



**Ministry of higher Education and Scientific Research
Scientific Supervision and Evaluation Department
Quality Assurance and Academic Accreditation Office**

Description of Academic Program for Iraqi Universities and Institutes 2023-2024

**University; AL-Rasheed University College
Scientific Department; Department of Pharmacy**

The Chairman of the Department;
Assist. Prof. Dr. Esraa Ghazy Jabar
Date & Signature;

The Vice-dean of Scientific affairs;
Assist. Prof. Dr.Saad A. Mohammed

Date & Signature;

This file has been re-viewed by the chairman of Quality
Assurance Section: **Teba Mohammed**
Date & Signature;

This File has been done by the In-charge
of Quality Assurance in pharmacy Dep.

Date & Signature;

Dean Authentication; Prof. Dr. Maythem Handhal Shareef

1. University	Al-Rasheed University College
2. Scientific Department	Department of Pharmacy
3. Academic Program	Science of Pharmacy
4. Qualification	Pharmacy Bsc.
5. Program Type	Courses
6. Accreditation Program	----
7. Additional Program information's	Theory, Practical, Oral, ,Hospital, Laboratory and Summer Training, graduation Project
8. Date of Program Submission	11/11/2023

9- (Academic Program Goals)

- To prepare students for the practice of pharmacy by providing them with the scientific and technical skills in different pharmaceutical aspects concerning pharmaceutical products manufacturing and care practice that enables them to successfully complete their program of study.
- Provide an educational environment that enables students to acquire the behavior, moral and ethical attitudes they will need to practice the profession competently and ethically.
- Development of students as professional and as leader (the ability to lead and to function both independently and as a member of a team) through active participation in community service events.
- Drug Therapy Evaluation - The student shall assess and monitor the patient's drug therapy, including a consideration of the chemical, pharmaceutical, pharmacokinetic, and pharmacological characteristics of the administered medications.
- The student shall demonstrate the ability to accurately interpret the prescription, select the appropriate dosage form, route and method of administration, and appropriately package and label the product.

10- (Required Program outputs and Teaching and learning Assessment Method)

A- (Cognitive goals)

1. Demonstrate knowledge of the basic and clinical science background of pharmacy practice
2. Demonstrate knowledge of the basic skills and techniques involved in drug manufacture and development, drug design, screening and quality assurance of pharmaceutical products.
3. Implement the processes of compounding and dispensing medications, interpreting prescription orders and applying calculations related to the compounding and dispensing of medicines
4. Demonstrate knowledge of the rational use of herbal supplements, fundamentals of phytotherapy and the hazards of poisonous and abused natural products.

B- (Skillfulness goals)

1. Participate in patient care by influencing optimal drug choice and dosage through effective communication with health care providers and patients
2. Display legal, moral and ethical attitudes and behaviors consistent with the standards of the profession.
3. Develop self-learning skills, problem solving and critical thinking abilities and the ability to retrieve, evaluate and manage information in the literature
4. Demonstrate the ability to write clear and organized reports, and to present oral communications.

Teaching and learning Methods

(Evaluation Methods)

-The basic requirement for pharmacy students is to pass course exams this (involves five-year courses) to attain a bachelor of pharmacy degree.

-The undergraduate students should be able to do a written and oral examination and during the 5th year of their studies they should complete a graduation project.

Affective Sentimental goals and values

- 1- Communication Skills - The student shall read, write, speak, listen and use multimedia to communicate effectively.
- 2- The student shall counsel and educate patients, as well as communicate with other health care professionals.
- 3- Critical Thinking - The student shall acquire, comprehend, apply, analyze, synthesize, and evaluate information.
- 4- The student shall integrate the abilities to identify, resolve, and prevent problems and make appropriate decisions. The student shall understand the research process.

(Teaching and learning Methods)

- 1- Display legal, moral and ethical attitudes and behaviors consistent with the standards of the profession.
- 2- Demonstrate the ability to lead and to function both independently and as a member of a team.
- 3- Develop self-learning skills, problem solving and critical thinking abilities and the ability to retrieve, evaluate and manage information in the literature.
- 4- Develop the necessary skills in information use and management to educate health care professionals and the public in optimal drug therapy.

(Evaluation Methods)

- 1- Demonstrate the ability to write clear and organized reports, and to present oral communications.
- 2- Develop the student's liability to pass the Oral, and written quizzes during the course.

(Public and rehabilitative movable skills Concerning investment and Self-Development)

- 1- Professional ethics and Responsibility-The student shall represent the profession in an ethical manner. The student shall identify, analyze and resolve ethical problems.
- 2- Social Interaction, Citizenship, Leadership, Professionalism- The student shall demonstrate appropriate interpersonal behaviors.
- 3- The student shall provide service to the profession, as well as the community.
- 4- The student shall be proactive in collaborating with other health care

professionals.

Teaching and learning Methods

- 1- Life-long Learning - The student shall continuously strive to expand his or her knowledge to maintain professional competence.
- 2- The student shall apply technology to pharmacy practice and science.
- 3- The student shall demonstrate the ability to interpret and evaluate data for the purpose of assessing the suitability, accuracy, and reliability of information from reference sources.

(Evaluation Methods)

- 1- Demonstrate the ability to write clear and organized reports, and to present oral communications.
- 2- Develop the student's liability to pass the Oral, and written quizzes during the course.

(Program Structure)

Course Hours		Curriculum Name	Curriculum Code	Stage
Practical	Theory			
2	2	Computer Sciences	CoSc 100	1 st
---	3	Mathematics and Biostatistics	MaBi 110	1 st
2	2	Human Biology	HuBi 120	1 st
---	2	Principles of Pharmacy Practice	PrPh 130	1 st
1	3	Analytical Chemistry	AnCh 140	1 st
---	1	Medical Terminology	MeTe 150	1 st
---	1	English Language	EnLa 100	1 st

2	2	Medical Physics	MePh 110	1 st
2	1	Human Anatomy	HuAn 120	1 st
2	2	Pharmaceutical Calculations	PhCa 130	1 st
2	3	Organic Chemistry I	OrCh 141	1 st
2	2	Histology	Hist 150	1 st
---	1	Human Right	HuRi 100	1 st
2	2	Medical Physics	MePh 110	1 st
2	1	Human Anatomy	HuAn 120	1 st
2	3	Organic Chemistry II	OrCh 242	2 nd
2	3	Medical Microbiology	MeMi 210	2 nd
2	3	Physiology I	Phys 231	2 nd
2	3	Physical Pharmacy I	PhPh 251	2 nd
---	1	Democracy	Demo 200	2 nd
2	3	Organic Chemistry III	OrCh 243	2 nd
2	2	Medical Virology and Parasitology	MiVP 210	2 nd
2	3	Physical Pharmacy II	PhPh 252	2 nd
2	3	Physiology II	Phys 232	2 nd
2	3	Pharmacognosy I	Phar 221	2 nd
2	2	Inorganic Pharmaceutical Chemistry	InPC 310	3 rd
2	2	Pharmacognosy II	Phar 322	3 rd
2	3	Pharmaceutical Technology I	PhTe 331	3 rd

2	3	Biochemistry I	Bioc 341	3 rd
2	3	Pathophysiology	Paph 350	3 rd
2	3	Organic Pharmaceutical Chemistry I	OrPC 311	3 rd
---	3	pharmacology I	Phar 321	3 rd
2	3	Pharmaceutical Technology II	PhTe 332	3 rd
2	3	Biochemistry II	Bioc 342	3 rd
2	2	Pharmacognosy III	Phar 323	3 rd
---	1	Medical Ethics	MeEt 350	3 rd
2	3	Pharmacology II	Phar 422	4 th
2	3	organic pharmaceutical chemistry II	OrPC 412	4 th
2	2	Clinical Pharmacy I	CIPh 431	4 th
2	2	Biopharmaceutics	Biop 440	4 th
---	2	Public Health	PuHe 450	4 th
2	3	Organic Pharmaceutical Chemistry III	OrPC 413	4 th
2	2	Clinical Pharmacy II	CIPh 432	4 th
2	2	General Toxicology	GeTo 420	4 th
2	3	Industrial Pharmacy I	InPh 441	4 th
---	2	Pharmacology III	Phar423	4 th
---	2	Communication Skills	CoSk 460	4 th
---	2	Organic Pharmaceutical	OrPC 513	5 th

		Chemistry IV		
2	3	Industrial Pharmacy II	InPh 542	5 th
---	3	Applied Therapeutic I	ApTh 521	5 th
2	3	Clinical Chemistry	ClCh 530	5 th
1	2	Clinical Toxicology	ClTo 550	5 th
---	1	Project	Proj 560	5 th
4	---	Clinical Laboratory Training	CILT 570	5 th
----	2	Pharmacoeconomy	Phar 510	5 th
2	2	Therapeutic Drug Monitoring	ThDM 540	5 th
---	---	Hospital Training	HoTr 530	5 th
----	2	Applied Therapeutic II	ApTh 522	5 th
-----	1	pharmaceutical Biotechnology	PhBi 160	5 th
-----	2	Dosage form Design	DoFD 570	5 th

(Planning for Self Development)

- 1-** Recognize social determinants of health to diminish disparities and inequities in access to quality care.
- 2-** Self-awareness (Self-aware) – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth
- 3-** Professionalism (Professional) - Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society
- 4-** Learner (Learner) - Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action,

solve therapeutic problems, and advance population health and patient centered care

- 5- Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness
- 6- Educator– Educate all audiences by determining the most effective and enduring ways to impart information and assess understanding.
- 7- Starting self-development programs concerning e-learning due to pandemic corona virus all over the world, so electronic learning should be considered, developed and started.

(Program Information's Sources)

- www.alrasheedcol.edu.iq
- Al-Rasheed University Magazine.
- Wilson and Gisvold textbook of organic medical and pharmaceutical chemistry
- Roger Walker, Clinical Pharmacy and Pharmaceutics
- Clinical pharmacy by Kaplan
- The Theory and Practice of Industrial Pharmacy by Leon Lachman
- Pharmaceutical Dosage Forms and Drug Delivery Systems by Haward Ansel

مخطط مهارات المنهج

يرجى وضع اشارة في المربعات المقابلة لمخرجات التعلم الفردية من البرنامج الخاضعة للتقييم

مخرجات التعلم المطلوبة من البرنامج

Planning for Self Development				Affective Sentimental goals and values				Skillfulness goals				Cognitive Goals				Essential or Optional	Curriculum Name	Curriculum code	Academic Year/Grade
4	3	2	1	4	3	2	1	4	3	2	1	4	3	2	1				
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Computer Sciences	CoSc 100	1 st stage 2022-2023
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential		MaBi	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Mathematics and Biostatistics	110	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Human Biology	HuBi 120	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Principles of Pharmay Practice	PrPh 130	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Analytical Chemistry	AnCh 140	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Medical Terminology	MeTe 150	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	English Language	EnLa 100	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Computer Sciences	CoSc 100	

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Mathematics and Biostatistics	MaBi110
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Medical Physics	MePh 110
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Human Anatomy	HuAn 120
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmaceutical Calculations	PhCa 130
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Organic Chemistry I	OrCh 141
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Histology	Hist 150
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Human Right	HuRi 100
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Medical Physics	MePh 110
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Human Anatomy	HuAn 120
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmaceutical Calculations	PhCa 130
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Medical Virology and Parasitology	MiVP 210
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Physical PharmacyII	PhPh 252
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Physiology II	Phys 232
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmacogn-psy I	Phar 221
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Physical PharmacyII	PhPh 252
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Physiology II	Phys 232

2nd Stage
2022-2023

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmacognosy I	Phar 221	3 rd Stage 2022-2023
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Inorganic Pharmaceutical Chemistry	InPC 310	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmacognosy II	Phar 322	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmaceutical Technology I	PhTe 331	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Biochemistry I	Bioc 341	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pathophysiology	Paph 350	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Organic Pharmaceutical Chemistry I	OrPC 311	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	pharmacology I	Phar321	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmacognosy III	Phar 323	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Medical Ethics	MeEt 350	4 th Stage 2022-2023
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Pharmacology II	Phar422	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	organic pharmaceutical chemistry II	OrPC 412	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Clinical Pharmacy I	CIPh 431	
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Biopharmaceutics	Biop 440	

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Public Health	PuHe 450
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Organic Pharmaceutical Chemistry III	OrPC 413
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Clinical Pharmacy	CIPh 432
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential		II
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	General Toxicology	GeTo 420
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Industrial Pharmacy I	InPh 441
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Communication Skills	CoSk 460
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Organic Pharmaceutical Chemistry IV	OrPC 513
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Industrial Pharmacy II	InPh 542
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Applied Therapeutic I	521 ApTh
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Clinical Chemistry	CICh 530
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Clinical Toxicology	CITo 550
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Project	Proj 560
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Clinical	CILT 570

5th Stage
2022-2023

																	Laboratory Training		
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Applied Therapeutic II	APTh
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	pharmaceutical Biotechnology	522
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Dosage form Design	PhBi 160
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Advanced Pharmaceutical Analyses	DoFD 570
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	Applied Therapeutic II	AdPA 580
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	Essential	pharmaceutical Biotechnology	APTh

Signature:

Assist. Prof. Dr. Esraa Ghazy Jabar

Date: 11\11\2023