



Republic of Iraq
Ministry of Higher Education and Scientific Research
Al-Ayen Iraqi University
College of Health and Medical Technologies
Department dialysis Technologies



Academic Program Department dialysis Technologies

2025-2026

Academic Program Description Form

University Name: AL-Ayen Iraqi University

Faculty/Institute: College of Health and Medical Technologies

Scientific Department: Department dialysis Technologies

Academic or Professional Program Name: College of Health and Medical Technologies/ Department dialysis Technologies

Final Certificate Name: Bachelor of dialysis Technologies

Academic System: Semestrial course

Description Preparation Date:

File Completion Date:

Signature:



Head of Department Name:

Ass.Prof. Ghassan Haikel Abdullah

Signature:



Scientific Associate Name:

Asc.Prof. Mustafa Abd AL-Sattar Abd AL-Jabbar

Date:

29/11/2025

Date:

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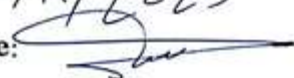


Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 29/11/2025

Signature:



Approval of the Dean

Prof. Mohammed Abd Al-Redha Al-Tahhan

29-11-2025

1. Program Vision

Our vision is to graduate medical professionals who possess the highest levels of skill and scientific competence, meet international standards, and are capable of working as a team. To contribute effectively to the treatment of kidney failure patients and to provide them with the best health and medical services, through study and practical training within the college, its specialized laboratories and kidney dialysis centers

Through this, we aim to:

- 1.reparing students with high medical skills and outstanding scientific competence.
2. Promoting a spirit of teamwork to ensure the provision of integrated care for kidney failure patients.
- 3.Providing specialized practical training within laboratories and kidney dialysis centers.
- 4.To train graduates capable of working efficiently in hospitals and dialysis units.

2. Program Mission

- 1.Leadng the way in Iraq in preparing specialized medical personnel in the field of artificial kidney technologies .
- 2.Training graduates capable of working with high efficiency within kidney dialysis centers in hospitals.
- 3.Providing the best advanced technology treatment services to ensure optimal care for kidney failure patients.
- 4.Serving the local community and our beloved governorate by supplying health institutions with trained and qualified personnel.

5.Keeping up with the demands of the current labor market by developing students' skills, given the increasing need for professional staff in the field of kidney dialysis.

6.Enhancing the practical and applied aspect through training in specialized centers and clinical environments.

3. Program Objectives

1.Graduating highly qualified medical personnel capable of providing outstanding treatment services to kidney failure patients with advanced scientific quality.

2.Providing advanced vocational training that conforms to the highest international standards to ensure the acquisition of practical skills and high expertise in the field of kidney dialysis.

3.Actively contributing to urological surgical services by involving students in surgical procedures related to kidney failure patients to enhance their clinical experience.

4.Providing scientific guidance and awareness programs for kidney failure patients through educational seminars on adherence to treatment, taking medications, and following the appropriate diet.

5.Contributing to the early detection of kidney failure cases by conducting health surveys targeting high-risk individuals.

6.Raising community awareness about the main causes of kidney failure and providing appropriate preventive guidelines to reduce its spread.8. Preparing national cadres capable of competing in the local and regional labor market in the field of anesthesia and critical care techniques.

4. Program Accreditation

5. Other external influences

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	14	28	17	
College Requirements	12	27	17	
Department Requirements	36	107	66	
Summer Training				
Other				

* This can include notes whether the course is basic or optional.

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			Theo.	Pract.
First / Semester First	MTDY1101	General Chemistry	2	3
	MTDY1102	General Histology	2	3
	MTDY1103	General Biology	2	3
	MTDY1104	Human Physiology	2	3
	MTDY1105	Medical Terminology	2	—
	MTDY1106	Computer Principles	1	1
	MTDY1107	Democracy and Human Rights	2	—
	MTDY1108	English Language	2	—
First / Semester second	MTDY1201	Basics of Biochemistry	2	2
	MTDY1202	General Anatomy	2	3
	MTDY1203	Human Biology	2	3
	MTDY1204	Clinical Physiology	2	3
	MTDY1205	Principles of Nursing	1	2

	MTDY1206	Arabic Language	2	—
	MTDY1207	Sports	1	1
Second/ Semester First	MTDY2101	Specific Anatomy	2	3
	MTDY2102	Haematology	2	3
	MTDY2103	General Pharmacology	2	3
	MTDY2104	General Pathology	2	2
	MTDY2105	Public Health	2	—
	MTDY2106	Medical Psychology	2	—
	MTDY2107	Professional Ethics	2	—
	MTDY2108	English Language	2	—
	MTDY2109	Crimes of the Baath regime in Iraq	2	—
Second/ Semester second	MTDY2201	Medical Microbiology	2	3
	MTDY2202	Basic Immunology	2	3
	MTDY2203	Metabolic Disorders	2	3
	MTDY2204	Clinical Pathology	2	3
	MTDY2205	Specific Pharmacology Related to the Kidney	2	2
	MTDY2206	Metabolism	2	2
	MTDY2207	Biostatistics	2	2
	MTDY2208	Arabic Language	2	—
	MTDY2209	Computers and Artificial Intelligence	1	1

8. Expected learning outcomes of the program

A.Knowledge

Learning Outcomes	1. The student will learn about the basics and principles of kidney functions in the human body. 2. The student should learn about the different types of equipment used in kidney dialysis. 3. The student will be able to understand the need to innovate and develop easier and more effective means and devices to alleviate the burden on kidney failure patients. 4. The student should understand the importance of increasing the number of specialized workers in the field of kidney dialysis, given the scarcity of available personnel in the country.
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B.Skills

Learning Outcomes	1.The student must be able to perform the dialysis process accurately and efficiently, especially in emergency situations. 2.To possess the basic skills for rapid nursing when necessary. 3.To be able to develop plans for the development and expansion of the kidney dialysis field in a way that benefits the community. 4. To be able to react quickly and effectively to critical situations in order to achieve greater stability in the patient's condition.

C.Ethics

Learning Outcomes	1.The student should understand the importance of this specialization and its vital role in serving the community and those working in the medical field. 2.The student should be aware of the sensitivity of the patient's situation and offer the utmost of their knowledge, experience, and professional values to alleviate their suffering. 3.To have the ability to plan periodic maintenance of dialysis machines on a regular basis without affecting the course of patient treatment. 4.The student should realize the need to develop new and advanced dialysis machines to help reduce the pressure on existing machines and provide better treatment opportunities for patients.

9. Teaching and Learning Strategies

1. Theoretical education :

Providing theoretical lectures that explain the functions of the kidneys, the mechanisms of dialysis, and the types of equipment used.

2. Practical training :

Students are trained within laboratories to operate dialysis machines and conduct related tests.

3. Clinical training in hospitals :

Sending students to hospitals and specialized centers for the purpose of direct practical training on patients.

4. Laboratory training and simulation :

Training on dialysis simulators to approximate realistic clinical situations without putting patients at risk.

5. Problem-based learning :

Presenting scenarios of illness and critical cases for students to analyze and determine the appropriate procedures.

6. Scientific discussions and seminars :

Conducting scientific discussions with students about the latest developments in the field of kidney dialysis.

Holding scientific seminars and conferences within the department to raise scientific and professional awareness.

7. Evidence-based education :

Training students on how to use modern research and scientific studies to develop their clinical skills.

Encouraging them to keep up with the latest developments in dialysis equipment and ways to improve service quality.

8. Supervising graduation research projects :

Assisting students in preparing graduation research papers related to kidney dialysis topics.

Directing them to choose topics that contribute to the development of devices or improve the care provided to kidney failure patients.

10. Evaluation methods

1. Theoretical Tests

- This includes monthly, term, and final exams.
- It includes essay questions and multiple-choice tests to measure the student's understanding of scientific concepts related to kidney function and dialysis machines.

2. Continuous evaluation

- Weekly tests to monitor student progress.
- Rapid tests to measure instantaneous understanding of the material.
- Writing scientific reports and research papers to enhance research and analysis skills.

3. Practical tests

- Evaluating students' performance in practical skills within the laboratory, such as operating dialysis machines, checking for basic malfunctions, and performing the steps of kidney dialysis.
- Practical exams are conducted using the department's equipment or through the student demonstrating their skills on the projector.

4. Clinical assessment

- Evaluating students during their training in hospitals and specialized centers.
- The assessment includes skills in dealing with patients, adherence to safety procedures, speed of response to critical cases, and accuracy in performing dialysis.

5. Student research and reports

- Students are tasked with preparing scientific research and reports related to dialysis machines, their development, or the clinical challenges associated with them.
- Evaluate the quality of the research, the presentation methodology, and the ability to discuss the results.

11. Faculty						
Faculty Members						
Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	field crops	crop physiology			✓	
Professor	Biology	parasites			✓	
Assistant Professor	Biology	Molecular biology			✓	
Lecturer	Life Sciences	Molecular Toxicology			✓	
Assistant Lecturer	Pharmacy Sciences	Clinical laboratory			✓	
Assistant Lecturer	Biology	Physiology			✓	
Assistant Lecturer	Law	Public Law			✓	
Assistant Lecturer	nursing	nursing			✓	

Assistant Lecturer	nursing	Community health			✓	
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Professional Development

Mentoring new faculty members

New faculty members are instructed to work on curriculum development, participate in departmental committees, and take part in workshops and scientific seminars.

Professional development of faculty members

Workshops to support skills in teaching, scientific research, and quality assurance

12. Acceptance Criterion

Graduates of the scientific branch (biology) according to the electronic portal launched by the Ministry of Education.

13. The most important sources of information about the program

- Specialized scientific books
- Academic Studies and Research
- Electronic resources and the information network
- The accumulated scientific expertise of the department's staff
- Opinions and recommendations of the labor market

14. Program Development Plan

1. Expansion of the department's infrastructure

- Creating an advanced learning environment that enables students to receive continuous practical training on modern equipment.

2. Enhancing students' scientific and practical output

- Increased opportunities to practice practical skills within laboratories to enhance their expertise in the field of dialysis.
- Developing curricula that focus on practical aspects through hands-on training and simulation.

3. Raising students' scientific and practical competence

- Developing training programs that help students gain real experience that qualifies them for high-quality field work.
- Integrating students into realistic, practical situations to equip them with skills for dealing with critical cases

4. Reinforcing the importance of specialization among students

- Raising students' awareness of the vital role and high sensitivity of this specialization in the care of kidney failure patients.
- Focus on building skills for accurate patient interaction in accordance with professional and humanitarian standards.

5. Supporting the teaching staff and developing the program

- Benefiting from the expertise of the teaching staff, which has yielded positive results despite the department being relatively new.
- Developing a professional academic plan based on updating curricula and employing the latest educational methods.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First /course 1	MTDY1101	General Chemistry	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1102	General Histology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1103	General Biology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1104	Human Physiology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1105	Medical Terminology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1106	Computer Principles	basic	✓	✓	✓		✓	✓	✓		✓	✓		
	MTDY1107	Democracy and Human Rights	basic	✓	✓			✓	✓			✓	✓	✓	
	MTDY1108	English Language	basic	✓	✓			✓	✓			✓	✓		
First /course 2	MTDY1201	Basics of Biochemistry	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1202	General Anatomy	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1203	Human Biology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1204	Clinical Physiology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1205	Principles of Nursing	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY1206	Arabic Language	basic	✓	✓	✓		✓	✓			✓	✓		

	MTDY1207	Sports	basic	✓	✓	✓		✓	✓			✓	✓		
Second / course 1	MTDY2101	Specific Anatomy	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2102	Haematology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2103	General Pharmacology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2104	General Pathology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2105	Public Health	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2106	Medical Psychology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2107	Professional Ethics	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2108	English Language	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2109	Crimes of the Baath regime in Iraq	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
Second /course 2	MTDY2201	Medical Microbiology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2202	Basic Immunology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2203	Metabolic Disorders	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2204	Clinical Pathology	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2205	Specific Pharmacology Related to the Kidney	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2206	Metabolism	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	

	MTDY2207	Biostatistics	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2208	Arabic Language	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	
	MTDY2209	Computers and Artificial Intelligence	basic	✓	✓	✓		✓	✓	✓		✓	✓	✓	