

Northern Technical University
Technical Engineering College Mosul
Department of Medical Instrumentation Technology Engineering
Master degree program in Medical Instrumentation Technology Engineering

About the program:

➤ **Program Aim:**

The Master of technology in Medical Instrumentation Technology Engineering prepares graduate students to:

- Demonstrate independent learning, which is necessary in order to update their skills in a changing workplace and economy.
- Successfully formulate solutions to current technical problems in medical instrumentation engineering field or related disciplines.

➤ **The program's student learning outcomes are:**

- Tools and Techniques: The ability to utilize state-of-the-art tools and techniques in the field of medical instrumentation technology engineering.
- Depth: A depth of knowledge in a specialty area of medical instrumentation technology engineering.
- Research: The ability to perform independent research.

➤ **Mode and Duration of Study**

- The medical instrumentation technology engineering master's program extends over a two academic years. Courses are offered through two semesters during the first academic year. In the second academic year, the student required to conduct thesis research.

➤ **Medium and Course Assessment**

- The master degree program will be given in English.
- Besides the on campus, online coursework and a list of suggested readings will be provided to help students to grasp the fundamental concepts of medical instrumentation technology engineering.
- Assessment of each course may include assignments, mid-term examinations, project papers, and course work, as well as a final examination, which is normally held at the end of each semester.

➤ **Graduation Requirements**

- Students are required to successfully complete 12 courses (25 credits), and a research in the related subject (11 credits) to be a total of 36 credits.
- Those who have failed in more than the half of the courses in the first semester will be expelled from the program.

➤ **Curriculum Structure**

- Total credits required: 36
 - 25 credits for courses.
 - 11 credits for research project.

Northern Technical University
Technical Engineering College Mosul
Department of Medical Instrumentation Technology Engineering
Master degree program in Medical Instrumentation Technology Engineering

➤ **First Semester**

No.	Course No.	Subject	No. Hr/Week		No. of Units
			Theory	Practical	
1.	MTME 01	Advanced Medical Instrumentation 1	2	2	3
2.	MTME 02	Biomedical Signal Processing	2	2	3
3.	MTME 03	Advanced Communication Systems	2	2	3
4.	MTME 04	Advanced Digital Electronics	2	2	3
5.	MTME 05	Intelligent systems	1	2	2
6.	MTME 06	English Language 1	-	-	-
		Total	9	10	14

➤ **Second Semester**

No.	Course No.	Subject	No. Hr/Week		No. of Units
			Theory	Practical	
1.	MTME 07	Advanced Medical instrumentation 2	2	2	3
2.	MTME 08	Medical Image Processing	2	2	3
3.	MTME 09	Microcontrollers	2	2	3
4.	MTME 10	Selective Topic	2	-	2
5.	MTME 11	Research Methodology	-	-	-
6.	MTME 12	English Language 2		-	
		Total	8	6	11

Selective Topics

1.	Wireless Networks and Telemedicine Services
2.	Simulation and Modeling
3.	Internet of Things (IoT) in Medical Application
4.	Radiation and Laser Instrumentation
5.	Microprocessors
6.	Computer Interface