



Yarmouk University

**Faculty of  
Science**

## Master's in Medical Physics

### Program Overview

The master's program in medical physics at Yarmouk University started in 2020 to keep pace with scientific development in the field of applications of physics in medicine. It is considered one of the leading programs in Jordan and the region, as the program provides advanced education and practical training in the various fields of medical physics from a diagnostic and therapeutic standpoint.

## Program Objectives

- Provide students with a deep understanding of the basic principles of physics when applied in medicine and health care.
- Train students on the applications of physics principles and techniques in the field of medicine, including radiation therapy, diagnostic imaging, nuclear medicine, and other medical techniques.
- Educate students about the principles and practices of radiation protection, including the safe use of radiation in various industries such as health care, research, nuclear energy, and environmental monitoring.
- Enable students to assess and report risks associated with radiation exposure, including evaluating potential health effects and implementing strategies to reduce risks.
- Develop students' research skills, including the ability to design experiments, collect and analyze data, and draw evidence-based conclusions.
- Prepare students to work in the field of medical physics by providing them with the knowledge, skills, and experience necessary to succeed in this field.
- Promote commitment to continuous learning and professional development, and encourage students to keep pace with developments in the field of medical physics.
- Educate students about the importance of quality assurance in medical physics practices and ensure the accuracy and safety of medical procedures involving radiation and imaging techniques.

## Program Importance

The importance of the program lies in its keeping pace with the rapid progress in the field of medical physics and providing Jordan and the region with trained cadres of medical physicists to ensure the effective use of radiation in the medical field, health care and industry in a way that ensures the safety of patients and workers in the radiation field. The program is distinguished from other traditional programs in that it is an applied program that requires practical field training of 9 credit hours.

## Targeted Groups and Accepted Majors

Individuals who hold a bachelor's degree in physics, engineering, or related fields have a strong interest in applying their scientific knowledge to the field of health care. In addition, people who work in the field of medical physics and want to expand their scientific knowledge and develop their capabilities in this field

## Job Areas

- **Clinical Medical Physicist:** In hospitals, clinics, radiation therapy centers or medical imaging centers to ensure the safe and effective use of radiation and accurately deliver radiation doses to target areas and is responsible for quality assurance and calibration of equipment used in radiation oncology, diagnostic imaging and nuclear medicine.
- **Radiation Safety Officer:** in various settings such as hospitals, research facilities and industrial environments. Responsibilities include developing and implementing radiation safety programs, conducting radiation monitoring, and providing training on radiation safety practices.
- **Researcher:** In academic, research, or industry institutions where they can conduct research on new imaging techniques, treatment techniques, radiotherapy protocols, or radiation protection methods.
- **Academic teaching:** In academic institutions to teach courses in medical physics, radiation therapy, imaging technology, or related subjects.

## Credit Hours and Tuition Fees

33 credit hours in the comprehensive and thesis tracks.

Jordanian students: 100 JOD per credit hour.

International students: 300 USD per credit hour.

## Study Plan Overview

The study plan includes studying 7 compulsory courses, including: radiation physics, radiation therapy, medical imaging, health physics, nuclear medicine, radiobiology, anatomy and physiology. This is in addition to a group of elective courses. The student chooses 6 credit hours according to his or her desire to expand his knowledge in any of the fields of medical physics. The comprehensive track includes compulsory practical training for a total of 9 accredited hours, distributed equally across three modalities: medical imaging, nuclear medicine, and radiation therapy.



## Contact Information

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