

**STUDY PLAN FOR THE CERTIFICATE OF THE
HIGHER SPECIALIZATION IN
(Diagnostic Radiology)**

plan number :15/11/97/NT

I-GENERAL RULES AND CONDITIONS:

- 1- This plan conforms to the regulations of granting the certificate of higher specialization in Medicine and Dentistry.
- 2- Only holders of a Bachelor degree in Medicine and Surgery or equivalent can be admitted to this program.

II- SPECIAL CONDITION: none.

III- DURATION OF STUDY AND TRAINING: Four years.

IV- THE STUDY PLAN:

- 1- Teaching /Training as shown below:-

YEAR	Field of study and Training
First	<u>Introduction to the basics of Diagnostic Radiology</u> 1- Radiological anatomy. 2- Physics of radiology. 3- Techniques and positioning in radiology.
Second	<u>Introduction to Diagnostic Radiology</u> 1- Gastrointestinal Imaging(1). 2- Genitourinary Imaging(1). 3- Ultrasound Scanning. 4- Conventional and Emergency Radiology

Third	<u>Diagnostic Radiology - 1</u> 1-Gastrointestinal Imaging(2). 2-Genitourinary Imaging(2).
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	<p>3-Computed Tomography Scanning(1).</p> <p>4-Angiography Scanning(1).</p> <p>5-Nuclear Medicine.</p> <p>6-Mammography</p> <p>7- Magnetic Resonance Imaging(1).</p>
Fourth	<p><u>Diagnostic Radiology - 2</u></p> <p>1-Gastrointestinal Imaging(3).</p> <p>2-Genitourinary Imaging(3).</p> <p>3-Computed Tomography Scanning(2).</p> <p>4- Magnetic Resonance Imaging(2).</p> <p>5-Angiography Scanning(2).</p>

2 - Passing a comprehensive examination at the end of the last teaching / training year (4th year).

3 - The description and duration of teaching / training specified in every teaching / training year as well the department, divisions ,and specialties where teaching /training takes place are integral parts of the plan.

Course Description

1 - Radiological Anatomy :

This course covers the study of the structures of the whole body systems through plain and imaging films. It also concentrates on characteristics and advantages of the different modalities in illustrating the anatomical details of the different structures of the body organs.

2 - Physics of Radiology :

This course covers the physics of radiation involving atomic structure, radiation types and their properties, radioactivity, half lives and radioactivity decay. It also covers the interaction of radiation with matter, radiation units, dosimetry, biological effects of radiation and radioisotopes. The course covers as well radiation in medicine involving the principles of diagnostic radiology, nuclear medicine, magnetic resonance imaging, ultrasound imaging and radiotherapy.

3 - Techniques and Positioning in Radiology :

This course covers the study of and training on all radiological procedures and techniques including their indications, contraindications and complications as well as side effects and doses of drugs used in radiology. It

also covers the study of positions used in the different imaging techniques performed in diagnostic radiology.

4 - Gastrointestinal Imaging - (1):

This course covers the study of and training on the procedures of gastrointestinal imaging including the ideal positioning for radiological diagnosis of diseases affecting each part of the digestive system, the properties of contrast media used to assess the esophagus, stomach, small and large bowel as well as the hepatobiliary system using the different imaging modalities.

5 - Genitourinary Imaging - (1):

This course covers the study of and training on the procedures, contrast media and patient care, preparation and positioning used in the radiological evaluation of the kidneys, ureters, and bladder in addition to the male and female genital organs. It also covers training on film reporting of the radiological manifestation of the different diseases affecting the genitourinary system.

6 – Ultrasound Imaging :

This course covers the study of and training on the utilization of ultrasonography in the diagnosis of diseases affecting the various body organs including basic principles of the technique, patient preparation, positioning, proper approach in performing the procedure and image interpretation and reporting.

7 - Conventional and Emergency Radiology :

This course covers the study of and training on imaging procedure of choice in usual and in emergency sittings including their indications, applications and interpretation. It also covers proper handling and management during imaging of patients particularly in sittings related to multiple trauma and acute abdomen.

8 - Gastrointestinal Imaging - (2) :

This course covers an advanced study of and training on imaging of the gastrointestinal tract including contrast media of the upper and lower gastrointestinal tract, cross sectional imaging of the gastrointestinal tract and the hepatobiliary system utilizing ultrasonography, computed tomography and magnetic resonance imaging.

9 – Genitourinary Imaging - (2) :

This course covers an advanced study of and training on genitourinary imaging involving the kidneys, ureters and bladder in addition to the male and female genital organs utilizing computed tomography and magnetic resonance. It covers as well the radiological manifestations of the different diseases of the genitourinary system.

10 - Computed Tomography Scanning - (1) :

This course covers the study of and training on the basics of the computed tomography scanning and the recent advances in imaging of the different body systems utilizing this modality. It also covers patient preparation for various imaging protocols and contrast media administration as well as reporting of images.

11 – Angiography - (1) :

This course covers the study of and training on the principle of angiography, procedures utilized, contrast media used, preparation and care of patients before, during and after angiography in addition to

techniques and approaches in performing the procedure, and the reporting of findings.

12 - Nuclear Medicine :

This course covers the study of and training on the principles of nuclear imaging, different kinds isotopes and tracers used and their indications. It also covers patient preparation, radioisotope administration, imaging technique as well as interpretation of various nuclear imaging performed and analysis of pathological findings.

13 – Mammography :

This course covers the study of and training on the principles of mammography including its physics and techniques, application, interpretation of finding and reporting. It also covers performing breast interventional ultrasound guided needle sampling and needle to localization techniques under mammography guidance.

14 - Magnetic Resonance Imaging - (1) :

This course covers the study of and training on magnetic resonance imaging including principles of imaging of different body systems using this modality, its indications and

advantages, patient preparation, imaging technique, interpretation of findings and reporting.

15 - Gastrointestinal Imaging - (3):

This course covers an advanced study of and training on cross sectional gastrointestinal imaging including the upper and lower gastrointestinal tract and the hepatobiliary tract involving performing the procedure, interpretation and reporting under supervision. It also covers training on gastrointestinal-related interventional radiology and stenting.

16 – Genitourinary Imaging – (3) :

This course covers an advanced study of and training on cross sectional genitourinary imaging including the kidneys, the ureters, the bladder and the male and female genital organs. This involves performing the procedure under supervision, interpretation of findings as well as reporting. It also covers the training on interventional genitourinary radiology including nephrostomy.

17 – Computed Tomography Scanning – (2) :

This course covers an advanced study of and training on specialized protocols of computed tomography scanning such as those of multislice machines and computed tomography angiography. This involves the principles of each procedure, patient preparation, techniques of the procedure, interpretation of findings and reporting.

18 – Magnetic Resonance Imaging – (2) :

This course covers an advanced study of and training on magnetic resonance imaging of the different body organ systems. This involves performing the whole procedure under supervision including patient preparation, application of the technique, interpretation of findings and reporting.

19 – Angiography – (2) :

This course covers an advanced study of and training on angiographic procedures of the vascular system and the heart including principles of the technique, its application, interpretation of findings and reporting. The trainee is expected to perform the procedure under supervision, to present his interpretation of findings, and to write up his interpretation in an official report.