

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

Academic Program Specification Form For The Academic Year 2024-2025

University: Al-Ayen Iraqi University
College: Health and Medical Technologies
Number of Departments in The College :
Date of Form Completion: 10 / 1 /2025

Signature :
Head of department :
Date : 9 / 4 /2025

Signature :
Quality Assurance And University Performance Manager
Date : 12 / 4 /2025

Signature

Dean's Name:

12 / 4 / 2025

Signature

Dean assistant for
Scientific Affairs

12 / 4 / 2025

Signature

College Quality Assurance and
University Performance Manager

12 / 4 / 2025

Academic Program Description of Medical Laboratory Techniques:

University:	Al-Ayen Iraqi University
Department/Faculty	Faculty of Health and Medical Techniques
Academic Program	Medical Laboratory Techniques
Academic Degree	Bachelor's Degree in Medical Laboratory Techniques
Educational system	Semesters for the First, Second and Third years / Yearly for the fourth years
Accreditation Program	Accredited program is prepared by the sectorial committee at the Ministry of Higher Education and Scientific Research.
Other External Influences:	Field visits and training in hospitals, laboratories, and clinics.
Date:	10 / 1 / 2025

1- Program Strategy:

1.1- Aims of the program and program description:

The program seeks to achieve the following specific objectives:

A- Foundational Knowledge and Understanding:

A1- Objective:

- Develop a comprehensive understanding of theoretical principles underpinning medical laboratory sciences.
- Acquire knowledge in biochemistry, biology, and laboratory techniques.
- Understand the fundamentals of anatomy, human biology, and medical terminology.

A2- Teaching and Learning Methods:

- Lectures: Theoretical insights delivered by faculty.
- Practical Sessions: Hands-on laboratory experiences to reinforce theoretical concepts.
- Seminars: Interactive sessions for in-depth discussions on specific topics.
- Case Studies: Real-world scenarios to apply theoretical knowledge.
- Guest Lectures: External experts provide industry insights.

A3- Assessment Methods:

- Written Exams: Assess understanding of theoretical principles.
- Practical Assessments: Evaluate hands-on skills and application of knowledge.
- Assignments: Encourage independent exploration and research projects.

B-Practical and Technical Proficiency:

B1- Objective:

- Acquire practical skills necessary for performing laboratory procedures and techniques with precision.
- Develop hands-on expertise in laboratory techniques, clinical biochemistry, microbiology, and molecular biology.
- Demonstrate proficiency in applying theoretical knowledge to practical scenarios.

B2- Teaching and Learning Methods:

- Problem-Solving Exercises: Structured exercises to enhance problem-solving abilities.
- Lectures: Theoretical insights delivered by faculty.
- Critical Analysis: In-depth analysis of complex scenarios.
- Group Discussions: Collaborative discussions to explore multiple perspectives.
- Research Projects: Independent research to cultivate analytical skills.

B3- Assessment Methods:

- Written Exams: Assess understanding of theoretical principles.
- Laboratory Reports: Evaluate the ability to document and communicate practical findings.
- Practical Examinations: Assess hands-on skills and technique proficiency.
- Competency Assessments: Evaluate overall proficiency and adherence to best practices.

C- Critical Thinking and Problem-Solving:

C1- Objective:

- Cultivate critical thinking and problem-solving abilities for effective decision-making in diverse laboratory contexts.

- Analyze complex scenarios in histopathology, hematology, clinical chemistry, and immunology.
- Develop skills to interpret and solve problems related to medical laboratory procedures.

C2- Teaching and Learning Methods:

- Lectures: Theoretical insights delivered by faculty.
- Case Studies: Analyze real or hypothetical scenarios to develop critical thinking skills.
- Problem-Solving Exercises: Engage in structured exercises to enhance problem-solving abilities.
- Group Discussions: Collaborative discussions to explore multiple perspectives on complex issues.

C3- Assessment Methods:

- Written Exams: Assess understanding of theoretical principles.
- Critical Analysis Papers: Assess the ability to analyze and evaluate complex information critically.
- Case Study Assessments: Evaluate problem-solving skills in the context of real-world scenarios.
- Examinations: Assess the application of critical thinking skills in a timed setting

D- Communication and Teamwork Skills:

D1- Objective:

- Develop effective communication, teamwork, and professional skills essential for success in healthcare and research environments.
- Enhance communication skills through courses in English, computer sciences, and human rights.
- Foster teamwork through collaborative projects, presentations, and workshops.

D2- Teaching and Learning Methods:

- Lectures: Theoretical insights delivered by faculty.
- Communication Exercises: Engage in activities to enhance verbal and written communication skills.

- Group Projects: Collaborative assignments to foster teamwork and shared responsibility.
- Presentations: Develop and deliver oral presentations to enhance communication skills.

D3- Assessment Methods:

- Written Exams: Assess understanding of theoretical principles.
- Oral Presentations: Evaluate the ability to communicate effectively through spoken presentations.
- Teamwork Evaluations: Assess collaborative efforts, communication, and shared responsibility.
- Reflective Essays: Encourage self-reflection on communication and teamwork experiences.

Remark: Attached with this report the program structure detailed and approved by the Medical Laboratory Technology Department and the Faculty of Health and Medical Technology.

1- Program structure:

The Medical Laboratory Technology is a Bachelor degree assigned to the student after four academic years. The detailed program is summarized as follow:

First Year					
Semester	Course name	Number of hours per week			Number of credits
		Theoretical	Practical	Total	
1	General Chemistry 1	2	5	7	4
1	Medical terminology	2	-	2	2
1	Human Biology 1	2	5	7	4
1	Laboratory instruments 1	2	4	6	4
1	Medical ethics	2	-	2	2
1	Computer applications1	1	2	3	2
1	Human Rights and Democracy	2	-	2	2
1	English	2	-	2	2
Total		15	16	31	22
2	General Chemistry 2	2	5	7	4
2	Anatomy	2	5	7	4
2	Human Biology 2	2	5	7	4
2	Laboratory Instruments 2	2	4	6	4
2	Computer Applications 2	1	2	3	2
2	Arabic Language	2	-	2	2
Total		11	21	32	20

Second Year					
Semester	Course name	Number of hours per week			Number of credits
		Theoretical	Practical	Total	
1	Medical Bacteriology 1	2	4	6	4
1	Biochemistry 1	2	4	6	4
1	Human Physiology 1	2	4	6	4
1	Histology 1	2	4	6	4
1	Molecular Biology	2	4	6	4
1	Medical Parasitology 1	2	4	6	4
1	جرائم نظام البعث في العراق	2	-	2	2
Total		14	24	38	26
2	Medical Bacteriology 2	2	4	6	4
2	Biochemistry 2	2	4	6	4
2	Human Physiology 2	2	4	6	4
2	Histology 2	2	4	6	4
2	Medical Parasitology 2 and Entomology	2	2	3	2
2	Descriptive Biostatics	1	2	3	2
2	Arabic language	2	-	2	2
Total		13	22	35	24

Third Year					
Semester	Course name	Number of hours per week			Number of credits
		Theoretical	Practical	Total	
1	Histopathology1	2	2	4	3
1	Hematology1	2	2	4	3
1	Medical Mycology	2	4	6	4
1	Metabolic disorder	2	4	6	4
1	Human Genetics1	2	4	6	4
1	Immunology1	2	4	6	4
1	Advanced Laboratory Techniques	2	2	4	3
1	Computer Applications1	1	2	3	2
Total		15	24	39	27
2	Histopathology2	2	2	4	3
2	Hematology2	2	2	4	3
2	Medical Virology	2	4	6	4
2	Clinical Endocrinology	2	4	6	4
2	Human Genetics2	2	4	6	4
2	Immunology2	2	4	6	4
2	Analytical Biostatistics	1	3	4	2
2	Computer Applications2	1	2	3	2
Total		14	25	39	26

Fourth Year					
Semester	Course name	Number of hours per week			Number of credits
		Theoretical	Practical	Total	
1	Clinical Immunology	2	4	6	8
1	Diagnostic Bacteriology	2	4	6	8
1	Advanced Clinical Chemistry	2	4	6	8
1	Medical Parasitology	2	4	6	8
1	Blood Transfusion	2	4	6	8
1	Histopathology	1	3	4	5
1	Final Year Project	-	5	5	4
1	Laboratory Management and Research Methodology	1	-	1	2
				Total Credits	51

2- Program organization:

The curriculum serves as an educational tool to lead societal changes and prepare learners capable of facing contemporary and future challenges:

- An educational kit is prepared for each subject within the curriculum, containing detailed vocabulary, explanations, and objectives delivered with precision and timing to ensure effective teaching and learning.
- The curriculum is continuously updated to align with global standards, enhance flexibility, and accommodate advancements in the field. In addition, collaboration with departments affiliated with public colleges and universities of the same specialization plays a fundamental role in updating the curricula.
- Emphasis is placed on practical lessons, visits by academic leaders to assess teaching efficiency, and the provision of necessary educational resources and technologies.
- The department aims for a continuous improvement process, updating curricula, teaching plans, and instructional materials, and actively seeking feedback from students to enhance the educational experience.
- The department is committed to staying current with educational trends, ensuring cohesion between courses, and promoting a quality learning environment.

Mapping of Course Learning Outcomes to Program Outcomes

Course Learning Outcomes

Transferred general and qualification other skills related to employability (skills and personal development)				Emotional and value goals				Program specific objectives				Cognitive goals				Specialist General Auxiliary	Curriculum	/ Year Level
D4	D3	D2	D1	C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1			
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	General Chemistry 1	First level
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Medical terminology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Human Biology 1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Laboratory instruments 1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Medical ethics	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Computer applications	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Human Rights and Democracy	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	English	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	General Chemistry 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Anatomy	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Human Biology 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Laboratory Instruments 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Computer Applications 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Arabic Language	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Medical Bacteriology 1	Second level
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Biochemistry 1	

√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Human Physiology 1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	General Histology 1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Molecular Biology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Medical Parasitology 1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	جرائم نظام البعث في العراق	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Medical Bacteriology 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Biochemistry 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Human Physiology 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	General histology 2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Medical Parasitology 2 and Entomology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Descriptive Biostatistics	Third level
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Histopathology1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Hematology1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Fungi	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Clinical Chemistry	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Human Genetics1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Immunology1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Advanced Laboratory Techniques	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Computer Applications1	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Histopathology2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Hematology2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Virology	

√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Endocrinology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Human Genetics2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Immunology2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Biostatistics	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	General	Computer Applications2	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Clinical Immunology	Forth Level
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Diagnostic Bacteriology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Advanced Clinical Chemistry	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Medical Parasitology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Blood Transfusion	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Histopathology	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Specialist	Final Year Project	
√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Auxiliary	Laboratory Management and Research Methodology	

3. Planning for Personal Development :

- Through the College Scientific Conference.
- Departmental Scientific Seminars.
- Research Workshops

4. Acceptance Criteria (Establishment of Admission Systems for Colleges or Institutes).

- Central Admission for Morning Studies.
- According to the specified regulations by the Ministry of Higher Education through central admission.
- Scientific Interview

5. Major Sources of Program Information

- Curriculum Books.
- Websites of Iraqi and foreign universities.
- Workshops organized by the Ministry of Higher Education in addition to ministry standards.
- Collaboration with other colleges.