

**Department of Radiological Sciences, College of Applied Medical Sciences,
IAU, Proposal for Postgraduate Program
Master's degree in Radiological Sciences**

College: Applied Medical Sciences

Department: Radiological Sciences

Degree: MSc

Program title: Master's degree in Radiological Sciences

Program Duration: 24 months

Credits hours: 30

Graduation requirements:

- Credit hour without a thesis 24. Master's thesis 6 hours
- Conducting research and submitting a master's thesis
- Defending of a master thesis project in front of a committee panel of internal and external examiners.

Program system: Program Courses and Master's degree thesis

Minor specialization: 3 tracks:

- Health Physics and Radiation Protection
- Medical Diagnostic Imaging
- Radiotherapy and dosimetry

Study plan:

The courses are distributed and assigned to be finished within the two-years of study are shown in the following plan:

**Master's degree Generic Courses
(First year Semesters I and II)**

TRACK 1

Health Physics and Radiation Protection

First Year Semester I

Course Number	Course Name	Credit Hours
MDRS 511	Radiological Pathophysiology	2
MDRS 512	Medical imaging systems	3
MDRS 513	Mathematical Methods for Radiological Sciences	2
MDRS 514	Medical Radiation Physics	3
Total Credit Hours		10

First Year Semester II

Course Number	Course Name	Credit Hours
MDRS 521	Radiobiology	2
MDRS 522	Research Methodology	2
MDRS 523	Radiation Protection	3
MDRS 524	Computer Applications in radiological Sciences	3
Total Credit Hours		10

Master's degree Specialty/Tracks Courses (Second year Semester III and IV)

TRACK 1

Health Physics and Radiation Protection Second Year, Semester III

Course Number	Elective courses*	Credit Hours
MDRS 531	Medical Health physics	2
MDRS 532	Environmental Health physics	2
MDRS 533	Radiation Metrology	2
Total Credit Hours		4

**Only two courses are allowed to be selected.*

Second Year, Semester IV

Course number	Course name	Credit hours
MDRS 550	Master's degree Thesis*	6

Master's degree Generic Courses (First year Semesters I and II)

TRACK 2

**Medical Diagnostic Imaging
First Year Semester I**

Course Number	Course Name	Credit Hours
MDRS 511	Radiological Pathophysiology	2
MDRS 512	Medical imaging systems	3
MDRS 513	Mathematical Methods for Radiological Sciences	2
MDRS 514	Medical Radiation Physics	3
Total Credit Hours		10

First year semester II

Course Number	Course Name	Credit Hours
MDRS 521	Radiobiology	2
MDRS 522	Research Methodology	2
MDRS 523	Radiation Protection	3
MDRS 524	Computer Applications in radiological Sciences	3
Total Credit Hours		10

Master's degree Specialty/Tracks Courses

Medical Diagnostic Imaging

Second Year, Semester III

Course Number	Elective courses*	Credit Hours
MDRS 534	Advance Molecular imaging	2
MDRS 535	Advance diagnostic imaging CT	2
MDRS 536	Advance diagnostic imaging MRI	2
MDRS 537	Advance diagnostic imaging ultrasound	2
Total Credit Hours		4

**Only two courses are allowed to be selected.*

Second year, Semester IV

Course number	Course name	Credit hours
MDRS 550	Master's degree Thesis	6

Master's degree Generic Courses (First year Semesters I and II)

TRACK 3

Radiotherapy and dosimetry

First year semester I

Course Number	Course Name	Credit Hours
MDRS 511	Radiological Pathophysiology	2
MDRS 512	Medical imaging systems	3
MDRS 513	Mathematical Methods for Radiological Sciences	2
MDRS 514	Medical Radiation Physics	3
Total Credit Hours		10

First year semester II

Course Number	Course Name	Credit Hours
MDRS 521	Radiobiology	2
MDRS 522	Research Methodology	2
MDRS 523	Radiation Protection	3
MDRS 524	Computer Applications in radiological Sciences	3
Total Credit Hours		10

**Master's degree Specialty/Tracks Courses
(Second year Semester III and IV)**

TRACK 3

**Radiotherapy and dosimetry
Second Year, Semester III**

Course Number	Elective courses*	Credit Hours
MDRS 538	Advance Radiotherapy	2
MDRS 539	Medical dosimetry	2
MDRS 540	Radiation Oncology	2
Total Credit Hours		4

**Only two courses are allowed to be selected.*

Second Year, Semester IV

Course number	Course name	Credit hours
MDRS 550	Master's degree Thesis*	6

Note: In the first year, all tracks have the same generic courses.