COURSE SPECIFICATION

(Radiodiagnostic Technology)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Msc degree of Radiology program
(2) Department offering the programme:	Radiology Dpt.
(3) Department responsible for teaching the course:	Radiology Dpt.
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	28/6/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Radiodiagnostic Technology
(8) Course code:	RAD 529 RT
(9) Total teaching hours:	37.5

(B) Professional information

(1) Course Aims:

The broad aim of the course is to provide the students with the basic principles of different radiologic imaging modalities and their applications, in addition to enable the students to understand other new technologies in the field and how to use them in scientific researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A) Knowledge and Understanding

A1. Define the basic physics of the different imaging modalities.

A9. **Describe the different interventional radiological modalities: angiography, cholangiography, interventional procedures e.g. embolization.**

A10. Define and be Aware of radiation safety and protection measures.

A11 Describe best methods and protocols for enhancing patient safety & standardization of CT contrast media practice.

A12. Be aware of and recognize the national code of ethics, medico-legal aspects, malpractice and common medical mistakes.

B- Intellectual skills

B5. Assemble advanced imaging modalities, scientific methods, regular conference attendance and computer & internet for research purposes.

C-Professional/practical skills

C1. Apply the technical refinements in each imaging modality in order to establish the diagnosis with the highest accuracy and in the shortest time.

C2. Apply the contrast media and the isotopes in the optimal way regarding the dose and the time.

C6. Recognize limitations in knowledge and equipment and refer patients to an appropriately equipped facility.

C7. Perform the essential basic radiologic interventional procedures e.g US/CT guided biopsies.

D- Communication & Transferable skills

D2. Retrieve, manage and manipulate information by all means, including electronic means to be regularly updated with the recent technical innovations.

3) Course content:

Technique Subjects	Lectures	Clinical	Total Teaching Hours
1. Positioning of UL	0.5 hour	1hour	1.5 hours
2. Positioning of LL	0.5 hours	1hour	1.5 hours
3. Positioning of Chest and heart	0.5 hours	1hour	1.5 hours
4. Positioning of Axial skeleton	0.5 hours	1hour	1.5 hours
5. Positioning of Skull (1)	0.5 hours	1hour	1.5 hours
6. Positioning of Skull (2)	0.5 hours	1hour	1.5 hours
7. Esophagus & Stomach: a. Ba. Swallow & Ba. Meal. b. Plain X-ray c. CT	0.5 hours	1hour	1.5 hours
8. Small intestine: a. Ba. Study b. Plain X-ray c. CT & CT angiography d. New MRI	0.5hours	1hour	1.5 hours
9. colon: a. Ba. enema b. Plain X-ray c. CT & CT angiography d. US e. MRI	0.5hours	1hour	1.5 hours
10. Liver , spleen , pancreas a. CT & CT angiography **b.** US , MRI , MR angiography	1 hour	1.5 hour	2.5 hours

11. Biliary system: a. US, CT , MRI, MRA & MRCP	0.5hours	1hour	1.5 hours
12. Chest Positioning : a. Routine views b. Special views	1 hours	1hour	2 hours
13. CT chest & other methods of examinations: a. US. b. MRI c. Angiography.	1 hours	1hour	2 hours
14. Heart techniques**:** **a- X-ray** **b- MRI**	0.5 hour	1hour	1.5 hours
15. Renal system Techniques: 1- Kidney: a-KUB & IVP b-US, CT, CT urography, MRI & MR urography 2- Bladder (Cystography)& urether a. Descending b. Ascending c. Micturating d. CT & MRI. 3- Urethra: a. Ante grade Retrograde.	1.5hours	1.5 hour	3hours
16. Breast Techniques: a- Mammogram &US. b- MRI	1hour	1hour	2hours
17. Genital system Techniques: **a. Female genital system.** a) Plain X-ray b) CT c) US d) MRI b. **Male genital system**:	1hour	1hour	2hours
18. Vascular system Techniques: a) Doppler arterial b) Doppler venous c) CTA, DSA & MRA	1hours	1hour	2hours

19. Brain Techniques: a- CT & MRI b- Trans-fontanellar US, CT & MRI angiography	1hours	1.5 hour	1.5 hours
20. Spine Techniques: a) X-ray & CT b) MRI	0.5 hours	1hour	1.5 hours
21. Head & Neck Techniques: a) Plain x-ray, b) CT c) MRI	0.5 hour	1hour	1.5 hours

4) Teaching methods:

4.1. lectures

4.2. Meetings

4.3. Case presentations

4.4. Video demonstrations

5) Assessment methods:

5.1: Written examination for assessment of ILOs number A1, A9, A10
5.2: Structured oral examination for assessment of ILOs number: B1, A1.
5.3: OSCE examination for assessment of ILOs numberC1,C2, C6, C7, I1,I5.
5.4: MCQ examination for assessment of ILOs number A1, A9, A10.

5.5: Log book for activities for assessment of: mainly for assessment of practical & transferable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.
5.6: The supervisor requires certain assignments: meetings and case presentations that are evaluated and signed by the supervisor in the log book (without marks).
5.7: Meetings: the candidate should prepare and present at least one seminar in a topic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1:……week/month:……

Assessment 2:…… ……week/month:……

Assessment 3:……week/month:……

Assessment 4:……week/month:……

Percentage of each Assessment to the total mark:

Written exam: 60 %:

OSCE exam: 10%::

Structured oral exam: .30%::

MCQ: ----

Other types of assessment: ----

Other assessment without marks: log book

6) References of the course:

6.1: Hand books:

6.2: Text books: Textbook of Radiology and Imaging, David Sutton.

6.3: Journals: www. Radiographics.com

6.1: Websites: www.learning radiology.com

7) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- Facilities for image analysis
- Computers for data analysis
- Data show facilities
- Video demonstrators

Course coordinator:

D. Eman Abd El Salam

D. Nehal ElBatouty

Head of the department: Prof.Dr/ Mahmoud Abd Elshaheed Date: