Ministry of Higher Education and Scientific Research
Scientific supervision and evaluation device
Department of Quality Assurance and Academic Accreditation
Accreditation Department

Academic program and course description guide

2024

Introduction:

The educational program is considered a coordinated and organized package of academic courses that includes procedures and experiences organized in the form of academic vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs such as the external examiner program.

The description of the academic program provides a brief summary of the main features of the program and its courses, indicating the skills that students are working to acquire based on the objectives of the academic program. The importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and the teaching staff participates in writing it under the supervision of the scientific committees in the scientific departments.

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the latest developments in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, quarterly), in addition to adopting the description of the academic program circulated according to the book of the Department of Studies 3/2906. On 5/3/2023 with regard to programs that adopt the Bologna Process as a basis for their work.

In this area, we can only emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth conduct of the educational process.

Concepts and terminology:

Description of the academic program:

The description of the academic program 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:

Provides a necessary summary of the most important characteristics of the course and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has 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 a developed, inspiring, motivating, realistic and applicable program.

The program's mission:

It briefly explains the goals and activities necessary to achieve them, and also defines the program's development paths and directions.

Program objectives:

These 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/study subjects included in the academic program according to the approved learning system (semester, annual, Bologna track), whether it is a requirement (ministry, university, college, or scientific department), along with the number of study units.

Learning outcomes:

A consistent set of knowledge, skills, and values that the student has acquired after the successful completion of the academic program. The learning outcomes for each course must be determined in a way that achieves the program objectives.

Teaching and learning strategies:

They are the strategies used by the faculty member to develop the student's teaching and learning, and they are plans that are followed to reach the learning goals. That is, it describes all curricular and extracurricular activities to achieve the learning outcomes of the program.

Academic program description form

Name of the university: Al-Zahrawi University College

College/Institute: Al-Zahrawi University College

Scientific Department: Department of Optics Technologies

Name of the academic or professional program: Bachelor of Optical Technologies

Name of final degree: Bachelor of Optical Technology

Academic system: semester courses

Description preparation date: 01/28/2024

Date of filling the file: 02/02/2024

the signature:	the signature:
Name of department head:	Name of scientific assistant:
the date:	the date:

Check the file before

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance and University Performance Division:

the date :

the signature:

Authentication of the Dean

1-Program Vision

The Department of Optometry occupies a unique scientific position in the academic scientific community locally and in the Arab world and plays an effective and influential applied role in the technical and medical fields, thus meeting the needs of society and the requirements of the labor market. The Optics Technology Department has a solid scientific staff and absorptive capabilities that enable it to achieve the vision it seeks.

2- Program message

One of the department's main tasks is to prepare internationally trained cadres in the field of vision specialization, diagnosis of eye diseases, and the manufacture of glasses and contact lenses. The graduate is characterized by a high level of knowledge and creativity in dealing with medical devices used in examining and diagnosing vision problems and what is compatible with internationally approved medical standards for quality assurance and academic accreditation in analyzing results according to life statistics methods and the corresponding medical programs in the Department of Optometry Technologies at the College of Health Technology.

3-Program Purpose

1- Providing competent and qualified technical personnel in the precise specializations in the field of vision examination to meet the country’s need in accordance with the requirements of medical and economic development and securing teaching staff in universities and institutes.
2-Continuous updating of curricula and study plans for all stages to keep pace with the latest developments in the field of vision development.
3- Striving to keep pace with rapid developments in the field of information technology.
4-Focusing on scientific research and its basic role in serving society by conducting applied research through scientific research projects for students.
5- Striving to be open to relevant public sector institutions to prepare various training courses to develop the capabilities of our medical personnel.
6- Actively strive to improve performance to achieve comprehensive quality assurance.
7- Encouraging scientific cooperation with corresponding Arab and international universities and institutions and striving to exchange experiences to ensure the development of the department and the advancement of educational science.

4- Program accreditation
Does the program have program accreditation? From which side?

5- Other external influences
Is there a sponsor for the program? Ministry of Higher Education and Scientific Research

6- Program structure

Program structure	Number of courses	Study unit	percentage	Notes*
Enterprise requirements	**2**	**30**		
College requirements				
Department requirements				
summer training				
Other				

7- Program description

Credit hours		Name of the course/ course	Course/course code	Year/level
Practical	**Theory**			
2	**1**	**Chemistry principles**		**2023 - 2024**

8- Expected learning outcomes of the program

Knowledge	
Learning outcomes 1	1- For the student to become familiar with the scientific concepts of chemistry. 2- To be able to deal with different chemical materials. . Prepare different solutions and measure their concentration. 4Understands the chemical composition of the human body and the characteristics of the reactions of each of its components. 5The fate of its nutritional components within the body is known. 6- It diagnoses some vital components in the human body using chemical and laboratory methods. 7- He uses some laboratory equipment.

Skills	
Learning outcomes 2	The skill of recognizing the most important chemical information
Learning outcomes 3	The student must have the ability to link cause to causes
Skills	
Learning outcomes 4	The style of dialogue between the professor and the student
Learning outcomes 5	Conduct discussions of the results of chemical analyses

9- Teaching and learning strategies

Teaching and learning strategies and methods adopted in implementing the program in general.

10- Evaluation methods

Implemented in all stages of the program in general.

11- Education institution

Faculty members

Preparing the teaching staff		Special requirements/skills	Specialization		Scientific rank
lecturer	personnel		Precise	General	
	personnel	Workshops, courses, software and websites	chemistry	chemistry	Assistant lecture

Professional development

Orienting new faculty members

Describes the process used to orient new, visiting, full-time, and part-time faculty at the institution and department levels.

Professional development for faculty members

Describe the academic and professional development plan and arrangements for faculty members such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

12- Acceptance standard

Developing regulations related to admission to the college or institute, whether central admission or others mentioned.
-CENTRAL

13- The most important sources of information about the program

Remember briefly.

14- Program development plan

Program skills chart															
Learning outcomes required from the program															
Value				Skills				Knowledge				Basic or optional	Course Name	Course Code	Year/level
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1				
•	•	•	•	•	•	•	•	•	•	•	•	basic	Chemistry principles		2024-2023

•Please check the boxes corresponding to the individual learning outcomes from the program subject to evaluation

Course description form

1. Course Name	
Chemistry principles	
2. Course Code	
3. Semester/year	
First and second semester 2023-2024	
4. Date this course was prepared	
2024/02/02	
5. Attendance available of students	
Direct attendance in the classroom and laboratory	
6. Number of study hours (total)/number of units (total)	
One hour theoretical - two hours practical Number of units = 3 units per semester (total units = 6 units per year)	
7. Name of the course administrator	
Name: Yousra Ali Abdulsayed Altayyar Email: yosra_altayyar@yahoo.com	
8. Course objectives	
Objectives of the study subject	It includes a brief description of the subject, the purpose of its study, and its teaching philosophy, as this course aims to study the principles of chemistry and the most important organic compounds that make up the human body, which are: - Carbohydrates, which constitute the body's primary source of energy. Proteins, which are responsible for the formation of cells in the human body. Amino acids, which store genetic information for cells in the body
9. Teaching and learning strategies	
The strategy	-Direct teaching strategies Presentation, training, discussion, brainstorming, group work, research and reports -Active learning strategies Encourages students to participate actively in the educational process. -Cognitive learning strategies Focuses on how students process and remember information -Effective learning strategies Focuses on how students can improve their ability to learn

10- Course structure					
Weak	**Hours**	**Required learning outcomes**	**Name of the unit or topic**	**Learning method**	**Evaluation method**
1	2	Knowledge	Chemistry of vision	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
2	2	Knowledge	Chemical reaction in eye	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
3	2	Knowledge	Molar solution and normal solution	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
4		Knowledge	Problems and questions	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
5	2	Knowledge	Redox reaction (Oxidation-Reduction)	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
6	2	Knowledge	Oxidation stress in the eye	Delivering the lecture through the blackboard and modern presentation methods, with the interactive	Oral exam with surprise written exams and reports

				participation of students	
7	2	Knowledge	Oxygen in the eye	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
8	2	Knowledge	Water in the eye	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
9	2	Knowledge	Tear film	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
10	2	Knowledge	Carbone dioxide and nitric oxide in the eye	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
11	2	Knowledge	Body fluid: blood, eye pressure	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
12	2	Knowledge	Organic chemistry: alkane, alkene, alkyne	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports

13	2	Knowledge	Problems and questions	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
14	2	Knowledge	Chemical reaction	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
15	2	Knowledge	Molar solution and normal solution	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
Final exam for the first semester					
16	2	Knowledge	:Carbohydrates classification, origin and optical activity	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
17	2	Knowledge	Monosaccharaides, Disaccharides and Polysaccharides	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
18	2	Knowledge	Hydrolysis of Polysaccharides by (saliva and acid)	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports

19	2	Knowledge	Metabolism of Carbohydrate	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
20	2	Knowledge	Metabolic cells (glycolysis)	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
21	2	Knowledge	Proteins: sources, function, classification	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	21Oral exam with surprise written exams and reports
22	2	Knowledge	Problems and questions	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
23	2	Knowledge	Peptide (classification, properties)	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
24	2	Knowledge	Role of protein in the: cornea, lens, retina	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports

25	2	Knowledge	Lipid: properties, classification	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
26	2	Knowledge	Lipids in retina	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
27	2	Knowledge	Vitamins	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
28	2	Knowledge	Hormones	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
29	2	Knowledge	Carbohydrates: classification, origin and optical activity	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
30	2	Knowledge	Monosaccharaides, Disaccharides and Polysaccharides	Delivering the lecture through the blackboard and modern presentation methods, with the interactive participation of students	Oral exam with surprise written exams and reports
Final exam for the second semester					

11- Course evaluation	
5marks are calculated for attendance 5marks is calculated on the reports 5marks are calculated on daily exams A score of 5 is calculated on daily preparation The rest of the grade is for final exams	
12-Learning and teaching resources	
Required textbooks (methodology, if any)	Nothing
Main references (sources)	The curriculum decided within the sectoral committees
Recommended supporting books and references (scientific journals, reports....)	- Scientific books and recent international articles -Principles of chemistry -General chemistry -Biochemistry -Principles of biochemistry
Electronic references, Internet sites	-Chem collective - Learn chem -Google scholar