Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.

Academic Program Specification Form for The Academic Year 2024-2025

University: Al Rasheed University College
College: Al Rasheed University College / Department of pharmacy
Number of Departments in The College: 15
Date of Form Completion: 10-9-2024

Dean 's Name:

Date: / /

Signature

The Chairman of the Department;

Date: / /

Signature

Dean 's Assistant for Scientific Affairs

Date: / /
Signature

The department Quality Assurance manager
Date: / /
Signature:

The College Quality Assurance and University Performance Manager

Date: / /
Signature

1. Teaching Institution	Al-Rasheed collage
2. University Department/Centre	Department of Pharmacy
3. Programme Title	Science of Pharmacy
4. Title of Final Award	Pharmacy Bsc
5. Modes of Attendance offered	Courses / in person
6. Accreditation	Intended to get NCAPS
7. Other external influences	The practical section, extracurricular activities, volunteer activities, extracurricular research
8. Date of production/revision of this specification	10-9-2024

9. Aims of the Programme

- 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. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1- identifying the natural function of the body and the changes in these functions that accompany the disease. (Identify the human body, its systems and their functions in health and illness from anatomical, functional, biochemical and clinical aspects.)

A2 - Identify the drug as a chemical compound and its chemical and physical properties (Determine the effect of the drug's properties on its effectiveness and side effects.)

A3- Learn about the types of drug doses(How to determine the appropriate pharmaceutical formula for the drug, methods of manufacturing it, and evaluating it in terms of effectiveness, therapeutic effect, negative effect, stability, and calculating the correct doses)

A4- Learn about different treatments(Choosing the appropriate treatment for the medical condition and the desired therapeutic effect)

A5- Understanding the concepts of human rights and citizenship(The pharmacist must be aware of his duties and rights as a good citizen in society.)

A6- Learn the principles of medical statistics and medical physics(Knowing the basics of evaluating the results of clinical studies and economic studies of pharmaceutical preparations)

A7- Learn about the mechanism of action of drugs, their side effects and toxicity(Identifying drug interactions)

B. Subject-specific skills

B1- Working in the laboratory environment (The student is able to safely handle laboratory equipment and materials, considering laboratory safety and security standards)
B2- self – learning (the student is able to search information and use it properly)
B3- Providing the highest level of healthcare (the pharmacist is able to provide scientific and pharmaceutical advice to the individual in the health institutions and the community and follow up on treatment.)
B4- provide an effective and safe treatment (the pharmacist is able to diagnose therapeutic errors in terms of the suitability of the treatment for the medical condition and the patient and the absence of drug interactions or interactions with the patient general health condition)
B5- communicating with patient (the pharmacist is able to work with patient at different intellectual, scientific, social, psychological and health levels)

B6- communicating with medical staff (the pharmacist is able to communicate with various medical staff such as doctors, nurses and others to correct treatment errors if any, and provide treatment recommendation based on sound foundation)

B7- monitoring the safety and effectiveness of the treatment provided to the patient (the pharmacist is able to apply the basic concept of drug chemistry and its mechanism of action in interpreting drug interactions and providing pharmaceutical advice to medical staff and the community)

B8- the skill of handling and dispensing medications (the pharmacist is able to play a role in educating the patient on various aspects of using the drug and storage)

B9- the skill of preparing pharmaceutical perpetrations, drug compounds and method of preserving them

Teaching and Learning Methods

1- Presentation and delivery
2- Interactive discussions
3- Brain storming
4- Small group
5- Research and induction
6- Reverse classes
7- Discussion groups
8- Field visits to institutions and entities related to the pharmacist's work
9- Volunteer work, seminars, workshops, and exhibitions.

Assessment methods

1- Individual and group assignment and reports
2 -Daily and weekly exams
3 - Practical skills assessments
4 - Mid-term and end of term exams
5 -Graduation project

C. Thinking Skills

C1- Communication Skills - The student shall read, write, speak, listen and use multimedia to communicate effectively.

C2- The student shall counsel and educate patients, as well as communicate with other health care professionals.

C3- Critical Thinking - The student shall acquire, comprehend, apply, analyze, synthesize, and evaluate information.

C4- 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.

- Using the data show method.

To enable students to understand and learn the basic sciences properly.

Assessment 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.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- Professional ethics and Responsibility-The student shall represent the profession in an ethical manner. The student shall identify, analyze and resolve ethical problems.
D2- Social Interaction, Citizenship, Leadership, Professionalism- The student shall demonstrate appropriate interpersonal behaviors.
D3- The student shall provide service to the profession, as well as the community.
D4- The student shall be proactive in collaborating with other health care professionals.

Assessment 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.

11. Program Structure

Program structure	NO. of courses	unit	Percentage	Notes *
Institution requirements	8	10	5.5	compulsory
College requirements	54	169	94.4	compulsory
Department requirements	/	/	/	/
Summer training		completed		
others	/	/	/	/

* Notes can be either compulsory or optional

12Awards and Credits / ----

Level/Year	Course or Module Code	Course or Module Title	theoretical	Practical
First stage Chapter one				
	HuRi 100	**Human Right**	**1**	**---**
	MaBi110	**Mathematics and Biostatistics**	**3**	**---**
	HuBi 120	**Human Biology**	**2**	**2**
	PrPh 130	**Principles of Pharmacy Practice**	**2**	**---**
	AnCh 140	**Analytical Chemistry**	**3**	**2**

	MeTe 150	Medical Terminology	1	---
First stage Chapter two	MePh 110	Medical Physics	2	2
	HuAn 120	Human Anatomy	1	2
	PhCa 130	Pharmaceutical Calculations	2	2
	OrCh 141	Organic Chemistry I	3	2
	Hist 150	Histology	2	2
	CoSc 182	Computer sciences	1	2
Second stage Chapter one	OrCh 242	Organic Chemistry II	2	2
	MeMi 210	Medical Microbiology	3	2
	Phys231	Physiology I	3	2
	PhPh 251	Physical Pharmacy I	3	2
	Baa200	Baath crimes	1	---
	CoSc102	Computer Science	---	2
Second stage Chapter two	ArLa 100	Arabic Language	2	----
	OrCh 243	Organic Chemistry III	2	2
	Phar 221	Pharmacognosy I	3	2
	PhPh 252	Physical PharmacyII	3	2
	MeMi 200	Medical Microbiology II	3	2
	Phys 232	Physiology II	3	2
	CoSc103	Computer Science	---	2
Third stage Chapter one	InPC 310	Inorganic Pharmaceutical Chemistry	2	2
	Phar 322	Pharmacognosy II	2	2
	PhTe 331	Pharmaceutical Technology I	3	2
	Bioc 341	Biochemistry I	3	2

	Paph 350	**Pathophysiology**	**3**	**2**
Third stage Chapter two	OrPC 311	**Organic Pharmaceutical Chemistry I**	**3**	**2**
	Phar 321	**pharmacology I**	**3**	**----**
	PhTe 332	**Pharmaceutical Technology II**	**3**	**2**
	Bioc 342	**Biochemistry II**	**3**	**2**
	Phar 323	**Pharmacognosy III**	**2**	**2**
	MeEt 350	**Medical Ethics**	**1**	**----**
Fourth stage Chapter one	Phar 422	**Pharmacology II**	**3**	**2**
	OrPC 412	**organic pharmaceutical chemistry II**	**3**	**2**
	ClPh 431	**Clinical Pharmacy1**	**2**	**2**
	Biop 440	**Biopharmaceutics**	**2**	**2**
	PuHe 450	**Public Health**	**2**	**----**
Fourth stage Chapter two	OrPC 413	**Organic Pharmaceutical Chemistry III**	**3**	**2**
	ClPh 432	**Clinical Pharmacy III**	**2**	**2**
	GeTo 420	**General Toxicology**	**2**	**2**
	InPh 441	**Industrial Pharmacy I**	**3**	**2**

	Phar423	**Pharmacology III**	**2**	**----**
	CoSk460	**Communication Skills**	**2**	**----**
fifth stage Chapter one	**OrPC 513**	**Organic Pharmaceutical Chemistry IV**	**2**	**---**
	InPh 542	**Industrial Pharmacy II**	**3**	**2**
	ApTh 521	**Applied Therapeutic I**	**3**	**----**
	ClCh 530	**Clinical biochemistry**	**3**	**2**
	ClTo 550	**Clinical Toxicology**	**2**	**2**
	Proj 560	**Project**	**1**	**---**
	ClLT 570	**Clinical lab. Training**	**---**	**4**
Fifth stage Chapter two	**Phar 510**	**Pharmacoeconomic**	**2**	**----**
	ThDM 540	**Therapeutic Drug Monitoring**	**2**	**2**
	HoTr 530	Hospital Training	**---**	**4**
	ApTh 522	Applied Therapeutic II	**2**	**---**
	PhBi 160	pharmaceutical Biotechnology	**1**	**---**
	DoFD 570	Dosage form Design	**2**	**---**
	AdPA 580	Advanced Pharmaceutical analysis	**3**	**2**

13. Personal Development Planning

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

14. Admission criteria.

Academic average and physical health as approved by the ministry of higher education and scientific research

15. Key sources of information about the program

- The website of AL Rasheed university college
- The website of the ministry of higher education and scientific research
- The official page of AL Rasheed college of pharmacy social media
- Boards installed in the college corridors
- Official documentation

Curriculum Skills Map																									
please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed																									
				Programme Learning Outcomes																					
Year / Level	Course Code	Course Title	Core (C) or Option (O)	Knowledge and understanding							Subject-specific skills									Thinking skills				General and Transferable Skills		
				A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	B8	B9	C1	C2	C3	C4	D1	D2	D3
first stage	HuBi 120	Biology	C	√							√	√								√			√	√	√	√
	PrPh 130	Principles of pharmacy	C		√	√	√					√						√	√	√		√	√	√	√	√
	MaBi 110	Mathematics and Biostatistics	C						√			√								√		√	√	√	√	√
	Hist 112	Histology	C	√							√	√								√		√	√	√	√	√
	AnCh 140	Analytical Chemistry	C		√						√	√								√		√	√	√	√	√
	MeTe 150	Medical Terminology	C									√								√		√	√	√	√	√
	OrCh 141	Organic Chemistry	C		√						√	√								√		√	√	√	√	√
	HuAn 120	Human Anatomy	C	√							√	√								√		√	√	√	√	√
	PhCa 130	Pharmaceutical Calculation	C		√	√	√					√							√	√		√	√	√	√	√
	MePh 110	Medical Physics	C						√		√	√								√		√	√	√	√	√
	100HuRi	Human rights	C					√				√								√		√	√	√	√	√
	Cosc 182	Computer II	C									√								√		√	√	√	√	√
	OrCh232	Organic chemistry II	C		√						√	√								√		√	√	√	√	√
	MeMi210	Microbiology I	C								√	√								√		√	√	√	√	√
	PhPh 251	Physical pharmacy I	C						√			√								√		√	√	√	√	√

Second stage	**Phys 231**	**Physiology I**	**C**	√	√							√								√		√	√	√	√	√
	CoSc 283	**Computer science III**	**C**									√								√		√	√	√	√	√
	OrCh 2 4 3	**Organic chemistry III**	**C**		√						√	√								√		√	√	√	√	√
	MiVP 210	**Microbiology II**	**C**								√	√								√		√	√	√	√	√
	PhPh 252	**Physical pharmacy II**	**C**		√				√			√								√		√	√	√	√	√
	Phys 2 3 2	**Physiology II**	**C**	√								√								√		√	√	√	√	√
	Phar2 2 1	**Pharmacognosy I**	**C**		√					√	√	√								√		√	√	√	√	√
	DeBi240	**Arabic II**	**C**									√								√		√	√	√	√	√
	Baa100	**Baath crimes II**	**C**					√				√								√		√	√	√	√	√
	InPC 310	**Inorganic pharmaceutical chemistry**	**C**		√					√	√	√								√		√	√	√	√	√
	Phar 322	**Pharmacognosy II**	**C**		√					√	√	√								√		√	√	√	√	√
	PhTe 331	**Pharmaceutical technology I**	**C**			√	√				√	√							√	√		√	√	√	√	√
Third stage	**Bioc 341**	**Biochemistry I**	**C**	√						√	√	√								√		√	√	√	√	√
	Paph 350	**Pathophysiology**	**C**	√	√					√		√								√		√	√	√	√	√
	OrPC 311	**Organic pharmaceutical chemistry I**	**C**	√						√	√	√								√		√	√	√	√	√
	Phar 321	**Pharmacology I**	**C**	√		√	√			√	√	√					√			√		√	√	√	√	√
	PhTe 332	**Pharmaceutical technology**	**C**		√	√	√				√	√							√	√		√	√	√	√	√

		II & cosmetics																							
	Bioc 3 4 2	**Biochemistry II**	**C**	√						√	√	√								√		√	√	√	√	√
	Phar 3 2 3	**Pharmacognosy III**	**C**		√					√	√	√								√		√	√	√	√	√
	MeEt 350	**Ethics of pharmacy**	**C**					√				√								√		√	√	√	√	√
	Phar 422	**Pharmacology II**	**C**	√		√	√			√	√	√					√			√		√	√	√	√	√
	OrPC 412	**Organic pharmaceutical chemistry II**	**C**	√	√					√	√	√								√		√	√	√	√	√
	ClPh 431	**Clinical pharmacy I**	**C**	√		√	√			√	√	√					√	√		√		√	√	√	√	√
Fourth stage	**Biop 440**	**Biopharmaceutics**	**C**	√	√							√								√		√	√	√	√	√
	PuHe 450	**Public health**	**C**	√								√								√		√	√	√	√	√
	Phar423	**Pharmacology III**	**C**	√	√					√	√	√					√			√		√	√	√	√	√
	OrPC 413	**Organic pharmaceutical chemistry III**	**C**	√	√					√	√	√								√		√	√	√	√	√
	ClPh 432	**Clinical pharmacy II**	**C**	√	√	√	√			√	√	√					√	√		√		√	√	√	√	√
	GeTo 420	**Toxicology**	**C**	√	√	√	√			√	√	√								√		√	√	√	√	√
	CoSk 460	**Communication skills**	**C**					√				√			√	√				√		√	√	√	√	√
	InPh 441	**Industrial pharmacy I**	**C**			√	√				√	√							√	√		√	√	√	√	√
	PhPr 270	**Pharmacy practice**	**C**																							

Fifth stage	**OrPC 513**	**Organic pharmaceutical chemistry IV**	**C**	√	√					√	√	√								√		√	√	√	√	√
	InPh 542	**Industrial pharmacy II**	**C**			√	√				√	√							√	√		√	√	√	√	√
	ApTh 521	**Applied therapeutics I**	**C**	√	√	√	√			√	√	√								√		√	√	√	√	√
	ClCh 530	**Clinical biochemistry**	**C**	√		√	√				√	√								√		√	√	√	√	√
	ClLT 570	**Clinical lab. training**	**C**	√		√	√			√	√	√	√			√	√			√	√	√	√	√	√	√
	HoTr 530	**Hospital training**	**C**	√		√	√			√	√	√	√	√	√	√	√	√		√	√	√	√	√	√	√
	ClTo 550	**Clinical toxicology**	**C**	√	√	√	√			√	√	√								√		√	√	√	√	√
	Proj 560	**Graduation project**	**C**									√								√		√	√	√	√	√
	Phar 510	**Pharmaceutical economy**	**C**						√			√								√		√	√	√	√	√
	ThDM 540	**Therapeutic drug monitoring**	**C**	√	√	√	√				√	√					√			√		√	√	√	√	√
	ApTh 522	**applied therapeutics II**	**C**	√		√	√			√	√	√								√		√	√	√	√	√
	AdPA580	**Advanced pharmaceutical analysis**	**C**		√						√	√								√		√	√	√	√	√
	DoFD 570	**Dosage form design**	**C**		√	√	√				√	√							√	√		√	√	√	√	√

	PhBi 160	**Biotechnology**	**C**			√	√				√	√							√	√		√	√	√	√	√