Academic Program Description Form

University Name: Middle Technical University.

Faculty / Institute: Institute of Medical Technology – Al-Mansour.

Scientific Department: ciminal and forensic techniques

Academic or Professional Program Name: Diploma in criminal and forensic techniques

Final Certificate Name: Diploma in criminal and forensic techniques

Academic System: course

Description Preparation Date: 2024/3/20

File Completion Date: 2024/3/20

Signature:	**Signature:**
Head of Department Name: Batool Abdul-Jabbar Husain	**Scientific Associate Name: Abdul Qader Rumaid**
Date: 20--3-2024	**Date: 20-3-2024**

The file is checked by:

Department of Quality Assurance and University Performance:

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the dean

1. Program Vision

2. Program Mission
This academic program description provides a necessary summary of the most important characteristics of the program and the learning outcomes expected of the student 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

3. Program Objectives
Preparing qualified technical staff to work in the areas of forensic evidence collection and examination 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.

Academic Program Description Form

University Name: Middle Technical University.

Faculty / Institute: Institute of Medical Technology – Al-Mansour.

Scientific Department: health Administration techniques

Academic or Professional Program Name:

Final Certificate Name:

Academic System:

Description Preparation Date:

File Completion Date:

Signature:	**Signature:**
Head of Department Name: Batool Abdul-Jabbar Husain	**Scientific Associate Name: Mohammed Khalid Hussein**
Date: 2-5-2024	**Date: 2-5-2024**

The file is checked by:

Department of Quality Assurance and University Performance:

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Approval of the dean

4. Program Accreditation
Ministry of Higher Education and Scientific Research / Scientific Supervision and Evaluation Authority

5. Program external influences
Scientific field visits to institutions specialized in the field of collecting and examining forensic evidence, including (the Forensic Medicine Department / the Ministry of Health / the Forensic Evidence Department / the Ministry of the Interior and the International Criminal Police Organization (Interpol)

6. Program Structure

Program Structure	Number of Courses	Credit hours	percentage	Reviews*
Institution Requirements				
College Requirements				
Department Requirements				
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	
			Theoretical	**Practical**
first - second course		First aid	2hr.	2hr.

8. Expected Learning Outcomes of the Program	
Knowledge	
Learning Outcomes 1	Learning Outcomes Statement 1
Skills	
Learning Outcomes 2	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies
Blended learning (traditional) and e-learning by (power point) and according to the following applications . . Class room- . google meet -

10.Evaluation Methods
1- Daily assessment, theoretical and practical tests in the laboratory. 2-- Semester and daily assessment (term and daily exams)

11.Faculty					
Faculty Members					
Academic Rank	**Specialization**		**Special Requirements / Skills (if applicable)**	**Number of the teaching staff**	
	General	**Special**		**Staff**	**Lecturer**

Lecturer	Biology	Biotechnology			staff	

Professional Development
Mentoring new faculty members
Professional Development of faculty members
Attending scientific courses, seminars and workshops

12.Acceptance Criterion
- Central admission / scientific - GPA + student's interest in the scientific department

13.The most important sources of information about the program
1- Vocabulary determined by the Deans' Committee in the scientific specialty 2- Teaching lectures from scientific sources and the Internet

14.Program Development plan

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
The First		Equipment techniques	Basic			X				X				X	

- **Please tick the boxes corresponding to the individual program learning outcomes under evaluation.**

Course Description Form

1. Course Name: Equipment techniques
2. Course Code:
3. Semester / Year: first year / couse
4. Description Preparation Date: 20-3-2024
5. Available Attendance Forms: Attendance in practical lecture laboratories and in theoretical lecture halls + virtual attendance in electronic classes
6. Number of Credit Hours (Total) / Number of Units (Total) 1 hour theoretical and (2) practical hours.
7. Course administrators name (Mohammed Khalid Hussein)
Name: Mohammed Khalid Hussein Email: mohammedkhalid@mtu.iq
8. Course Objectives:

Course Objectives	**1. Mastering the use of medical devices, such as a blood pressure device, through practical training in the laboratory.** **2. Technical skills in first aid for emergency situations**

9. Teaching and Learning Strategies

Strategy	**Daily exams** **- Presentation of slides and PowerPoint presentations of the latest scientific findings**

10. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2+1	Non-destructive tests, what is the purpose of the examination, the nature of defects and their sources,	non-destructive examination methods, and the visual inspection method.	a lecture+ power point	Discussion
2	2+1	Penetrating fluid method,	examination by magnetic particle method.	a lecture+ power point	Oral self-tests And discussion
3	2+1	Radiographic examination, short-wavelength electromagnetic examination,	X-ray examination, gamma ray examination	Lecture, presentation, power point, practical training in the laboratory	Discussion
4	2+1	Neutron radiological examination.	Neutron radiological examination.	Lecture, presentation, power point, practical training in the laboratory	Oral self-tests And discussion
5	2+1	Eddy current testing.	Eddy current testing.	Lecture, presentation,	Oral self-tests

				power point, practical training in the laboratory	And discussion
6	2+1	Ultrasound examination.	Ultrasound examination.	Lecture, presentation, power point, practical training in the laboratory	Written pre-test, oral self-tests and discussion
7	2+1	Optical microscope, types of optical microscopes and their structure, discrimination ability.	Optical microscope, types of optical microscopes and their structure, discrimination ability.	Lecture, presentation, power point, practical training in the laboratory	Written pre-test, oral self-tests and discussion
8	2+1	Disadvantages of optical lenses, methods of increasing discrimination ability,	use of filters in examination and photography with an optical microscope.	Lecture, presentation, power, practical training for first aid for burns, point	Oral and written examination and discussion
9	2+1	Basic properties of electrons, positive nature of electrons, methods of electronic emission, interaction between the electron beam and solid matter,	transmission electron microscope, electron lenses, design of the transmission electron microscope (TEM), aberrations in magnetic lenses.	Lecture, presentation, power, practical training for first aid for burns, point	Oral and written examination and discussion
10	2+1	Image clarity and discrimination ability of the objective lens,	geometric nature of electron diffraction	Lecture, presentation, power, practical training for first	Oral and written examination and discussion

		depth of field and depth of focus, electron diffraction technique,	patterns, types of electron diffraction patterns, standards for electron diffraction patterns	aid for burns, point	
	2+1	Image contrast in the transmission electron microscope, absorption contrast and fold contrast, diffraction contrast,	the method of forming and recording images and their types, choosing the appropriate amount of accelerating,	powerpoint presentation lecture,	A written test
11	2+1	Scanning electron microscope (SEM), the basis of the scanning electron microscope, image contrast mechanisms,	design and construction of the scanning electron microscope,	Lecture, presentation, power point,	discussion
12					
13	2+1	preparing samples for the scanning microscope,	applications of the scanning electron microscope, and the microelectronic probe analyzer.	lecture, presentation, power point	discussion
14	2+1	Microelectronic probe analyzer, design of microelectronic probe analyzer,	X-ray spectroscopy, quantitative analysis with microelectronic probe analyzer,	lecture, presentation, power point	self-test

1. Course Evaluation

2. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Educational bag**
Main references (sources)	Sparks and Taylor's Nursing Diagnosis Pocket Guide, Ralphs S.S., Lippincott Williams & Wikins.
Recommended books and references (scientific journals, reports…)	**First Aid Guide, World Health Organization, .Pdf**
Electronic References, Websites	**websites**