

**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

2024

Academic Program Description Form

University Name: Uruk University

Faculty/Institute: College of Pharmacy

Scientific Department:

Academic or Professional Program Name: Bachelor of Pharmacy

Final Certificate Name: Bachelor

Academic System: Semester

Description Preparation Date: 2024

File Completion Date: 2024

Signature:

Head of Department Name:

Date:

Signature:

Scientific Associate Name: Dr. Hamoudi Aliwi

Mousah

Date: 16-12-2024

Hamoudi

The file is checked by: Dr. Reem Ghanim Hussien

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 16/12/2024

Signature:



Y. Farid

Approval of the Dean

Prof. Dr. Yahya Yahya Farid

الاستاذ الدكتور
يحيى يحيى ركي فريد
عميد كلية الصيدلة

16/12/2024

1. Program Vision

The College of Pharmacy at the University of Uruk aspires to become a distinguished national and international center in the field of pharmaceutical education and scientific research, and to develop the capabilities and skills of its graduates through pharmaceutical development and innovation in service of society.

2. Program Mission

The College of Pharmacy is committed to the standards of quality and accreditation within national institutional institutions of higher education in Iraq, in terms of teaching and follow-up, enhancing the learning and scientific research environment, encouraging creative and critical thinking, communication skills for pharmacists, and the social responsibility resulting from the pharmacy profession.

3. Program Objectives

- ❖ Specializations: Developing students' skills, abilities, and creativity through quality education and training for their personal and professional development, and providing Iraqi society with qualified cadres in the public and private sectors.
- ❖ Enhancing effective communication skills that enable pharmacist graduates to work, produce, and develop in various fields.
- ❖ Instilling the concept of global multiculturalism in students and preparing them to interact effectively in an increasingly complex and rapidly changing global society.
- ❖ Promoting scientific research in various pharmaceutical specialties to find scientific solutions, correct the therapeutic path, ensure the optimal and safe use of medicine, and link research results to health development plans and the comprehensive vision of Iraqi society.
- ❖ Preparing students and attracting them towards specialized post-graduation programs to practice the best pharmacy profession in Iraq

4. Program Accreditation

National accreditation/National Council for Accreditation of Pharmacy Colleges is in progress

5. Other external influences

Practice sites- Office research - extracurricular activities - volunteer activities - other

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews
Institution Requirements	8	10	5.5	Basic
College Requirements	55	169	94.4	Basic
Department Requirements	/	/	/	/
Summer Training		Satisfied		
Other	/	/	/	/

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
Year 1, 1 st semester	50304104	Biology	2	2
	50303103	Principles of pharmacy practice	2	----
	50102102	Analytical chemistry	3	2
	50301101	Medical terminology	1	----
	50304106	Mathematics and biostatistics	3	----
	50304105	Computer	----	2
	50404113	English language	2	----
Year 1, 2 nd semester	50304111	Human anatomy	1	2
	50303108	Pharmaceutical calculations	2	2
	50304109	Medical physics	2	2
	50302107	Organic Chemistry I	3	2
	50304110	Histology	2	2
	50304112	Human Rights + Democracy	1	----
	50304105	Computers	----	2
Year 2, 1 st semester	50302202	Organic chemistry II	3	2
	50304204	Microbiology I	3	2
	50303203	Physical pharmacy I	3	2
	50301201	Physiology I	3	2
	50304214	Computer	----	2
	5034205	Crimes of Baath system	1	----
Year 2, 2 nd semester	50302207	Organic chemistry III	2	2
	50304209	Microbiology II.	3	2
	50303208	Physical pharmacy II	3	2
	5030120	Physiology II	3	2
	50306211	Pharmacognosy I	3	2

	50304215	Computer	----	2
	50304115	Arabic language	2	-----
Year 3, 1st semester	50302301	inorganic pharmaceutical chemistry I	2	2
	50306305	pharmacognosy II	2	2
	50303302	Pharmaceutical technology I	3	2
	50304304	Biochemistry I	3	2
	50304303	Pathophysiology	3	2
Year 3, 2nd semester	50302307	Organic Pharmaceutical Chemistry I	3	2
	50301306	Pharmacology I	3	----
	50303308	Pharmaceutical technology II	3	2
	50304309	biochemistry II	3	2
	50306311	Pharmacognosy III	2	2
	50305310	Pharmacy ethics	2	2
Year 4, 1st semester	50301401	Pharmacology II	3	2
	50302402	Organic Pharmaceutical Chemistry II	3	2
	50305405	Clinical Pharmacy I	2	2
	50303403	Biopharmaceutics	2	2
Year 4, 2nd semester	50301406	pharmacology III	2	----
	50302408	Organic Pharmaceutical Chemistry III	3	-2-
	50305410	Clinical pharmacy II	2	2
	50301407	General toxicology	2	2
	50303409	Industrial Pharmacy I	3	2
Year 5, 1st semester	50305210	Communication skills	2	---
	50302502	Organic Pharmaceutical Chemistry IV	2	----
	50303503	Industrial pharmacy II	3	-2-
	50305506	Applied therapeutics I	3	----
	50304505	Clinical chemistry	3	-2--
	50304504	Training of clinical laboratories	---	4
Year 5, 2nd semester	50301501	Clinical toxicology	-2-	2
		Graduation project	1	---
Year 5, 2nd semester	50305513	Pharmacoeconomics	2	-----
	50305511	Applied therapeutics II	2	----
	50305512	Therapeutic drug	2	-2-

		monitoring		
	50302504	Advanced pharmaceutical analysis	3	2
	50305514	Hospital training	----	4
	50303508	Dosage form design	2--	----
	50303507	Pharmaceutical biotechnology	1	----

8. Expected learning outcomes of the program

Knowledge

1. Recognize the normal functions of the body and changes in these functions associated with disease conditions	To identify the human body and its organs and their functions in cases of health and disease from the anatomical and functional biochemistry and clinical aspects
2. Identify the drug as a chemical compound and identify its chemical and physical properties	Determine the effect of the drug's properties on its effectiveness and side effects
3. Identify the types of pharmaceutical dosage forms	How to determine the appropriate dosage form and methods of preparation and evaluate it in terms of effectiveness, therapeutic effect, side effects, stability and calculation of correct doses
4. Identify the different treatment options	Choose the right treatment for the pathological condition and the desired therapeutic effect
5. Understand the concepts of human rights and citizenship	The pharmacist is aware of his/her duties and rights as a good citizen of the society
6. Learn about the principles of medical statistics and medical physics	Knowledge of the basis for evaluating the results of clinical studies and economic studies of pharmaceuticals
7. Identify the mechanism of action of drugs, its side effects and their toxicity	Identification of drug interactions

Skills

1. Working in laboratory environment	The student is able to safely handle laboratory equipment and reagents taking into account laboratory safety standards
2. Self-learning	The student is able to search for needed information and apply it
3. Providing the highest level of health care	The pharmacist is able to provide scientific and pharmaceutical consultations to the individuals in the health institutions and the community and provide treatment follow up
4. Provide safe and effective treatment	The pharmacist is able to diagnose medication errors in terms of the suitability of treatment for the pathological condition and the patient and the

	absence of interactions with other medications and with the general health condition of the patient
5. Communication with patients	The pharmacist is able to communicate with patients of different educational background, social status and health conditions
6. Communication with medical team members	The pharmacist can effectively communicate with the various medical staff such as the physician, nurse and others to correct medication errors, if any, and to make treatment recommendations based on scientific basis
7. Follow-up on the safety and effectiveness of the treatment provided to the patient	The pharmacist is able to apply the basic concepts of drug chemistry and pharmacology in interpreting drug interactions and providing pharmaceutical advice to medical staff and the community
8. Handling and dispensing of medications	The pharmacist is capable of educating the patient in the aspects of the use of different dosage forms, proper storage, and disposal
9. Preparation of pharmaceutical products and extemporaneous compounding	The pharmacist is able to prepare compounded dosage products in the pharmacy as needed and work in the pharmaceutical industry
Ethics	
1. Dealing with patients with the ethics of the pharmacy profession	The pharmacist maintains the privacy of the patient and makes the security and safety of the patient and the community the first goal of the pharmacy profession
2. Teamwork with other colleagues within the health care team in the work environment	The pharmacy student and the pharmacist deals with his classmates and colleagues in a team spirit

3. Teaching and Learning Strategies

- Presentations
- Interactive discussions
- Brainstorming
- Small groups
- Research
- Flipped classrooms
- Panel discussions
- Field visits to institutions and entities associated with the work of the pharmacist
- Voluntary work, seminars, workshops and exhibitions

4. Evaluation methods

- Individual and group assignments and reports
- Daily and weekly exams
- Assessment of practical skills

- Mid-term and final exams
- Graduation projects

5. Faculty						
Faculty Members						
Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	1	1			2	1
Assistant Professor	2	3			5	0
Teacher	2	17			19	5
Assistant teacher	12	13			25	3

Professional Development
Mentoring new faculty members
<ul style="list-style-type: none"> ● Teaching methods course ● Teaching validity course
Professional development of faculty members
Workshops, seminars and courses in: <ul style="list-style-type: none"> ● The methods and strategies of pharmaceutical education ● The basis for assessments and exam design ● Interactive education strategies ● Foundations and methods for updating and developing the curriculum

6. Acceptance Criterion
High school GPA and physical health as approved by the Ministry of higher Education and Scientific Research

7. The most important sources of information about the program
<ul style="list-style-type: none"> ● The College of Pharmacy, University of Baghdad website, in Arabic and English ● University of Baghdad website ● Website of the Ministry of higher Education and Scientific Research ● University of Baghdad College of Pharmacy page on social networking sites

- **The announcement boards and signs installed in the halls of the college**
- **Official documentation**

8. Program Development Plan

- Implementation objective structured clinical exam (OSCE) for all clinical pharmacy courses and related course
- Incorporate Active Learning Strategies
- Expand the use of technology in education
- Foster Research and Inquiry
- Develop Practical Skills
- Encourage Interdisciplinary Collaboration
- Professional Development for Faculty
- Further student-Centered Approach

Program Skills Outline																			
		Required program Learning outcomes																	
Year/Level	Course	Knowledge							Skills									Ethics	
		A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	B8	B9	C1	C2
First year	Biology	/							/	/			/	/				/	/
	Principles of pharmacy practice			/	/				/	/								/	/
	Analytical chemistry		/						/									/	/
	Medical terminology							/	/			/	/						/
	Mathematics and biostatistics						/		/				/						/
	Computer								/	/				/					/
	English language								/					/					/
	Human anatomy	/							/	/				/					/
	Pharmaceutical calculations			/	/				/	/								/	/
	Medical physics						/		/	/				/					/
	Organic Chemistry I		/							/								/	/
	Histology	/							/	/				/					/
	Human Rights + Democracy					/							/	/				/	/
	Computers								/	/				/					/
Crimes of Baath party					/														

Second year	Organic chemistry II		/						/						/		/
	Microbiology I							/	/	/			/				/
	Physical pharmacy I		/	/				/	/						/		/
	Physiology I	/					/		/					/		/	/
	democracy					/						/	/			/	/
	Computer							/	/				/				/
	Organic chemistry III		/					/	/						/		/
	Microbiology II.							/	/	/			/				/
	Physical pharmacy II		/	/				/	/						/		/
	Physiology II	/					/		/					/		/	/
	Pharmacognosy I		/				/	/	/	/	/					/	
	Arabic language											/	/			/	/
	Crimes of Baath party					/											
Third year	inorganic pharmaceutical chemistry I		/				/	/	/						/		/
	pharmacognosy II	/					/	/	/	/	/					/	
	Pharmaceutical technology I			/				/	/	/				/	/	/	/
	Biochemistry I	/						/	/	/			/				/
	Pathophysiology	/						/	/				/				/

	Organic Pharmaceutical Chemistry I		/					/	/	/						/		/	
	Pharmacology I			/	/							/	/	/	/		/	/	
	Pharmaceutical technology II			/					/	/	/				/	/	/	/	
	biochemistry II	/						/	/	/			/					/	
	Pharmacognosy III		/				/	/	/	/	/						/		
	Pharmacy ethics					/						/	/				/	/	
Fourth year	Pharmacology II		/	/			/		/			/	/	/	/		/	/	
	Organic Pharmaceutical Chemistry II		/				/	/	/						/		/		
	Clinical Pharmacy I	/			/		/			/	/	/		/	/		/	/	
	Biopharmaceutics	/		/			/	/	/		/			/				/	
	Public health	/			/		/			/							/	/	
	pharmacology III								/				/					/	
	Organic Pharmaceutical Chemistry III		/	/		/		/				/	/	/	/		/	/	
	Clinical pharmacy II		/				/	/	/						/			/	
	General toxicology	/			/		/		/	/	/	/	/	/	/	/		/	/
	Industrial Pharmacy I		/		/			/	/		/	/	/	/			/	/	
	Communication skills		/	/			/		/	/						/		/	
Fifth	Organic Pharmaceutical Chemistry IV		/				/		/										

year	Industrial pharmacy II		/	/			/	/	/							/		/	
	Applied therapeutics I	/			/			/			/	/			/	/		/	/
	Clinical chemistry	/						/	/	/		/	/				/	/	
	Training of clinical laboratories	/						/	/	/		/	/				/	/	
	Clinical toxicology																		
	Graduation project	/							/										
	Pharmacoeconomics						/		/	/								/	
	Applied therapeutics II	/			/		/		/	/			/	/		/	/	/	
	Therapeutic drug monitoring			/	/		/		/	/		/	/		/	/		/	/
	Advanced pharmaceutical analysis		/	/				/	/										/
	Hospital training	/			/		/		/	/	/	/	/	/	/	/		/	/
	Dosage form design		/				/		/										
	Pharmaceutical biotechnology		/	/			/	/	/								/		/

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