



## COURSE SPECIFICATION

### (Musculoskeletal radiology)

Faculty of Medicine- Mansoura University

#### (A) Administrative information

(1) Programme offering the course:	MD 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:	Second 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:	Musculoskeletal radiology
(8) Course code:	RAD629BRTc
(9) Total teaching hours:	90

## **(B) Professional information**

### **(1) Course Aims:**

The broad aim of the course is to provide the students with the different radiologic imaging modalities used for musculoskeletal system examination, as well as the recent technical innovations and their application in the differential diagnosis of various diseases and their radiologic appearance.

### **(2) Intended Learning Outcomes (ILOs):**

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

#### **A) Knowledge and Understanding**

**A1. Describe the physics and technical principles of the different imaging modalities used in musculoskeletal system examination.**

**A2. Define the recent technical innovations in different imaging modalities and learn how to apply them to reach a final diagnosis.**

**A3. Demonstrate the anatomy in the different imaging modalities.**

**A4. Classify and describe the etiology, pathogenesis and clinical features of the different diseases and correlate them with their radiologic appearances.**

**A5. Differentiate between the appearances of the pathological conditions on the different imaging modalities and describe them efficiently in the case reports by all means: written oral and radiologic.**

**A6. Radiologic approach to emergency medicine and life threatening illnesses; non invasive and invasive intervention and pre and postoperative follow up.**

**A7. Review how to conduct efficiently and independently the assigned research issue.**

## **- Intellectual skills**

**B1. Integrate clinical information with radiological interpretation to reach the appropriate diagnosis/ differential diagnosis.**

**B2. Construct an algorithmic approach to any organ system pathology and follow it step by step ending with sonographic/CT guided biopsy taking and pathologic assessment.**

**B3. Design the initial course of management for critical emergencies and traumatized cases.**

**B4. Cooperate with the referring physician by all means to reach the proper treatment decision for the patient.**

**B5. Enhance leadership capabilities required for conducting a teamwork aim to achieve a certain research subject.**

**B6. Assemble available human and equipment resources in the field of study to achieve the search goals in a given time scale.**

**B7. Express ideas and scientific arguments in case reporting and problem solving debates.**

## **C-Professional/practical skills**

**C1. Analyze the available clinical and radiological data to decide the final diagnosis.**

**C2. Upgrade information about the recent advances in contrast media and isotopes as well as the safety measures to avoid their side effects.**

**C3 Provide the maximum protective measures to avoid the risks of radiation on the patients, workers and visitors.**

**C5. Retrieve, analyze and evaluate relevant and current data from literature, using information technologies and library resources and integrate them to formulate an evidence based problem solving approach in the research studies.**

**C6. Communicate clearly and effectively with the patients and their relatives regardless of their social backgrounds and respect their cultural beliefs.**

## D- Communication & Transferable skills

**D1. Utilize regular different electronic and practical means for life long continuous medical education (CME) through the medical profession.**

**D2. Demonstrate clearly medical and radiological opinions, recommend the imaging modality for further evaluation of the case when required to reach final diagnosis.**

**D3. Work effectively in teamwork and be willing to share all types of inter-professional activities and information.**

### 3) Course content.

Subjects	Lectures	Clinical	Total Teaching Hours
- AVN & Paget's	2.5	5	
- Metabolic & endocrine	2.5	5	
- Infection	2.5	5	
- Arthritis	2.5	5	
- Oncology	2.5	5	
- Bone marrow	2.5	5	
- Trauma	2.5	5	
- Shoulder	2.5	5	
- Knee	2.5	5	
- Hip	2.5	5	
- Elbow & TMJ	2.5	5	
- Ankle	1.5	3	
- Wrist	1	2	
	<b>30</b>	<b>60</b>	<b>Total time = 90 Hrs.</b>

### 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 knowledge and intellectual skills.**

**5.2: Structured Oral examination for assessment of knowledge and intellectual skills.**

**5.3: OSCE examination for assessment of practical and communication skills.**

**5.4: MCQ examination for assessment of knowledge and intellectual skills.**

**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 supervisors 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.

Written exam. After the candidate finishes all semesters

OSCE exam After the candidate finishes all semesters

Structured Oral exam After the candidate finishes all semesters

MCQ 15 weeks after the start of the semester

Percentage of each Assessment to the total mark. 15%

Written exam. 36 marks

OSCE exam.

Structured Oral exam.

MCQ: 8 marks

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.  
- Musculoskeletal MRI; Kaplan.

6.3: Journals: [www.MsskR.com](http://www.MsskR.com)  
[www.radiology.com](http://www.radiology.com)  
[www.radiographics.com](http://www.radiographics.com)

6.4: Websites: [www.medcyclopaedia.com](http://www.medcyclopaedia.com)  
[www.radiopaedia.com](http://www.radiopaedia.com)  
[www.learningradiology.com](http://www.learningradiology.com).

6.5: Others:

## 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 ElBatooty

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

**Date:**