

Course Specification of Introduction to radiologic sciences

Faculty: Medicine and Health sciences

Department: Health sciences

Program: Bachelor in Radiologic Technology and Medical Imaging

I. General information about the course instructor:

Name	Saddam Alzofi	Office Hours (3 Hours Weekly)					
Location & phone number	UST- 775031101	Sat	Sun	Mon	Tue	Wed	Thu
Email	S.alzofi @gmail.com	1		1		1	

II. General information about the course:

1	Course Title:	Introduction to radiologic sciences				
2	Course Code and Number	BMI121				
3	Credit Hours:	Lecture	Seminar/Tutorial/Practical	Training	Total	
		2	-	-	2	
4	Study Level and Semester:	1 st year / 2 ^{ed} semester				
5	Pre-requisites:	None				
6	Co-requisites:	None				
7	Program in which the course is offered	Bachelor in Radiologic Technology and Medical Imaging				
8	Teaching Language:	English				
9	Instruction location:	University of Science and Technology, Sana'a, Yemen				

III. Course Description:

This course is an introductory course to radiologic sciences involving an overview of sciences regarding to radiology from discovery of X-ray up to advance imaging modalities and recent technologies regarding to radiology. This course mainly focusses on basic principles of each imaging modalities either conventional or advance. In addition, medical imaging department, patients care, radiation protection and job description will be included in this course. Basic terminology and abbreviations which commonly used in radiology also will be privily discussed in this course. The teaching will include, lectures with seminars, field visit, collaborative learning, dialogue and discussion. The students will be evaluated through reports, quiz, assignment and written exam.

عميد الكلية:
د. عبدالله المخلافي

رئيس القسم:
د. عبد الحبيب القنيطري

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المراجع:
د. أمين الفلاحي
د. مجاهد نصار

الموصف:
صدام الزوفي

جامعة العلوم والتكنولوجيا
إدارة ضمان الجودة والاعتماد
معتتمد
APPROVED

IV. Course objectives: This course is aimed to

1. Enable students to recognize story of radiology and discovery of x-ray.
2. Provide the student sufficient knowledge about medical imaging department layout and role of radiology in medicine.
3. Enable the student to discuss basic principles of each imaging modalities and operational modes.
4. Enhance student knowledge about radiation protections and patients care.
5. Learn student to describe job of radiographic technologist and its roles.

V. Course Intended Learning Outcomes (CILOs):

1. Define radiology, medical imaging department and explain basic principles of imaging modalities and operational mode.
2. Specify basic concepts of radiation protection and other ethical health care issues.
3. List major component of main imaging modalities.
4. Record basic skills in patient's care and assessment of patient's status in medical imaging department.
5. Distinguish terminology and other information regarding to radiological sciences from different sources.
6. Employ calculations regarding to radiation procedures such as inverse square law
7. Gather the information's about radiology from E-books, library and web site.

VI. Course content:

Topics/Units of Course Contents

First: Theoretical Aspects

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction	Story of radiology Discovery of X-ray Terminology	1 st	2
2	Medical imaging department	Layout of medical imaging department Imaging modalities in medical imaging department	2 ^{ed} & 3 rd	4
2	X-ray	X-ray production and properties X-ray tube Terminology	4 th	2
3	Conventional radiography	Conventional radiography mods Application of conventional radiography Advantages & disadvantages of conventional radiography	5 th	2
4	Ultrasound I	Ultrasound and production of ultrasound Interaction of ultrasound with subjects	6 th	2



5	Mid-term exam		7 th	2
6	Ultrasound II	Display mods of ultrasound Applications of ultrasound Advantages & disadvantages of ultrasound	8 th	2
7	CT scan	Discovery of CT scan Basic principles of CT scan Applications of CT scan Advantages & disadvantages of CT scan	9 th	2
8	MRI	Discovery of MRI Basic principles of MRI Applications of MRI Advantages & disadvantages of MRI	10 th	2
9	Nuclear medicine	Discovery of NM Basic principles of NM Applications of NM Advantages & disadvantages of NM	11 th	2
10	Care of patients	Overview about care of patients in medical imaging department	12 th	2
11	Radiation protection	Basic concepts about radiation protection	13 th	2
12	Job description	Who is radiographic technologist Roles of radiographic technologist ARRT	14 th	2
13	Final exam		15 th	2
14	Total number of weeks and hours		15	30