams.
- Practical exercises and activities in the classroom.
- Guiding students to scientific references to expand student's perceptions in understanding scientific courses.

Assessment methods

- Participation in the classroom.
- Presentation of activities.
- Semester and final exams.

C. Thinking Skills

C1. Develop the students ability to understand the specialization and deal with it flexibly

C2. Create a familiarity with branch applications.

C3. Responsibility in serving the community and the country through this scientific branch.

Teaching and Learning Methods

- Managing the lecture on an applied and scientific approach in a way that can be understood and analyzed.
- Giving students some group activities and assignments.
- Allocate a percentage of grades for the daily assignment and activities.

Assessment methods

- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to deadlines for submitting assignments and research.
- The quarterly and final exams are an expression of commitments and cognitive and skill achievement.
- Applications, exercises and daily assignments.

General and Transferable Skills (other skills relevant to employability and personal development)

- D1. Develop the student ability to deal with technical means.
- D2. Develop the student ability to deal with internet.
- D3. Develop the student ability to deal with multimedia.
- D4. Develop the student ability to dialogue and discussion.

Teaching and Learning Methods

- Presenting the courses in a clear and simplified manner with the use of correspondence and illustrative charts and presentation through the power point technique.
- Classroom and laboratory exercises and activities
- Weekly and quarterly assignments and reports.
- Guidance to scientific references to expand understanding of course details.
- Visits and field trips to work sites.

Assessment Methods

- Surprise daily tests or exams (Quizzes).
- Participation in the classroom.
- Presentation of activities.
- Semester and final exams.

11. Program Structure				12. Awards and Credits
Level/Year	Course or Module Title	Creditrating		
		Theoretical	Practical	
1st	Descriptive Analytical Chemistry	2	2	Bachelor Degree Requires (x) credits
1st	General Physics	2	2	
1st	English Language	2	-	

1st	Mathematics	2	-
1st	Computer Science (1)	2	2
1st	Inorganic Chemistry (1)	2	-
1st	Human Rights	2	-
1st	Thermodynamic Physical Chemistry	2	3
1st	Structural Inorganic Chemistry	2	3
1st	Gravimetric Analysis	2	---
1st	Organic Chemistry (2)	2	3
1st	Calculus Equations (1)	2	3
1st	Computer Science (3)	2	---
1st	Environmental Chemistry (1)	2	3
2nd	Thermodynamic Physical Chemistry	2	2
2nd	Structural Inorganic Chemistry	2	2
2nd	Gravimetric Analysis	2	3
2nd	Organic Chemistry (2)	2	2
2nd	Calculus Equations (1)	2	
2nd	Computer Science (3)	2	2
2nd	Environmental Chemistry (1)	2	2
2nd	Equilibriums Physical Chemistry	2	2
2nd	Main-Group Elements Chemistry	2	2
2nd	Organic Chemistry (3)	2	2
2nd	Separation Methods	2	3
2nd	Environmental Chemistry (1)	2	2

2nd	Calculus Equations (2)	2	-
2nd	Computer Science (4)	2	2
2nd	English Language	2	-
3rd	Kinetic & Photochemistry	2	2
3rd	Coordination Chemistry (1)	2	2
3rd	Biochemistry (1)	2	2
3rd	Organic Chemistry (4)	2	2
3rd	Fundamentals of Industrial Chemistry	2	3
3rd	Petroleum Chemistry	2	---
3rd	Electric Chemistry	2	---
3rd	Coordination Chemistry (2)	2	2
3rd	Biochemistry (2)	2	2
3rd	Organic Chemistry (5)	2	2
3rd	Applications of Industrial Chemistry	2	-
3rd	Green Chemistry	2	---
4th	Spectroscopy Instrumental Analysis	2	2
4th	Biochemistry (3)	2	2
4th	Fundamental of Polymers	2	2
4th	Quantum Chemistry	2	-
4th	Identification of Organic Spectrum (1)	2	3
4th	Metallic Organic Chemistry	2	-

4th	English Language	2	-
4th	Electrical Instrumental Analysis	2	3
4th	Biochemistry (4)	2	---
4th	Petrochemical	2	---
4th	Spectrum Chemistry	2	-
4th	Identification of Organic Spectrum (2)	2	3
4th	Industrial Recovery	2	2
4th	Research Project	2	2

13. Personal Development Planning

Follow up, Support and guide outstanding students and build their mental and scientific capabilities in line with their abilities and orientations in different branches.

14. Admission criteria.

Students who graduate from the sixth middle school accept the biological or applied branch with a rate of at least 80 %, in addition to the possibility of private admission.

15. Key sources of information about the program

One of the most important sources of information for the study program is the reliance on curricula and courses recognized in faculties and scientific departments in European and American universities. In addition to communicating with institutions and state administrations that possess chemical cadres, to set study programs that contribute to the graduation of students with scientific and applied experiences, to work in relevant departments and institutions, as well as support graduate programs.

Curriculum Skills Map

please tick in the relevant boxes where individual Program Learning Outcomes are being assessed

		Program Learning Outcomes																
Year / Level	Course Title	Core (C) Title or Option(O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
			A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
1st	Descriptive Analytical Chemistry	C	√				√				√				√	√		
	General Physics	C	√				√											
1st	English Language	C	√				√											
	Mathematics	C	√				√											
1st	Computer Science (1)	C	√				√											
	Inorganic Chemistry (1)	C	√				√											
1st	Human Rights	C	√				√											
	Thermodynamic Physical Chemistry	C	√	√			√	√			√				√	√		
1st	Structural Inorganic Chemistry	C	√				√				√				√	√		
	Gravimetric Analysis																	
1st	Organic Chemistry (2)	C	√				√											
	Calculus Equations (1)																	
1st	Computer Science (3)	C	√				√											
	Environmental Chemistry (1)																	
1st	Thermodynamic Physical Chemistry	C	√				√											
	Structural Inorganic Chemistry																	
1st	Gravimetric Analysis	C	√				√				√				√			

	Organic Chemistry (2)																	
1st	Calculus Equations (1)	C	√							√								
	Computer Science (3)																	
1st	Environmental Chemistry (1)	C																
	Equilibriums Physical Chemistry		√			√												
Main-Group Elements Chemistry																		
Organic Chemistry (3)																		
2nd	Separation Methods	C	√	√			√	√			√	√			√	√		
	Environmental Chemistry (1)																	
2nd	Calculus Equations (2)	C	√				√								√			
	Computer Science (4)																	
2nd	English Language	C	√	√			√				√				√	√		
2nd	Kinetic & Photochemistry	C	√				√				√				√			
2nd	Coordination Chemistry (1)	C	√				√								√			
	Biochemistry (1)																	
2nd	Organic Chemistry (4)	C	√	√			√				√				√			
	Fundamentals of Industrial Chemistry																	
2nd	Petroleum Chemistry	C	√				√				√				√			
	Electric Chemistry																	
2nd	Coordination Chemistry (2)	C	√				√				√							
	Biochemistry (2)																	
2nd	Organic Chemistry (5)	C	√				√				√				√			
	Applications of Industrial Chemistry																	
2nd	Green Chemistry	C	√	√			√	√			√	√			√	√		
	Spectroscopy Instrumental Analysis																	

2nd	Biochemistry (3) Fundamental of Polymers	C	√				√	√			√				√			
2nd	Quantum Chemistry Identification of Organic Spectrum (1)	C	√				√				√				√			
2nd	Metallic Organic Chemistry English Language	C	√				√											
	Electrical Instrumental Analysis Biochemistry (4)																	
3rd	Petrochemical Spectrum Chemistry	C	√	√			√	√			√	√			√	√		
3rd	Identification of Organic Spectrum (2) Industrial Recovery	C	√	√			√	√			√	√			√	√		
3rd	Research Project Descriptive Analytical Chemistry	C	√	√			√	√			√	√			√	√		
3rd	General Physics English Language	C	√				√				√				√			
3rd	Mathematics Computer Science (1)	C	√	√			√	√			√	√			√	√		
3rd	Inorganic Chemistry (1) Human Rights	C	√				√	√			√				√	√		
3rd	Thermodynamic Physical Chemistry Structural Inorganic Chemistry	C	√				√											
3rd	Gravimetric Analysis Organic Chemistry (2)	C	√	√			√	√			√	√			√	√		
3rd	Calculus Equations (1) Computer Science (3)	C	√	√			√	√			√	√			√	√		
3rd	Environmental Chemistry	C	√	√			√	√			√	√			√	√		

	(1) Thermodynamic Physical Chemistry																	
3rd	Structural Inorganic Chemistry Gravimetric Analysis	C	√			√			√			√						
3rd	Organic Chemistry (2) Calculus Equations (1)	C	√	√		√			√			√	√					
3rd	Computer Science (3) Environmental Chemistry (1)	C	√	√		√			√			√						
3rd	Equilibriums Physical Chemistry Main-Group Elements Chemistry	C	√	√		√	√		√	√		√	√					
	Organic Chemistry (3) Separation Methods																	
4th	Environmental Chemistry (1) Calculus Equations (2)	C	√	√		√	√		√	√		√	√					
4th	Computer Science (4) English Language	C	√	√		√	√		√	√		√	√					
4th		C	√	√		√	√		√	√		√	√					
4th	Kinetic & Photochemistry Coordination Chemistry (1)	C	√			√			√			√						
4th	Biochemistry (1) Organic Chemistry (4)	C	√			√			√			√						
4th	Fundamentals of Industrial Chemistry Petroleum Chemistry	C	√	√		√	√		√	√		√	√					
4th	Electric Chemistry Coordination Chemistry (2)	O	√	√	√	√	√		√	√		√	√	√				
4th	Biochemistry (2)	C	√	√		√	√		√	√		√	√					

	Organic Chemistry (5)																	
4th	Applications of Industrial Chemistry Green Chemistry	C	√	√			√	√			√	√			√	√		
4th	Spectroscopy Instrumental Analysis Biochemistry (3)	C	√				√				√				√			
4th	Fundamental of Polymers Quantum Chemistry	C	√				√				√				√	√		
4th	Identification of Organic Spectrum (1) Metallic Organic Chemistry	C	√				√											
			√				√			√				√	√			
4th	English Language	C	√				√											
	Electrical Instrumental Analysis	C	√				√											
	Biochemistry (4)	C	√			√	√			√	√			√	√			
	Petrochemical	C																
	Spectrum Chemistry	C	√			√	√			√	√			√	√			
	Identification of Organic Spectrum (2)	C	√			√	√			√	√			√	√			
	Industrial Recovery	C				√												
	Research Project	C	√			√	√			√	√			√	√			