



## Course Syllabus Advanced radiographic Technique

Faculty: Faculty of Medicine and Health Sciences

Department: Health Sciences

Program: Bachelor in Radiologic Technology & Medical Imaging

### I. General information about the course instructor :

<b>Name</b>	Dr.Amin MohsenAmer	<b>Office Hours(3 Hours Weekly )</b>					
<b>Location &amp; phone number</b>	UST- 775948767	<b>Sat</b>	<b>Sun</b>	<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>
<b>Email</b>	aminalflahi@gmail.com	1		1		1	

### II. General information about the course:

1. <b>Course Title :</b>	Advanced radiographic Technique			
2. <b>Course Code and Number :</b>	BMI412			
3. <b>Credit Hours :</b>	<b>Credit Hours</b>			<b>Total</b>
	<b>Theoretical</b>	<b>Seminar/Tutorial/Practical</b>	<b>Training</b>	
	1	-	-	1
4. <b>Study Level and Semester:</b>	4 <sup>th</sup> level / 1 <sup>st</sup> semester			
5. <b>Pre-requisites:</b>	None			
6. <b>Co-requisites :</b>	None			
7. <b>Program in which the course is offered:</b>	Bachelor in Radiologic Technology & Medical Imaging			
8. <b>Teaching Language:</b>	English			
9. <b>Instruction location:</b>	University of Science and Technology, Sana'a, Yemen			

### III. Course Description

This course will familiarize the student with the applications of advanced technique in radiography, It provides an explicit description of the computed and digital radiography procedures for the different body systems, and other advanced Techniques including mammography, dental radiography, and bone densitometry. It also introduces the student to macro radiography, and technique of radiographic conventional subtraction. Synchronized Demonstration sessions in the x-ray unit will be achieved in clinical practice co-requisite course. The teaching strategies will include lectures with video demonstration and assignments. The students will be evaluated through written exams, reports and assignment evaluation.

عميد الكلية:  
د. عبدالله المخلافي

المراجع:  
د. صدام الزوفي  
د. مجاهد نصار

عمادة التطوير و ضمان الجودة  
جامعة العلوم والتكنولوجيا

د. عبد الحبيب القباطي

APPROVED

الموصف:  
أمين الفلاحي

#### IV. Course Aims:

1. Learn students the theoretical background of applications of advanced technique in radiography including CR, DR, mammography, dental radiography, bone densitometry, macro radiography and conventional subtraction.
2. Enable student for professional dealing with care of the patient pre, during, and post the examination related to advanced radiographic techniques.
3. Improve the student skills to read the related radiographic anatomy images using different advanced radiographic techniques.
4. Provide student the basic skills of applying standards in advanced radiographic technique procedures based on quality assurance and radiation protection.
5. Teach student the fundamental skills to evaluate images of advance radiographic procedures according to image criteria.

#### V. Course Intended Learning Outcomes (CILOs) :

1. Describe the best approach of taking specific radiographic image using advanced technique based on quality assurance and protection principles.
2. Recognize the appropriate procedures according to the patient psychological, emotional and social state in radiology to achieve patient needs and improve best care.
3. Explain advanced radiological procedure of various imaging modalities.
4. Analyze the image and recognize the artifacts or faults if occur during the advanced radiographic technique.
5. Evaluate the advanced radiographic image quality regarding to the QA issues and standards with applying the correction if required.
6. Operate safely the advanced radiographic imaging modalities according to the standard manual operation (manufacturer's instructions) in advanced technique.
7. Deal effectively with advanced radiographic system facilities based on administrative rules.



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د. مجاهد نصار

الموصف :  
أمين الفلاح



## VI. Course Contents

### Theoretical Aspect:

No.	Course Topics/Units	Sub-topics	Week due	Contact Hours
1	Introduction	<ul style="list-style-type: none"> <li>Orientation of the course</li> </ul>	1 <sup>st</sup>	2
2	Computed radiography	<ul style="list-style-type: none"> <li>Principles of Computed radiography</li> <li>Components of Computed radiography</li> <li>Advantages and disadvantages of Computed radiography</li> </ul>	2 <sup>nd</sup> , 3 <sup>rd</sup>	4
3	Digital Radiography	<ul style="list-style-type: none"> <li>Principles of Digital radiography</li> <li>Components of Digital radiography</li> <li>Advantages and disadvantages of Digital radiography</li> </ul>	4 <sup>th</sup> , 5 <sup>th</sup>	4
4	Mammography	<ul style="list-style-type: none"> <li>Introduction</li> <li>Anatomy review</li> <li>Equipments</li> <li>Imaging techniques</li> </ul>	6 <sup>th</sup> , 7 <sup>th</sup>	4
5	Bone densitometry	<ul style="list-style-type: none"> <li>Introduction</li> <li>Anatomy review</li> <li>Equipment</li> <li>Imaging techniques</li> </ul>	8 <sup>th</sup>	2
6	Mid-term exam		9 <sup>th</sup>	
7	Dental radiography	<ul style="list-style-type: none"> <li>Introduction</li> <li>Anatomy review (dentition and formula)</li> <li>Equipment</li> <li>Imaging techniques (intraoral and extra oral)</li> </ul>	10 <sup>th</sup> , 11 <sup>th</sup>	4
8	Macro radiography	<ul style="list-style-type: none"> <li>Principles, equipment and techniques</li> </ul>	12 <sup>th</sup>	2
9	Radiographic subtraction	<ul style="list-style-type: none"> <li>Principles, tools, and techniques</li> </ul>	13 <sup>th</sup>	2
10	Miscellaneous advanced techniques	<ul style="list-style-type: none"> <li>Xeroradiography</li> </ul>	14 <sup>th</sup> , 15 <sup>th</sup>	4
11	Final exam	- Written exam	16 <sup>th</sup>	2
Total number of weeks and hours			16	32

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