Course Specifications

General Information

Course name	X-ray Machine(1)
Course number	AMSR2355
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - To understand the construction of x-ray machine
2 - To identify the generator circuits of the x-ray machine
3 - To be familiarized with the types of x-ray devices,

Intended Learning Outcomes

Knowledge and Understanding

* at the end of this course, the student will be familiar with the construction of x-ray tube
* In this course the student will be familiarized with the types and construction of the x-ray machines., This includes the construction of the x-ray tube, the type of x-ray restrictors devices, generators, control panel, grids, x-ray tubes, film processor, imaging intensifier screen system.

Course Contents

1 - General view on the construction of x-ray machine
2 - Types of x-ray machines
3 - Basic items and contents of x-ray machine
4 - (X-ray generator (electrical circuits
5 - Grid construction and values
6 - filter of x-ray machine
7 - collimation of x-ray beam
8 - mobile x-ray

Teaching and Learning Methods

1 - Power point presentation
2 - Short visit to hospitals
3 - Models of x-ray equipment

Teaching and Learning Methods for the Disabled Students

1 - electronic lectures

Students Assessment

Assessment Method	TIME	MARKS
homeworks and presentation and attendence	during the semester	30
midterm exam	the seventh week	30
final exam	at the end of the semster	40

Books and References

Course note	powerpoint lectuters
Essential books	essentials of radiologic sciences
Recommended books	iradiologic sciences for technologist
Other References (Periodical, web sites, ... etc.)	physics of medical imaging

Knowledge and Skills Matrix

Main Course Contents	Study Week	Knowledge and Understanding	Intellectual Skills	Professional Skills	General Skill
General view on the construction of x-ray machine	1-3				
Types of x-ray machines	3-4				
Basic items and contents of x-ray machine	5-8				
X-ray generator	9-11				
electrical circuits	12				
Grid construction and values	13-15				
collimation, filter, control panel construction, mobile x-ray	14 weeks				