Yarmouk University

Hijjawi Faculty for Engineering Technology

Master's in Biomedical Systems and Informatics Engineering

Program Overview

A master's degree program in Biomedical Systems and Informatics Engineering (BME MS) has recently been established at Hijjawi Faculty for Engineering Technology at Yarmouk University, starting from the academic year 2023/2024. The program aims to graduate competencies with a high degree of professional advancement in various fields of biomedical engineering, especially the industrial sector, and who have the ability to conduct accurate scientific research and assume professional and ethical responsibilities in the field of biomedical engineering. The program also aims to provide academic, health and industrial institutions with qualified human resources with different sciences and skills to

develop these institutions and push the wheel of development to keep pace with the best and latest healthcare technologies. The program enables students to use computers in vital, health and medical fields, automate hospitals, use machine learning and artificial intelligence to understand diseases and find appropriate treatments for them, and design and maintain medical devices and prostheses. The program is characterized by its close connection with various other disciplines such as medicine, pharmacy, biology, computer science, medical physics, etc., which allows the admission of students from the disciplines of biomedical engineering, computer engineering, electrical engineering, electronics and communications engineering, chemical engineering, pharmacy, medical physics, life sciences, and computer science.

Program Objectives

The objectives of the educational program are to produce graduates as follows:

1. Professional advancement in various fields of medical engineering, particularly the industrial sector.

2. The ability to conduct accurate scientific research, continuous learning, and pursue postgraduate studies at the doctoral level efficiently.

3. Carrying out professional and ethical responsibilities and following and developing legislation and laws related to medical engineering. The program's outputs prepare graduates with different abilities, such as:

i. Conducting sound scientific research based on independent creativity in thinking and continuous learning.

ii. Apply knowledge of various basic sciences and engineering solutions to many issues in medical engineering.

iii. Effective communication with medical staff and patients.

iv. Apply the standards and ethics that govern medical engineering.

v. Preparing highly qualified engineers capable of research and development in the field of biomedical industries.

Program Importance

The importance of the main program lies in the fact that the nature of medical engineering is a very complex specialization, and its fields are diverse. It requires an electrical, mechanical, physical, medical, and other background. Accordingly, the program provides academic, health, and industrial sectors with qualified human resources that possess various sciences and skills to develop these sectors and push the wheel of development to keep pace with the best and latest in healthcare technology. Therefore, by this pluralism, this program opens the field for many disciplines to enroll in this program, not only graduates of medical engineering. What distinguishes this proposed program is its uniqueness in Jordan by offering the medical systems and biomedical informatics tracks. The following table shows the bachelor's degree graduates who can be accepted in this program and the number of Jordanian universities, as well as similar specializations in international and regional universities, can be accepted in this program.

Targeted Groups and Accepted Majors

The nature of the diversity of the field of medical engineering and its close connection with various other specializations such as medicine, pharmacy, biology, computer science, medical physics, and other medical, biological, and information sectors allows the admission of students from the following specializations:

• Biomedical engineering

• Computer Engineering

• Electrical engineering

• Electronics and Communications Engineering

• Chemical Engineering

• Pharmacy

• Medical physics

• Life sciences

• Computer science

Job Areas

Graduates can work in hospitals, medical centers, medical companies, and computer companies that develop medical programs and machine learning programs, in addition to vital and medical research centers, where the graduate can deal with high professionalism with hospital computing, maintenance, and design of medical devices and prostheses, and In addition, he/she understood the nature of diseases and their treatment through his/her involvement in research centers and universities due to his/her knowledge of biomedical informatics.

Credit Hours and Tuition Fees

Credit Hours: 34

Regular Program: 120 JOD per Credit Hour

International Program: 300 USD per Credit Hour

Study Plan Overview

The BME MS program is a 2-year program. The study program consists of 34 credit hours. For more information about the courses please view the Study Plan.

Contact Information

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