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
Signature:
Prof. Moez Hassan Mohammed

Approval of the Dean
Prof. Mohsen Fadel Mohsen Al-Birmani

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 Biostatics	1	2
Third/ Semester		Histopathology/1	2	2

1				
Third/ Semester 1		Haematology/1	2	2
Third/ Semester 1		Medical Mycology	2	4
Third/ Semester 1		Metabolic Disorders	2	4
Third/ Semester 1		Medical Genetics/1	2	4
Third/ Semester 1		Immunology/1	2	4
Third/ Semester 1		Advanced Laboratory Techniques	2	2
Third/ Semester 1		Computer Applications/1	1	2
Third/ Semester 2		Histopathology/2	2	2
Third/ Semester 2		Haematology/2	2	2
Third/ Semester 2		Medical Virology	2	4
Third/ Semester 2		Clinical Endocrinology	2	4
Third/ Semester 2		Medical Genetics/2	2	4
Third/ Semester 2		Immunology/2	2	4
Third/ Semester 2		Analytic Biostatistics	1	3
Third/ Semester 2		Computer Applications/2	1	2
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
Fourth		English language	1	-
Fourth		Laboratory Management	1	-
Fourth		Professional Ethics	1	-
Fourth		Graduation Project	-	5

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
Professor	5				1	4
Assist. Prof.	2				2	-
Lecturer	9				3	6
Assist. Lecturer	38				36	2
Total	54				42	12

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.

Course Description Form(2024-2025)

1. Course Name:
Medlcal Genetics
2. Course Code:
3. Semester / Year:
Semester
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: Abbas Hussein Mugheer Email: dr.abbas.hussein@alsafwa.edu.iq
8. Course Objectives
Course Objectives At the end of the academic year, the student should be able to: 1. Definition of medical genetics and its importance. 2-Knowing and understanding cell division. 3-Knowledge of the cell cycle and the importance of checkpoints 4. Know and understand the structure of chromosomes. 5-Distinguishing between euchromatin and heterochromatin 6- Know and understand how chromosomes are duplicated and isolated during cell division. 7- Knowing how and why it is important to perform a karyotyping. 8. Know and understand chromosomal abnormalities. 9. Knowing and understanding inheritance patterns and their relationship to hereditary diseases. 10-Knowing the family pedigree, its importance and symbols 11-Knowing the genetic basis for inheriting diseases linked to the X chromoson
9. Teaching and Learning Strategies

Strategy	1. Providing students with the basics and supporting topics related the pre-skills learning outcomes. 2. Applying the topics studied in theoretical lessons on the practi level. 3. Asking students to identify the types of mutations and types

	inheritance patterns.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First Semester					
1	2practical+2 theoretical	Understand the lecture	**Introduction to Medical genetics**	Lecture Laboratory	Attendance Daily exam
2	2practical+2 theoretical	Understand the lecture	Cell Division, Mitosis, Meiosis	Lecture Laboratory	Attendance Daily exam
3	2practical+2 theoretical	Understand the lecture	Cell cycle check point	Lecture Laboratory	Attendance Daily exam
4	2practical+2 theoretical	Understand the lecture	The chromosome, , structure , karyotyping	Lecture Laboratory	Attendance Daily exam
5	2practical+2 theoretical	Understand the lecture	Euchromatin , Heterochromatin and nucleosome	Lecture Laboratory	Attendance Daily exam
6	2practical+2 theoretical	Understand the lecture	Chromosome replication , segregation	Lecture Laboratory	Attendance Daily exam
7	2practical+2 theoretical	Understand the lecture	The chromosome abnormalities	Lecture Laboratory	Attendance Daily exam
8	2practical+2 theoretical	Understand the lecture	Genetic disease	Lecture Laboratory	Attendance Daily exam
9	2practical+2 theoretical	Understand the lecture	Family pedigree ,symbols	Lecture Laboratory	Attendance Daily exam
10	2practical+2 theoretical	Understand the lecture	Patterns of inheritance of Mendel's laws	Lecture Laboratory	Attendance Daily exam
11	2practical+2 theoretical	Understand the lecture	Dominant inheritance	Lecture Laboratory	Attendance Daily exam
12	2practical+2 theoretical	Understand the lecture	Recessive inheritance	Lecture Laboratory	Attendance Daily exam
13	2practical+2 theoretical	Understand the lecture	The genetic basis of sex X – linked inheritance	Lecture Laboratory	Attendance Daily exam
14	2practical+2 theoretical	Understand the lecture	Another type of gene inheritance	Lecture Laboratory	Attendance Daily exam
15			Exam		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- monthly exam 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)	Vogel and Motulsky's: Human Genetics Problems a Approaches 4th Edition (2010)
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	