Ministry of Higher Education and Scientific Research
Supervision and evaluation device
Department of Quality Assurance and Academic Accreditation
Accreditation Department

Academic program and course description guide

2024

Introduction

The educational program is considered a coordinated and organized package of academic courses that includes procedures and experiences organized in the form of academic vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and .programs such as the external examiner program

The description of the academic program provides a brief summary of the main features of the program and its courses, indicating the skills that students are working to acquire

based on the objectives of the academic program. The importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and the teaching staff participates in writing it under the supervision of the scientific .committees in the scientific departments

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the latest developments in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, quarterly), in addition to adopting the description of the academic program circulated according to the book of the Department of Studies, M. 3/ 2906 on 3/5/2023 with regard to programs that adopt the Bologna .Process as a basis for their work

In this area, we can only emphasize the importance of writing descriptions of academic .programs and courses to ensure the smooth conduct of the educational process

Concepts and terminology

Description of the academic program: The description of the academic program provides a brief summary of its vision, mission, and objectives, including an accurate .description of the targeted learning outcomes according to specific learning strategies

Course Description: Provides a necessary summary of the most important characteristics of the course and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the available learning .opportunities. It is derived from the program description

<u>Program Vision:</u> An ambitious picture for the future of the academic program to be a .developed, inspiring, motivating, realistic and applicable programme

The program's mission: It briefly explains the goals and activities necessary to achieve .them, and also defines the program's development paths and directions

<u>:Program objectives</u>

These are statements that describe what the academic program intends to achieve .within a specific period of time and are measurable and observable

Curriculum structure: All courses/study subjects included in the academic program according to the approved learning system (semester, annual (Bologna) track, whether it is a ministry requirement), a university college, and a scientific department with multiple .study units

<u>Learning outcomes:</u> A consistent set of knowledge, skills, and values that the student has acquired after successfully completing the academic program. The learning outcomes for each course must be determined in a way that achieves the program's .objectives

<u>Teaching and learning strategies</u>: They are the strategies used by the faculty member to develop the student's teaching and learning, and they are plans that are followed to reach the learning objectives, that is, they describe all curricular and extracurricular .activities to achieve the learning outcomes of the program

<u>Academic program description form</u>

Name of the university :- Middle Technical University

:Mansour Al-- Medical Technical Institute -Scientific Department

Department :- Forensic Evidence Techniques

Name of the academic or professional program: Forensic Diploma Name of final certificate: Technical Diploma in Forensic Techniques

Academic system: annual

Description preparation date: 20/5/2024

Date of filling the file: 20/5/2024

Signature: Signature

Name of department head Dr. Batoul Abdul Jabbar Hussein

Name of Scientific Assistant Eng. Dr . Abd-el-Kader

Date: Date

Check the file before

Division of Quality Assurance and University

Authentication of the Dean

Program vision-1
The graduate will be qualified to work in governmental and private institutions using .high technologies
Program message -2 .

This academic program description provides a necessary summary of the most important characteristics of the program and the learning outcomes that the student is expected to achieve, demonstrating whether he or she has made the most of the available opportunities.

.It is accompanied by a description of each course within the program

Program objectives -3
Preparing qualified technical personnel to work in the areas of collecting forensic evidence samples and examining them in specialized technical laboratories located in government institutions, including the Ministry of Health and the Ministry of Interior, in .addition to the possibility of working in private sector institutions in this field

Program accreditation -4
Government accreditation

Other external influences -5

Program structure -6

*Notes	Percentage	Unit of study	Number of courses	Program structure
				Enterprise requirements
				College requirements
				Department requirements
				summer training
				Other

Program description -7

Credit hours		Name of the course or course	Course or course code	Year/level
Practical	Theory	Biology 2		First
3	2			
			Expected learning-8 outcomes of the program	
			Knowledge	
			Learning outcomes 1	Statement of learning outcomes 1
			Skills	
			Learning outcomes 2	Statement of learning outcomes 2
			Learning outcomes 3	Statement of learning outcomes 3
			Value	
			Learning outcomes 4	Statement of learning outcomes 4
		Learning outcomes 5	Learning outcomes 5	Statement of learning outcomes 5

Teaching and learning strategies-9
In-person (traditional) education, e-learning using the Power Point method, using the -:smart board and the following applications Classroom-1 Google meet-2 You tube-3

.Free conference-4
Evaluation methods-10
.Oral and written tests-1 Semester and final exams and daily evaluation-2 .

The teaching staff-11					
Faculty members					
preparation of the teaching staff		special requirements/skills ((if any	specialization		Academic rank
lecturer	angel		private	Public	
	✔	thirty years of experience	Biotechnology	Genetic Engineering &Biotechnology	Assistant Professor

Professional development
.Orienting new faculty members-1 Attending with them and giving them advice on how to manage the classroom and -2 .compose exam questions
Professional development for faculty members
Attending conferences, development courses in the specialty, seminars and scientific .workshops

Acceptance criterion-12

Central admission / scientific / biological branc-1 .

GPA + student's interest in the scientific department-2 .

The most important sources of information about the program-13

.Vocabulary determined by the Deans' Committee in the scientific specialty-1

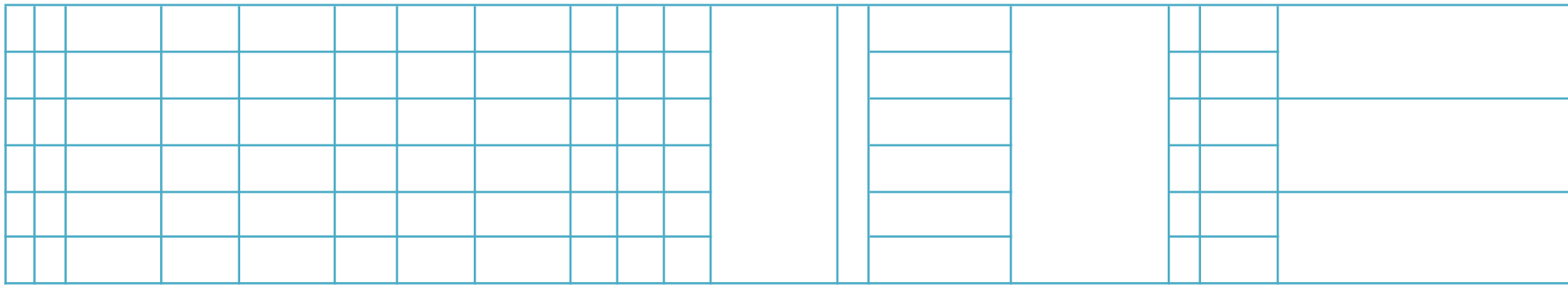
Teaching lectures from scientific sources and the Internet-2 .

Program development plan-14

Every year, vocabulary is added and modified according to scientific developments in-1 .the field of specialization

The curricula were updated this year to keep pace with scientific development in the-2 .corresponding universities

Program skills chart																
Learning outcomes required from the programme																
Value				skull				Knowledge				Essential or optional	Course Name	Course Code		Year /level
C4	C3	C2	C1	B4	B3	B2	B1	A4	A3	A2	A1					
sense of responsibility	training	sincerity	honesty	speed	skill	Rescue	technique	√	√	√	passing the program Successfully		Essential	(Biology(2		First



Course description form

(Course Name // Life Sciences (2-1
//Course code -2
Semester/year/First/ first year-3
The date this description was prepared // 20/5/2024-4
Available forms of attendance // classroom / laboratories-5
Number of study hours (total) / Number of units (total) Number of hours (5) hours Number-6 of study units (5) units
Name of the course administrator-7
Mohammed Rafeeq Ali E-mail mohammed-rafeeq@mtu.edu.iq
Course objectives -8
By the end of this course the student will be able to:- By the end of this course the **-:student will be able to** **Understands the meaning of molecular biology and its relationship to other -1** **.sciences** **.Learns how to use PCR and Electrophoresis -2** **.Know & understand the Types of genetic disease-3** **.Know & understand the categories of mutations -4**

Teaching and learning strategies -9

Preparing intermediate staff who specialize in forensic evidence by obtaining a degree in the specialty of forensic evidence, through which they can work in hospitals and -:forensic medicine. As for the nature of work in this field, it is as follows
Collecting forensic evidence and examining it in specialized technical laboratories-1 located in government institutions, including the Ministry of Health and the Ministry of .Interior, in addition to the possibility of working in private sector institutions in this field
Working in specialized forensic medicine laboratories and searching mass graves to-2 extract bones for the purpose of DNA testing and the return of unidentified bodies to .their families after comparison

Course structure -10

Evaluation method	Learning method	Name of the unit or topic	Required learning outcomes	hours	week
Discussion Interventions with directed questions	Lecture PowerPoint presentation	what is the meaning-1 of molecular biology and Relationship to other biological .sciences	Knowing the meaning of molecular biology and the nature of its relationship with the sciences .interfering with it	2 theoretical + 3 practical	1
Oral self-tests And discussion	Lecture power point presentation Practical training experience with film screening	Techniques of .molecular biology	Understanding molecular biology techniques and the nature of their medical and .laboratory work	2 theoretical + 3 practical	2
Discussion	Lecture, power point presentation, practical training in the	Polymerase chain-1 .reaction Application of PCR -2	Learns about the importance of working with a PCR device and what its scientific and practical .applications	2 theoretical + 3 practical	3

	laboratory(PCR experience Show a movie				
Oral self-tests And discussion	Power point presentation lecture Practical training in the laboratory ((PCR experience Show a movie	Polymerase chain-1 .reaction Application of PCR -2	Learns about the importance of working with a PCR device and what its scientific and practical applications	2 theoretical + 3 practical	4
Oral examination and .discussion	The lecture, power point presentation, practical training in the laboratory on the device to separate DNA .bands	.Electrophoresis -1 Application of -2 .Electrophoresis	learns how to perform electrophoresis after separating the DNA	2 theoretical + 3 practical	5
Written pre-test, oral self-tests and discussion	The lecture, power point presentation, practical training in the laboratory on the device to separate DNA .bands	.Electrophoresis -1 Application of -2 .Electrophoresis	Learns and understands the uses of this technology	2 theoretical + 3 practical	6
Oral examination and discussion	Lecture, power point presentation, practical training in the laboratory, illustrative film	Define Genetic Disease .and reasons	Knows what genetic diseases are and their .causes	2 theoretical + 3 practical	7
Oral and written examination and .discussion	Lecture, power point presentation, practical training in the laboratory, watching slides of chromosomes	Chromosomal diseases(X) Chromosomal diseases(Y	Diseases resulting from chromosomal abnormalities	2 theoretical + 3 practical	8
Oral and written examination and discussion	Lecture, power point presentation, practical training in the laboratory, watching a movie	Co-dominant-1 inheritance disorders ((Co-dominant Mitochondrial -2 inheritance	Learn about other types of genetic diseases	2 theoretical + 3 practical	9
Oral exam And discussion	Lecture, power point presentation, practical training in	Mutations ((occurs. Result	Understands what mutations are and why they occur	2 theoretical + 3 practical	10

	the laboratory, watching a movie				
Written test	**Lecture, power point presentation, practical training in the laboratory, watching a movie**	**categories of mutations**	**Understands mutations, whether physical or sexual**	**2 theoretical + 3 practical**	11
Discussion written test	**Lecture, power point presentation, practical training in the laboratory, watching a movie**	**Causes of Mutations**	**Learns how to distinguish between mutations**	**2 theoretical + 3 practical**	12
Discussion	**Lecture, power point presentation, practical training in the laboratory, watching a movie**	**Gene therapy& Types**	**Understands what a gene is and what gene therapy is and its types**	**2 theoretical + 3 practical**	13
Self-test	**Lecture, power point presentation, practical training in the laboratory, watching a movie**	**Method of Gene therapy**	**Learns methods of introducing gene therapy into the body**	**2 theoretical + 3 practical**	14
Discussion	**Lecture, power point presentation, practical training in the laboratory, watching a movie**	**Warning of gene therapy**	**Understands the risks of gene therapy**	**2 theoretical + 3 practical**	15

Course evaluation -11	
Oral exams, written exams, interrogations, final exams, and daily evaluation	
Learning and teaching resources-12	
Educational bag	Required textbooks (methodology, if (any
	Main references ((sources
Molecular Biology, Third Edition, provides a thoroughly revised,-1 invaluable resource for college and university students in the life .sciences, medicine and related fields Understanding PCR,A Practical Bench-Top Guide.Book • -2 2016 Electrophoresis: The Basics (The A Basics Series) 1st -3 Edition .by D. M. Hawcroft Author Mutation Detection First Edition.by Richard G. H. Cotton -4 .Author -5 https://www.amazon.com/Gene-Therapy-Therapeutic-Mechani .sms -6 https://www.amazon.com/MTHFR-Gene-Therapy-Demystified- .Genetic/dp/1079789642/ref -7 https://www.amazon.com/Handbook-Therapy-Proof-Concept-C ?ommercialization/dp/1032257970/ref=sr_1_fkmr2_1	Recommended supporting books and references (scientific journals, (…reports
websites	Electronic references, Internet sites