

About Department

The department of Medical Imaging is one of the departments of the Faculty of Applied Health Sciences (FAHS) at the Hashemite University. It was established in 1998 and the first group of students was enrolled in the program in the academic year of 1999/2000. The number of students has increased from 24 students in the academic year of 1999/2000 to about 250 students in the academic year of 2016/2017. Currently, the faculty of the department include three assistant professors, one part-time lecturer with different specializations in the field of medical imaging. In addition, the department employed five highly qualified lab technicians who help in running different laboratory experiments and supervising students in different hospitals.

Rationale:

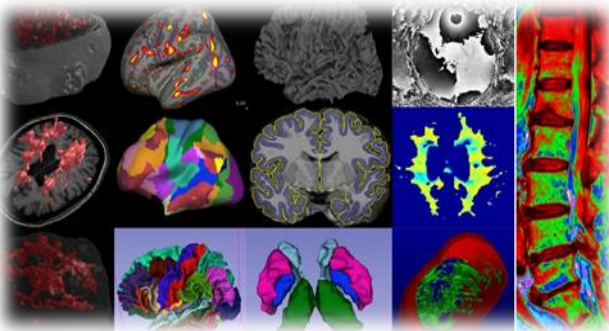
The department of Medical Imaging was established in need for highly skilled technologists who can carry out different basic and advanced imaging procedures professionally with strong theoretical and practical skills that allow them to become effective members of health care teams.

Vision

- The department of Medical Imaging aims to become a leading imaging program in the Hashemite kingdom of Jordan and in the region.
- The department of medical imaging is seeking the international accreditation.
- The short term vision of the department is to establish postgraduate programs in medical imaging by employing expert imaging specialists and sponsoring many students for higher degrees in highly reputation international universities.

Goals:

The goal of the program is to produce competent, skilled practitioners who can perform different imaging procedures in hospitals, clinics, research laboratories and industry, professionally. Furthermore, students are prepared to be good researchers to pursue their studies in the future.



Facilities

1. Radiation Physics Labs

The aim of the radiation physics laboratory is to study the interaction of charged particles and electromagnetic radiation with matter and also to study the important factors affecting the photon interactions including the incident photon energy, the density thickness and the atomic number of the medium. The experiments in this lab have been tested with GM tubes of different sensitive volumes and NaI (TI) scintillation detector with integrated computer spectrometer system. Experiments provide a traditional introduction to radiation physics emphasizing a study of the detectors properties plateau, characteristics counting statistics, GM dead time, detector efficiencies.

2. Radiographic Processing & Quality Assurance

The goal of this laboratory is to study the effect of exposure technique factors (kVp, mAs and source-to-image distance) on the image quality factors such as contrast, optical density, resolution, sharpness and distortion. X-ray unit and optical densitometer have been used to study the characteristic curve, inverse square law and reciprocity law of the radiographic films exposed to X-rays.



3. Radiography Clinic

Radiography Clinic has been established in the University's medical centre to assist in training the students in the area of conventional x-ray. This includes teaching the students the technical skills necessary to become members of the medical team, and teaching them how to implement some radiographic procedures such as patient positioning, image production, patient care and radiographic evaluation. Imaging procedures labs in the clinic include performing some imaging procedures for the skull, chest, pelvis, upper and lower extremities.



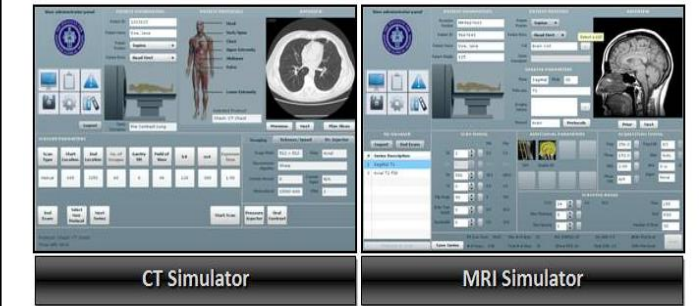
4. Quantitative Analysis of Medical Images

This lab is equipped with High performance and heavy duty computers installed with important image processing and analysis software packages such as *Matlab, JIM, SliceOmatic, Freesurfer, Statistical parametric mapping (SPM), FMRIB Software Library (FSL), ImageJ, MRICro, ITK-Snap, 3D Slicer, dtao, MIPAV, SepINRIA, mrconverter, DICOM sorter, DICOM viewer.*



5. Magnetic Resonance Imaging(MRI) & Computed Tomography (CT) labs

This lab has an MRI & CT simulators to demonstrate some MRI and CT procedures usually performed in hospitals.



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