



## Course Specifications

<b>Course Title:</b>	Radiology
<b>Course Code:</b>	RAD245
<b>Program:</b>	Bachelor of Medicine, Bachelor of Surgery (MBBS)
<b>Department:</b>	NA
<b>College:</b>	College of Medicine
<b>Institution:</b>	Alfaisal University

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## A. Course Identification

<b>1. Credit hours:</b> 2 (2+0+0)
<b>2. Course type</b>
a. University <input type="checkbox"/> College <input checked="" type="checkbox"/> Department <input type="checkbox"/> Others <input type="checkbox"/>
b. Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>
<b>3. Level/year at which this course is offered:</b> Sem 4, Year 2
<b>4. Pre-requisites for this course (if any):</b> Sem 1 and 2
<b>5. Co-requisites for this course (if any):</b> None

### 6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom – including Assignment	35	100%

### 7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	Lecture	35
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	<b>Total</b>	35

## B. Course Objectives and Learning Outcomes

### 1. Course Description

This course is offered in Year 2 to discuss basic and applied concepts related to Radiology. It consists of an overview of basic radiological techniques and the application and interpretation of radiological findings in various diseases. The course includes lectures on X-rays, ultrasound, CT scan, MRI and PET scans, and nuclear medicine techniques.

### 2. Course Main Objective

Discuss basic and advanced radiological techniques and the application and interpretation of radiological findings in various diseases.

### 3. Course Learning Outcomes

CLOs		Aligned PLOs
1	<b>Knowledge and Understanding</b>	
1.1	Discuss the administration and precautions of contrast media.	PLO5

CLOs		Aligned PLOs
1.2	Discuss the basis and clinical applications of Nuclear Medicine and PET/CT.	PLO5
1.3	Discuss the basis and clinical applications of ultrasound, CT scan and MRI.	PLO5
1.4	Discuss the clinic-pathologic correlation of X-ray examinations.	PLO5
1.5	Discuss the physics of radiology and ionizing radiation.	PLO5
<b>2</b>	<b>Skills :</b>	
2.1		
2.2		
<b>3</b>	<b>Values:</b>	
3.1	Adhere to the attendance policy.	
3.2	Maintain professional conduct with colleagues, faculty, and staff.	

### C. Course Content

No	List of Topics	Contact Hours
1	Intro to Radiology and Ionizing Radiation and imaging	2
2	Contrast	2
3	Physics 2 Radiation shielding	2
4	Physics 2 Radiation	2
5	From Photon to Image: Anatomy and Pathology Correlation on X-rays	2
6	Image formation on Ultrasound: Anatomy and Pathology Correlation on Ultrasound	2
7	Patient preparation and screening for Radiology exams	2
8	Clinical applications of Ultrasound	2
9	Introduction to Interventional Radiology	2
10	From Photon Image: Anatomy and Pathology Correlation on CT	2
11	Clinical applications of CT	2
12	Normal and Abnormal Nuclear Medicine and PET	2
13	Clinical applications of Nuclear Medicine and PET	2
14	Image formation on MRI: Anatomy and Pathology Correlation on MRI	2
15	Clinical applications of MRI	2
16	Imaging based diagnosis of common pathologies i.e., appendicitis, cholecystitis, etc.	2
17	Imaging based diagnosis of common oncological conditions like breast Ca, ovarian Ca, etc.	2
18	Assignment	1
<b>Total</b>		<b>35</b>

### D. Teaching and Assessment

#### 1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
<b>1.0</b>	<b>Knowledge and Understanding</b>		
1.1	Discuss the administration and precautions of contrast media.	Lectures	Summative assessment

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Discuss the basis and clinical applications of Nuclear Medicine and PET/CT.	Lectures	Summative assessment
1.3	Discuss the basis and clinical applications of ultrasound, CT scan and MRI.	Lectures	Summative assessment
1.4	Discuss the clinic-pathologic correlation of X-ray examinations.	Lectures	Summative assessment
1.5	Discuss the physics of radiology and ionizing radiation.	Lectures	Summative assessment
<b>2.0</b>	<b>Skills</b>		
2.1			
2.2			
<b>3.0</b>	<b>Values</b>		
3.1	Adhere to the attendance policy.		Continuous assessment
3.2	Maintain professional conduct with colleagues, faculty, and staff.		Continuous assessment

## 2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignment	17	10%
2	Mid-term	8	30%
3	Final Exam	18	60%

\*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

## E. Student Academic Counseling and Support

### Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

The CoM program established its own mentorship program that employs all full-time faculty as mentors. Through this program, every medical student in the program is assigned a mentor at the beginning of their first semester of studies. The program has a broad scope covering academic advising and counseling. The mentors handle all aspects related to academic advising, including academic planning, academic performance review, advice on course drop or withdrawal, study skills, and time management.

## F. Learning Resources and Facilities

### 1. Learning Resources

<b>Required Textbooks</b>	
<b>Essential References Materials</b>	

<b>Electronic Materials</b>	PowerPoint presentations uploaded on Alfaisal E-learning Portal Student are encouraged to visit the Radiology web sites
<b>Other Learning Materials</b>	

## 2. Facilities Required

Item	Resources
<b>Accommodation</b> (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms
<b>Technology Resources</b> (AV, data show, Smart Board, software, etc.)	AV (Audio-Visual), Smartboard, Moodle (E-learning Management)
<b>Other Resources</b> (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

## G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course and Faculty Evaluation Survey	Students	Survey

**Evaluation areas** (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)

**Evaluators** (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

**Assessment Methods** (Direct, Indirect)

## H. Specification Approval Data

<b>Council / Committee</b>	
<b>Reference No.</b>	
<b>Date</b>	