

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department



Academic Program and Course Description Guide



2026



Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its first version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: It provides a concise and focused overview of its most important features and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: University of Babylon

Faculty/Institute: College of Education for Pure Sciences

Scientific Department: Chemistry Department

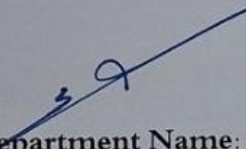
Academic or Professional Program Name: B.Sc.

Final Certificate Name: B. Ed. in Chemistry

Academic System: quarterly

Description Preparation Date: 25-2-2026

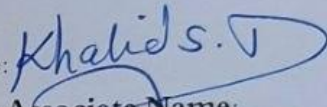
File Completion Date: 1-3-2026

Signature: 

Head of Department Name:

Dr. Mohamad Hamed

Date: 3/3/2026

Signature: 

Scientific Associate Name:

Dr. Khalid S. Jassim

Date: 3/3/2026

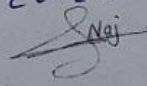
The file is checked by:

Department of Quality Assurance and University Performance

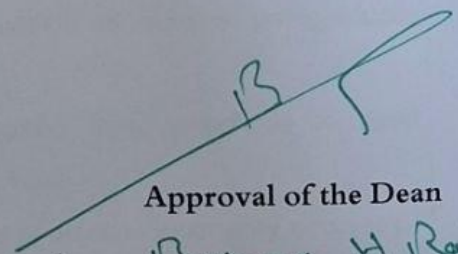
Director of the Quality Assurance and University Performance Department: Dr.

Najlaa Mohammed Hadi Awad

Date: 5/3/2026

Signature: 

Approval of the Dean


Rana H. Rabea

1. Program Vision

The department's vision is to be able to keep pace with the latest scientific and practical technologies in the field of modern science and technology in the field of chemistry, and to provide society with graduates capable of teaching chemistry, which qualifies them to advance and improve the educational process by using modern techniques in teaching chemistry and enhancing the practical aspect by using laboratories and modern scientific research methods, as well as qualifying highly efficient chemical personnel capable of competing and excelling in various professional fields.

2. Program Mission

The department's mission is to facilitate higher education and ensure its delivery with high quality and mastery of the training process. It also aspires to provide scientific programs rich in information and skills, and to graduate students with high competence in teaching, conveying information to students, working in various industrial fields, and equipping them with the life skills necessary for success.

3. Program Objectives

The department aims to achieve a set of educational and training objectives:

1. To prepare qualified personnel with expertise in chemistry to enable them to fulfill their teaching duties.
2. To provide opportunities for outstanding students to pursue postgraduate studies through Master's and Doctoral programs.
3. To provide books, references, research papers, and periodicals to keep students abreast of the latest developments in the field.
4. To conduct training courses for students (safety courses – laboratory courses).

5. To conduct research and address problems assigned to the department that contribute to the community.

4. Program Accreditation

The program has not received program accreditation.

5. Other external influences

There is no sponsor for the program.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	3	6	%19	
College Requirements	5	9	%29	
Department Requirements	6	16	%52	
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First year (first semester)	Che1110	Analytical chemistry I	2	2
	Che1102	Organic Chemistry I	2	2
	Che1103	Inorganic Chemistry I	2	
	Che1211	English I	2	
	Che1104	Computers I	2	2
	Che1106	Foundations of education	2	
	Che1111	Safety and chemical	1	

		security		
First year (second semester)	Che2109	Analytical chemistry II	2	2
	Che2102	Organic Chemistry II	2	2
	Che2103	Inorganic Chemistry II	2	
	Che2105	Arabic	2	
	Che2106	Mathematics I	2	
	Che1109	Democracy and human rights	2	
	Che2107	Educational psychology	2	

8. Expected learning outcomes of the program

Knowledge	
To understand the basic concepts of chemistry	
To classify different disciplines	
To compare different topics	
Skills	
It involves a combination of analytical abilities, practical laboratory experience, and critical thinking; the candidate must be proficient in handling chemicals, understanding molecular structure, analyzing data, applying safety procedures, solving complex problems, and possessing the ability to conduct scientific research.	
Ethics	
To establish the role of teaching in society	
To provide a service to the community	

9. Teaching and Learning Strategies

1. Cooperative Learning Strategy: This strategy encourages the exchange of ideas and the development of communication and teamwork skills.
2. Inquiry-Based Learning: This strategy encourages students to ask questions and investigate topics independently, requiring them to organize their information effectively.

3. Self-Directed Learning: This strategy allows students to be more independent in their learning.
4. Blended Learning: This combines traditional classroom learning with the use of technology and online learning, allowing students to access resources at any time.
5. Interactive Learning: This relies on active participation between students and instructors through interactive activities such as group discussions.
6. Reward-Based Learning: This uses methods such as grades, levels, and points to encourage students and increase their participation.
7. Brainstorming Strategy: This strategy encourages creative thinking and finding multiple solutions to problems.

10. Evaluation methods

1. Written exam
2. Quarterly report writing
3. Surprise quiz
4. Oral exam

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	Lecturer
Prof.	Chemistry			2	0
Assistant Prof.	Chemistry			1	0
Assistant Prof.	Computers			1	0
Assistant Prof.	English			1	0

Lecturer	Chemistry				2	0
Lecturer	Physics				5	0
Assistant Lectu.	Chemistry				7	0
Assistant Lectu.	Physics				1	0
Assistant Lectu.	Teaching methods				1	0
Assistant Lectu.	Arabic				1	0
Assistant Lectu.	Law				1	0

Professional Development

Mentoring new faculty members

This process aims to integrate them academically and administratively, and includes introducing them to the policies of the department and the university, teaching and assessment methods, and scientific research, to ensure their ability to perform their tasks effectively, through introductory meetings, professional development plans, and the department's mentoring system, with a focus on adherence to ethical and professional standards.

Professional development of faculty members

Professional development aims to enhance faculty members' teaching and research skills and keep them abreast of technological advancements to improve the quality of education. It includes training, workshops, and conferences to ensure excellence in teaching and community service, and to overcome challenges such as lack of motivation and heavy workload through ongoing material and moral support.

Its importance lies in:

- 1- Improving learning outcomes by developing teaching methods, such as the use of artificial intelligence and interactive learning.
- 2- Adapting to the rapid developments in higher education and scientific research.
- 3- Developing faculty members' research capabilities to increase their scientific output.
- 4- Enabling faculty members to engage with and address societal issues.

12. Acceptance Criterion

Central admission for graduates of the sixth preparatory scientific stream.

13. The most important sources of information about the program

Textbook

Key Books and Resources for the Department

University Website

University Guide

Student Guide for Early Years

14. Program Development Plan

Refer to the most popular websites and books dedicated to this course and update them annually.

Provide courses to reinforce the knowledge and skills required by students.

Attention should be given to laboratories, allowing students to conduct experiments individually to ensure both theoretical and practical understanding.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First year (first semester)	Che1110	Analytical chemistry I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1102	Organic Chemistry I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1103	Inorganic Chemistry I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1211	English I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1104	Computers I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1106	Foundations of education	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1111	Safety and chemical security	essential	•	•	•	•	•	•	•	•	•	•	•	•
Program Skills Outline															

				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First year (second semester)	Che2109	Analytical chemistry II	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che2102	Organic Chemistry II	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che2103	Inorganic Chemistry II	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che2105	Arabic	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che2106	Mathematics I	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che1109	Democracy and human rights	essential	•	•	•	•	•	•	•	•	•	•	•	•
	Che2107	Educational psychology	essential	•	•	•	•	•	•	•	•	•	•	•	•

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

