

Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation Dept.



Guide to Course Descriptions and Academic Programs for 2025

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Academic Program Specification Form for The Academic Year 2024

University: Northern Technical University

Faculty/Institute: Al-dour Technical Institute

Department: Medical Laboratory Technica's

Name of the academic or professional program: Technical diploma in Medical Laboratory Technica's

Name of the final certificate: Technical diploma in Medical Laboratory Technica's

Academic system: Curriculum system

File preparation date: 26-1-2025

File filling date: 26-1-2025

Signature

The name of the head of the department
Assist. Lec. Asmaa Abdulhaq Mohammed

Signature

Dean's Assistant For Scientific Affairs
Assist. Prof. Dr. Hanan Shahb Ahmad

Check the file by

Quality Assurance and University Performance Division

Name of the director of the Quality Assurance and University Performance Division:

Signature

Asst. Lecturer Hayder Ali Mohssn

Dean's endorsement

Assist. Prof. Dr. Maha Elttayef Jasim

Vision of program

The department seeks to prepare technicians specialized in medical tests and medical laboratory management, who are prepared to work in government health departments and benefit from them at the scientific and applied levels.

Program message

1. Preparing specialized technical, scientific and professional cadres within the field of laboratory work who are able to interact and keep pace with the development of scientific research and with a high level of responsibility towards the local and international community by providing medical services within laboratory specialization with all honesty and sincerity.
2. Working to refine the student's scientific and cognitive talents and benefit from them within laboratory specialization through training courses, workshops, and scientific visits to advanced health and educational institutions.

Program Goals

The department aims to graduate professional technical staff who have the ability to work in medical laboratories and perform simple routine laboratory tests and general biochemical examinations within various body fluids, as well as laboratory management and how to deal with and maintain laboratory equipment.

Program accreditation

The department is seeking programmatic accreditation.

External influences

Government and private sector

Program structure				
Program structure	Number of courses	Study unit	Percentage	Notes*
Foundation requirements	8	18	22.9%	Optional - Basic
Institute requirements	5	14	14.2%	Basic
Department requirements	22	64	62.9%	Optional - Basic
Summer training		Satisfied		Basic
Others	-	-	-	-

Program description				
Year / Level	Code of the course	Name of the course	Approved hours	
			Theoretical	Practical
First Level	MLT115	Analytical chemistry	1	2
	MLT113	Histology and cytological techniques	1	2
	MLT114	Medical laboratory instruments	1	2
	MLT118	Histology	1	2
	TID108	Safety in Labs. And workshop	2	-
	MLT117	Basic of nursing	1	2
	NTU102	Computer	1	1
	NTU101	English language	2	-
	NTU100	Human rights and democracy	2	-
	NTU103	Arabic language	2	-
	MLT119	Organic chemistry	1	2
	MLT112	Medical laboratory techniques	1	2
	TID109	Medical terminology	2	-
	MLT120	First aid	2	-
	MLT116	Blood transfusion	1	2
	TID106	Physiology	2	2
	TID110	Anatomy	2	2
	NTU104	Sport	1	1

Program description				
Year / Level	Code of the course	Name of the course	Code of the course	
			Theoretical	Practical
Second Level	MLT208	Biochemistry	١	٢
	MLT214	Basic of immunity	١	٢
	MLT206	Protozoa	١	٢
	MLT210	Basics of bacteriology	١	٢
	MLT209	Viruses	١	٢
	MLT205	Introduction to hematology	١	٢
	NTU204	Ethics	٢	-
	TID202	Statistics	٢	-
	NTU203	The crimes of the Baath regime in Iraq	٢	-
	MLT211	Clinical biochemistry	١	٢
	MLT216	Immunity and pathogenesis	١	٢
	MLT213	Worms	١	٢
	MLT210	Pathogenic bacteria	١	٢
	MLT212	Medical mycology	١	٢
	MLT217	Cellular blood diseases	١	٢
	NTU202	Arabic language	٢	-
MLT215	Research project	٢	-	

Expected learning outcomes of the program

Knowledge

1. Sufficient knowledge of most of the tests conducted in the laboratory, such as biochemical, immunological, and histological tests, and tests to detect various microorganisms such as bacteria, viruses, and parasites of various types, as well as learning about the physiology and anatomy of various body organs.
2. Correct and safe handling of chemicals, laboratory equipment and laboratory tools used within medical laboratories.
3. Learn safety procedures to avoid risks that may occur during laboratory work, as well as first aid and methods of applying it in emergency situations.
4. Correct and safe handling of various samples received into the medical laboratory to obtain the best results

Skills

1. Identify the various types of laboratory devices and equipment, how they work, and methods of maintaining them for the purpose of sustaining them for long periods.
2. Learn how to manage medical laboratories in a manner consistent with the accuracy of results and the speed of their completion, which ultimately benefits the patient's health.
3. Identify the methods and mechanisms for collecting various samples and ways to preserve them until specific tests are performed on them.
4. The ability to organize laboratory work and how to distribute tasks among individuals and departments of the medical laboratory.

Values

1. Enriching the student with the concepts and foundations of medical laboratory management.
2. Analyzing the problems and obstacles facing laboratory work and how to avoid their occurrence as much as possible.
3. Honesty in conducting tests and confirming information about laboratory samples and the safety of laboratory equipment to ensure obtaining accurate results.
4. Humane treatment of special medical cases in a way that preserves their dignity.

Teaching and learning strategies

1. Explaining the scientific course in detail, using different means of explanation.
2. Seminars focusing on the latest scientific developments related to the course.
3. Field visits to medical institutions for the purpose of examining various disease cases and laboratory methods for diagnosing them.

Evaluation methods

1. Exams (weekly, monthly, daily, and the end-of-year exam), both theoretical and practical.
2. Providing monthly reports in various academic courses
3. Summer training

Education Institution

Faculty members

Academic Degree	Specialization		Special requirements /skills		Faculty members	
	Major	Specialization			Staff	Lecturer
Assistant Professor	Biology	Physiology			٢	
Lecturer	Biology	Physiology			٢	
Lecturer	Biology	Molecular genetics			1	
Assistant Lecturer	Biology	Physiology			١	
		medical microbiology			١	
Assistant Lecturer	Applied science	Pathological analysis			2	
High diploma	science college	Pathological analysis			1	

Professional development
Orienting new faculty members
Participation in courses focusing on the integrity of the Arabic language, the nature of administrative work, and specialized courses within the field of laboratory work and the research field, in addition to courses on methods and validity of teaching.
Professional development for faculty members
<ol style="list-style-type: none"> 1. Participation in local and international conferences 2. Participation in applied courses and workshops within the department's specializations
Acceptance standard
Students graduating from middle school are accepted through the central admission system on the basis of:
<ol style="list-style-type: none"> 1. Branch (scientific) 2. Average score

The most important sources of information about the program
<ol style="list-style-type: none"> 1. The website of the university and institute 2. University guide 3. Central Library 4. References and sources for the institute and the department 5. The World Wide Web
Program development plan
<ol style="list-style-type: none"> 1. Cooperation with various local and international universities 2. Updating the curriculum for courses in line with scientific development 3. Cooperation between local universities through postgraduate student's discussions 4. Cooperation with the Ministry of Health departments by supplying medical and technical personnel to teach in the department

Program skills chart															
				Learning outcomes required from the program											
Year / Level	Code of course	Name of course	Basic or Optional	Knowledge				Skills				Values			
				1A	2A	3A	4A	1B	2B	3B	4B	1C	2C	3C	4C
First Level	MLT115	Analytical chemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT113	Histology and cytological techniques	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT114	Medical laboratory instruments	Basic		✓	✓		✓	✓		✓	✓	✓		
	MLT118	Histology	Basic	✓			✓				✓		✓		
	TID108	Safety in Labs. And workshop	Basic		✓	✓	✓				✓	✓	✓		
	MLT117	Basic of nursing	Basic			✓		✓						✓	

	NTU102	Computer	Basic						✓			✓	✓		
	NTU101	English language	Basic												
	NTU100	Human rights and democracy	Basic												✓
	NTU103	Arabic language	Basic												
	MLT119	Organic chemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT112	Medical laboratory techniques	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TID109	Medical terminology	Basic												
	MLT120	First aid	Optional	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT116	Blood transfusion	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TID106	Physiology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	TID110	Anatomy	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	NTU104	Sport	Optional												

Program skills chart																
				Learning outcomes required from the program												
Year / Level	Code of course	Name of course	Basic or Optional	Knowledge				Skills				Values				
				1A	2A	3A	4A	1B	2B	3B	4B	1C	2C	3C	4C	
Second Level	MLT208	Biochemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MLT214	Basic of immunity	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MLT206	Protozoa	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MLT210	Basics of bacteriology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MLT209	Viruses	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	MLT205	Introduction to hematology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	NTU204	Ethics	Basic										✓	✓	✓	✓
	TID202	Statistics	Basic									✓	✓			

	NTU203	The crimes of the Baath regime in Iraq	Basic												✓
	MLT211	Clinical biochemistry	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT216	Immunity and pathogenesis	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT213	Worms	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT210	Pathogenic bacteria	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT212	Medical mycology	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	MLT217	Cellular blood diseases	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	NTU202	Arabic language	Basic												
	MLT215	Research project	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓