

## Academic Program Description Form

University Name: .....

Faculty/Institute: Alsafwa University College

Scientific Department: Medical Laboratories Techniques

Academic or Professional Program Name: Bachelor in Medical Laboratories Techniques

Final Certificate Name: Bachelor in Medical Laboratories Techniques

Academic System: Semester in first , second and third stages and year in fourth stage

Description Preparation Date: 13/10/2024

File Completion Date: 13/10/2024



Signature:

Assist. Prof. Sabah Talib Najim

Head of Department Name:

Date: 13/10/2024



Signature:

Prof. Haider Galil Kamil

Scientific Associate Name:

Date: 13/10/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 13/10/2024



Prof. Moez Hassan Mohammed



Approval of the Dean

Prof. Mohsen Fadel Mohsen Al-Birman

### **1. Program Vision**

Excellence in preparing graduates armed with the academic knowledge and technical expertise necessary to work in government medical laboratories and private sector laboratories.

### **2. Program Mission**

Preparing graduates who have a solid scientific level, extensive practical experience, and personal abilities that qualify them to keep pace with scientific and technical development and engage in the fields of work in medical laboratories.

### **3. Program Objectives**

- 1- Preparing technical staff who possess the basic knowledge and skills in the fields of pathological analysis that qualify them to conduct laboratory analyzes and various tests in medical laboratories.
- 2- Training students and teaching them how to conduct scientific research in order to contribute to finding solutions to various health problems
- 3- Conducting scientific cooperation with corresponding departments in various colleges inside Iraq.
- 4- Accurate knowledge of the working methods, selection and preparation of materials required to conduct various pathological analyses
- 5- Diagnosing pathogenic causes, whether these causes are bacterial, parasitic, fungal or viral, and gaining the ability to investigate them.
- 6- Diagnosing genetic diseases and distinguishing them from acquired diseases
- 7- Accurate knowledge of laboratory equipment used in pathological analyzes and their operation and maintenance

8- Dealing with infectious and communicable disease cases and how to prevent them inside the laboratory by implementing occupational safety guidelines

9- Familiarity with the human aspects of dealing with the patient, which is an important part of treatment.

#### 4. Program Accreditation

Non

#### 5. Other external influences

Theoretical – practical – oral – summer training in hospitals

Students graduation researches

#### 6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	4	16	8.5%	
College Requirements	4	6	3.2%	
Department Requirements	39	166	88.3%	
Summer Training	1	Satisfied		
Other				

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

#### 7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical
First/ Semester 1		General chemistry 1	2	4

First/ Semester 1		Medical terminology	1	-
First/ Semester 1		Human biology 1	2	4
First/ Semester 1		Laboratory instruments 1	2	2
First/ Semester 1		Medical ethics	2	-
First/ Semester 1		Computer Applications 1	1	2
First/ Semester 1		Human rights and Democracy	2	-
First/ Semester 1		English language	2	-
First/ Semester 2		General chemistry 2	2	4
First/ Semester 2		Anatomy	2	4
First/ Semester 2		Human biology 2	2	4
First/ Semester 2		Laboratory instruments 2	2	2
First/ Semester 2		Computer Applications 2	1	2
First/ Semester 2		Arabic language	2	-
Second/ Semester 1		Medical Bacteriology 1	2	4
Second/ Semester 1		Biochemistry 1	2	4
Second/ Semester 1		Human physiology 1	2	2
Second/ Semester 1		Histology 1	2	2
Second/ Semester 1		Molecular Biology	2	4
Second/ Semester 1		Medical Parasitology 1	2	4
Second/ Semester 2		Medical Bacteriology 2	2	4
Second/ Semester 2		Biochemistry 2	2	4
Second/ Semester 2		Human physiology 2	2	2
Second/ Semester 2		Histology 2	2	2
Second/ Semester 2		Medical Parasitology 2 & Entomology	2	4
Second/ Semester 2		Descriptive Biostatistics	1	2
Third/ Semester		Histopathology/1	2	2

<b>1</b>				
<b>Third/ Semester 1</b>		<b>Haematology/1</b>	<b>2</b>	<b>2</b>
<b>Third/ Semester 1</b>		<b>Medical Mycology</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 1</b>		<b>Metabolic Disorders</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 1</b>		<b>Medical Genetics/1</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 1</b>		<b>Immunology/1</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 1</b>		<b>Advanced Laboratory Techniques</b>	<b>2</b>	<b>2</b>
<b>Third/ Semester 1</b>		<b>Computer Applications/1</b>	<b>1</b>	<b>2</b>
<b>Third/ Semester 2</b>		<b>Histopathology/2</b>	<b>2</b>	<b>2</b>
<b>Third/ Semester 2</b>		<b>Haematology/2</b>	<b>2</b>	<b>2</b>
<b>Third/ Semester 2</b>		<b>Medical Virology</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 2</b>		<b>Clinical Endocrinology</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 2</b>		<b>Medical Genetics/2</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 2</b>		<b>Immunology/2</b>	<b>2</b>	<b>4</b>
<b>Third/ Semester 2</b>		<b>Analytic Biostatistics</b>	<b>1</b>	<b>3</b>
<b>Third/ Semester 2</b>		<b>Computer Applications/2</b>	<b>1</b>	<b>2</b>
<b>Fourth</b>		<b>Clinical Immunology</b>	<b>2</b>	<b>4</b>
<b>Fourth</b>		<b>Diagnostic Bacteriology</b>	<b>2</b>	<b>4</b>
<b>Fourth</b>		<b>Blood Bank</b>	<b>2</b>	<b>4</b>
<b>Fourth</b>		<b>Clinical Chemistry</b>	<b>2</b>	<b>4</b>
<b>Fourth</b>		<b>Medical Parasitology</b>	<b>2</b>	<b>4</b>
<b>Fourth</b>		<b>Histopathology</b>	<b>1</b>	<b>3</b>
<b>Fourth</b>		<b>English language</b>	<b>1</b>	<b>-</b>
<b>Fourth</b>		<b>Laboratory Management</b>	<b>1</b>	<b>-</b>
<b>Fourth</b>		<b>Professional Ethics</b>	<b>1</b>	<b>-</b>
<b>Fourth</b>		<b>Graduation Project</b>	<b>-</b>	<b>5</b>

## 8. Expected learning outcomes of the program

### Knowledge

- 1- Introducing the students of the Medical Laboratory Technology Department to basic biology such as molecular biology, histology, physiology, parasitology, immunity, microbiology, genetics, and viruses.
- 2- Introducing the department's students to general, life and clinical chemistry topics
- 3- Enabling the department's students to master the topics of tissue diseases and blood diseases.

### Skills

- 1- Enabling students to use laboratory equipment.
- 2- Enabling students to diagnose pathogens such as parasites, bacteria, and fungi.
- 3- Enabling students to conduct various laboratories analyzes using what they have learned in biochemistry, clinical chemistry, and clinical immunology.

### Ethics

- 1- Appreciating the greatness of the Creator (Allah), Glory be to Him.
- 2- Giving them human values in dealing with patients
- 3- Giving them professional ethics
- 4- Teach them the values of dealing with colleagues at work
- 5- Accustoming them to cooperative work

## 9. Teaching and Learning Strategies

- 1- The lecture: It is conducted using educational technologies such as display devices and smart screens, and the lecture is enhanced with questions that the teacher directs to his students.
- 2- Using cooperative learning within the classroom by dividing students into groups and presenting each group with a scientific problem that requires the group members to reach the solution and then discuss all the solutions.
- 3- Distributing the students into groups and assigning each group to prepare a research paper on one of the vocabulary items stipulated in the curriculum and discuss the research in front of the students.
- 4- Summer training: The students of the second stage and the students of the third stage are distributed to hospitals during the months of July and August. This provides a golden opportunity for the students to gain practical experience from the real world. Summer training also works on students employing what they learned in

college to work in hospitals.

5- Hosting some professors and those with experience in the field of pathological analyzes to give lectures to students. This increases the students' excitement to study and understand the academic topics.

6- Field visits to relevant institutions in the center of the Holy Karbala Governorate, such as the Al-Warith International Cancer Foundation, the Directorate of Forensic Evidence, and some hospitals.

## 10. Evaluation methods

1- Daily preparation and participation in the classroom

2- Exams and daily papers

3- Monthly exams

4- Reports and research

## 11. Faculty

### Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
<b>Professor</b>	<b>5</b>				<b>1</b>	<b>4</b>
<b>Assist. Prof.</b>	<b>2</b>				<b>2</b>	<b>-</b>
<b>Lecturer</b>	<b>9</b>				<b>3</b>	<b>6</b>
<b>Assist. Lecturer</b>	<b>38</b>				<b>36</b>	<b>2</b>
<b>Total</b>	<b>54</b>				<b>42</b>	<b>12</b>

### Professional Development

#### Mentoring new faculty members

Participation and attendance in courses and workshops held by the college and

department

### **Professional development of faculty members**

Asking teachers to present new developments and use modern educational techniques in preparing lectures

## **12. Acceptance Criterion**

- 1- Admission is centralized within the rates determined by the Ministry of Higher Education and Scientific Research
- 2- Conduct an interview for accepted students to ensure that there is nothing preventing their eligibility to study, such as speech or personality defects, and conduct a medical examination.

## **13. The most important sources of information about the program**

- 1- Teachers' lectures
- 2- Central College Library
- 3- Information network (Internet)
- 4- The sources of assistance that teachers recommend for their students to benefit from

## **14. Program Development Plan**

- 1- Teachers provide scientific seminars (seminars) on emerging topics in the specialty
- 2- Involving students in discussion sessions on emerging topics.
- 3- Assigning students to search for modern scientific sources in their specialty.
- 4- – Reviewing academic curricula and making notes to improve them in keeping with the labor market and informing the Council of Deans of Health and Medical Technical Colleges.
- 5- Analyzing the results of evaluation exams to identify weaknesses in order to avoid them and enhance strengths to benefit from them in the future.

First/ Semester 1		Human rights and Democracy	2	-
First/ Semester 1		English language	2	-
First/ Semester 2		General chemistry 2	2	4
First/ Semester 2		Anatomy	2	4
First/ Semester 2		Human biology 2	2	4
First/ Semester 2		Laboratory instruments 2	2	2
First/ Semester 2		Computer Applications 2	1	2
First/ Semester 2		Arabic language	2	-
Second/ Semester 1		Medical Bacteriology 1	2	4
Second/ Semester 1		Biochemistry 1	2	4
Second/ Semester 1		Human physiology 1	2	2
Second/ Semester 1		Histology 1	2	2
Second/ Semester 1		Molecular Biology	2	4
Second/ Semester 1		Medical Parasitology 1	2	4
Second/ Semester 2		Medical Bacteriology 2	2	4
Second/ Semester 2		Biochemistry 2	2	4
Second/ Semester 2		Human physiology 2	2	2
Second/ Semester 2		Histology 2	2	2
Second/ Semester 2		Medical Parasitology 2 & Entomology	2	4
Second/ Semester 2		Descriptive Biostatistics	1	2
Third		Histopathology	2	3
Third		Haematology	2	2
Third		Virology and Mycology	2	2
Third		Immunology	2	2
Third		Laboratory Techniques	2	2
Third		Computer Applications	1	2
Third		English language	1	-
Third		Summer Training	satisfied	
Third		Human Genetics	2	3
Fourth		Clinical Immunology	2	4
Fourth		Diagnostic Bacteriology	2	4
Fourth		Blood Bank	2	4
Fourth		Clinical Chemistry	2	4
Fourth		Medical Parasitology	2	4
Fourth		Histopathology	1	3

## Course Description Form(2024-2025)

1. Course Name:	
Human physiology	
2. Course Code:	
3. Semester / Year:	
Third Year (Year)	
4. Description Preparation Date:	
21 / 10 / 2024	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
120 Hours	
7. Course administrator's name (mention all, if more than one name)	
Name: Hussein Amer Mohammed Hussein	
Email: <a href="mailto:hussain.amir@alsafwa.edu.iq">hussain.amir@alsafwa.edu.iq</a>	
8. Course Objectives	
<p><b>Course Objectives</b></p> <p>At the end of the academic year, the student should be able to:</p> <ol style="list-style-type: none"> <li>1. Know and understand Cell Physiology.</li> <li>2. Know and understand the Blood Physiology.</li> <li>3. Know and understand White Blood Cells.</li> <li>4. Knowing and understanding genetic mutations.</li> <li>5. Knowledge and understanding of Heart Physiology.</li> <li>6. Knowing and understanding Respiratory Physiology.</li> <li>7. Knowledge and understanding of Digestive Physiology.</li> <li>8. Knowing and understanding of Urinary Physiology.</li> <li>9. Knowing and understanding of Nervous Physiology.</li> </ol>	
9. Teaching and Learning Strategies	
<b>Strategy</b>	<ol style="list-style-type: none"> <li>1. Providing students with the basics and supporting topics related the pre-skills learning outcomes.</li> <li>2. Applying the topics studied in theoretical lessons on the practical level.</li> <li>3. Asking students to identify the types of mutations and types</li> </ol>

inheritance patterns.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
<b>First Semester</b>					
1	2practical+2 theoretical	Understand the lecture	Cell Physiology	Lecture Laboratory	Attendance Daily exam
2	2practical+2 theoretical	Understand the lecture	Blood Physiology	Lecture Laboratory	Attendance Daily exam
3	2practical+2 theoretical	Understand the lecture	Blood: Composition Specific Functions of each Compartment	Lecture Laboratory	Attendance Daily exam
4	2practical+2 theoretical	Understand the lecture	RBCs: Definition, Structure, and Normal Value	Lecture Laboratory	Attendance Daily exam
5	2practical+2 theoretical	Understand the lecture	White Blood Cells	Lecture Laboratory	Attendance Daily exam
6	2practical+2 theoretical	Understand the lecture	General Idea about Body fluids	Lecture Laboratory	Attendance Daily exam
7	2practical+2 theoretical	Understand the lecture	Platelet, Definition, Function	Lecture Laboratory	Attendance Daily exam
8	2practical+2 theoretical	Understand the lecture	Erythropoiesis, Homeostasis, Death and Disposal.	Lecture Laboratory	Attendance Daily exam
9	2practical+2 theoretical	Understand the lecture	Heart Physiology	Lecture Laboratory	Attendance Daily exam
10	2practical+2 theoretical	Understand the lecture	Vascular (Blood Vessels) Physiology	Lecture Laboratory	Attendance Daily exam
11	2practical+2 theoretical	Understand the lecture	Lymphatic Physiology	Lecture Laboratory	Attendance Daily exam
12	2practical+2 theoretical	Understand the lecture	Cell Physiology	Lecture Laboratory	Attendance Daily exam
13	2practical+2 theoretical	Understand the lecture	Blood Physiology	Lecture Laboratory	Attendance Daily exam
14	2practical+2 theoretical	Understand the lecture	Blood: Composition Specific Functions of each Compartment	Lecture Laboratory	Attendance Daily exam
15	2practical+2 theoretical	Understand the lecture	RBCs: Definition, Structure, and Normal Value	Lecture Laboratory	Attendance Daily exam
<b>Second Semester</b>					
1	2practical+2 theoretical	Understand the lecture	Digestive Physiology GIT: Part General Function, Food	Lecture Laboratory	Attendance Daily exam

			Movement, and Contr		
2	2practical+2 theoretical	Understand the lecture	Digestive Physiology GIT Chemical Digesti Absorption, and Contr	Lecture Laboratory	Attendance Daily exam
3	2practical+2 theoretical	Understand the lecture	Digestive Physiology Accessory Organs: Secretion and Their R in Digestion. Secretio Control.	Lecture Laboratory	Attendance Daily exam
4	2practical+2 theoretical	Understand the lecture	Digestive Physiology GIT: Part General Function, Food Movement, and Contr	Lecture Laboratory	Attendance Daily exam
5	2practical+2 theoretical	Understand the lecture	Digestive Physiology GIT Chemical Digesti Absorption, and Contr	Lecture Laboratory	Attendance Daily exam
6	2practical+2 theoretical	Understand the lecture	Digestive Physiology Accessory Organs: Secretion and Their R in Digestion. Secretio Control.	Lecture Laboratory	Attendance Daily exam
7	2practical+2 theoretical	Understand the lecture	Urinary Physiology: General Functions of U	Lecture Laboratory	Attendance Daily exam
8	2practical+2 theoretical	Understand the lecture	Role of Kidney in Uri Formation and Maintenance of Bod Fluids	Lecture Laboratory	Attendance Daily exam
9	2practical+2 theoretical	Understand the lecture	Urinary Tract: Parts a Function. Urine Hemodynamic and Control.	Lecture Laboratory	Attendance Daily exam
10	2practical+2 theoretical	Understand the lecture	Endocrine Physiology Endocrine Glands Typ and Secretion.	Lecture Laboratory	Attendance Daily exam
11	2practical+2 theoretical	Understand the lecture	Reproductive Physiolo	Lecture Laboratory	Attendance Daily exam
12	2practical+2 theoretical	Understand the lecture	Female Sex Physiolog Function of Genital Organs	Lecture Laboratory	Attendance Daily exam
13	2practical+2 theoretical	Understand the lecture	Muscles Physiology Types and Functions	Lecture Laboratory	Attendance Daily exam
14	2practical+2 theoretical	Understand the lecture	Nervous Physiology: Neuroglia: Definition, Types, and Function	Lecture Laboratory	Attendance Daily exam
15	2practical+2 theoretical	Understand the lecture	Generation of Action Potential. Neuronal Conduction: Types and Speed.	Lecture Laboratory	Attendance Daily exam

## 11. Course Evaluation

The following evaluation methods are adopted:

1. Theoretical and practical tests.
2. Reports.
3. Attendance and discussion.

The grades are distributed as follows:

- 1- Two monthly exams with a score of 20 points.
- 2-5 marks for activity and attendance.
- 3- 15 marks for the practical part, so the pursuit mark is 40.
- 4- The final exam score is distributed (35) points for the theoretical part and (25) points for the practical part, so the final score is 100.

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Not found
Main references (sources)	Human Physiology: An Integrated Approach human physiology text world-wide. The 8th Edition (2011)
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	