

Academic Program Description Form

University Name: University of Baghdad

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: October 2023

File Completion Date: March 2024

Signature:

Head of Department Name:

Date:

Signature:

Scientific Associate Name:

Date: 3/4/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Dr. Kawther Khalid Ahmed

Date: 3/4/2024

Signature:

Approval of the Dean

1. Program Vision

The college seeks to remain a leader and distinguished in preparing competent pharmacists qualified to work in different health institutions, capable of elevating the level of health care provided, and contribute to scientific research.

2. Program Mission

The College of Pharmacy is an educational and research institution of general benefit aiming at better human health. The college is keen to provide high-quality education and training using the latest and interdisciplinary means to prepare highly qualified pharmacists and pharmaceutical scientists. The graduates are trained to have high scientific and professional capabilities and skills enabling them to be leaders in their specialties and capable of spreading health culture and providing the best health care to the society. Competent graduates are expected to be able to conduct and develop scientific research for the welfare of society and human health..

3. Program Objectives

- Providing the highest degrees of knowledge, skills and encouragement to the college students using the latest educational means
- Prepare competent pharmacists and pharmacologists to work in health institutions, community pharmacies, pharmaceutical laboratories, pathological analysis laboratories, and pharmaceutical factories; in addition to pharmaceutical companies.
- Develop the role of the pharmacist as a vital and effective part of the healthcare team
- Improving the quality of education, scientific research and pharmaceutical practice to achieve the best international standards
- We seek to be a distinguished college among the colleges of the region and the world.
- Effective contribution to spreading awareness and health culture in the community.

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	101 CIHb	Biology	2	2
	102 PPpp	Principles of pharmacy practice	2	----
	103 PcAc	Analytical chemistry	3	2
	104 PtMt	Medical terminology	1	----
	105 CIMb	Mathematics and biostatistics	3	----
	106 CICs	Computer	----	2
	107 CIEI	English language	2	----
Year 1, 2 nd semester	108 CIHa	Human anatomy	1	2
			1	2
	109 PPhc	Pharmaceutical calculations	2	2
	110 CIMp	Medical physics	2	2
	111 PcOc1	Organic Chemistry I	3	2
	112 CIHi	Histology	2	2
	113 CIHr	Human Rights + Democracy	1	----
Year 2, 1 st semester	114 CICs	Computers	----	2
	216PcOc2	Organic chemistry II	3	2
	217 CIMm	Microbiology I	3	2
	218 PPp1	Physical pharmacy I	3	2
	219 Ptp1	Physiology I	3	2
	221 CICs	Computer	----	2
Year 2, 2 nd semester		Crimes of Baath system	1	----
	223 PcOc3	Organic chemistry III	2	2
	224 CIMm	Microbiology II.	3	2
	225 PPp2	Physical pharmacy II	3	2

	226 PtPh2	Physiology II	3	2
	227 phpa1	Pharmacognosy I	3	2
	228 CICs	Computer	----	2
	223 PcAL3	Arabic language	2	-----
Year 3, 1st semester	331 pHIP2	inorganic pharmaceutical chemistry I	2	2
	332 PPY2	pharmacognosy II	2	2
	333 CIPT1	Pharmaceutical technology I	3	2
	334 CIPy1	Biochemistry I	3	2
	235 CIEY	Pathophysiology	3	2
Year 3, 2nd semester		Organic Pharmaceutical Chemistry I	3	2
		Pharmacology I	3	----
		Pharmaceutical technology II	3	2
		biochemistry II	3	2
		Pharmacognosy III	2	2
		Pharmacy ethics	2	2
Year 4, 1st semester	450 PtPc3	Pharmacology II	1	----
	445 PcOp2	Organic Pharmaceutical Chemistry II	3	2
	446 CpCp1	Clinical Pharmacy I	3	2
	447 PBp	Biopharmaceutics	2	2
	448 CIPu	Public health	2	2
Year 4, 2nd semester	450 PtPc3	pharmacology III	2	----
	451 PcOp3	Organic Pharmaceutical Chemistry III	2	----
	452 CpCp2	Clinical pharmacy II	3	2
	453 PtGt	General toxicology	2	2
	454 Plp1	Industrial Pharmacy I	2	2
	455 CpCs	Communication skills	3	2
Year 5, 1st semester	557 PcOp4	Organic Pharmaceutical Chemistry IV	2	----
	558 Plp2	Industrial pharmacy II	2	----
	559 CpAt1	Applied therapeutics I	3	2
	560 CICc	Clinical chemistry	3	-----
	561 CICL	Training of clinical laboratories	3	2
	562 PtCt	Clinical toxicology	----	4
	563Pr	Graduation project	2	2
	563 GP	Pharmacoeconomics	1	-----

Year 5, 2nd semester	565 CpAt2	Applied therapeutics II	2	----
	566 CpTd	Therapeutic drug monitoring	2	----
	567 PcAp	Advanced pharmaceutical analysis	2	2
	568 CpHt	Hospital training	3	2
	569 POf	Dosage form design	----	4
	570 PPb	Pharmaceutical biotechnology	2	----

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
<ul style="list-style-type: none"> ● 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	2	9		10	1
Assistant Professor	8	30		38	0
Teacher	10	41		51	0
Assistant teacher	11	31		42	0

Professional Development

Mentoring new faculty members

- Teaching methods course
- Teaching validity course

Professional development of faculty members

Workshops, seminars and courses in:

- 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

- **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		/	/			/		/	/						/		/	
	Organic Pharmaceutical Chemistry IV		/				/		/									

Fifth 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.