

# TOROS ÜNİVERSİTESİ

Vocational School  
Medical Imaging Techniques

## Course Information

EQUIPMENT MAINTENANCE AND REPAIR IN RADIOLOGY					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
TGT122	Spring	2	2	3	3

<b>Prerequisites and co-requisites</b>	
<b>Language of instruction</b>	Turkish
<b>Type</b>	Required
<b>Level of Course</b>	Associate
<b>Lecturer</b>	Lec. Dr. Ekrem ALTUNEL
<b>Mode of Delivery</b>	Face to Face
<b>Suggested Subject</b>	
<b>Professional practise (internship)</b>	None
<b>Objectives of the Course</b>	The characteristics of the devices used will be comprehended.
<b>Contents of the Course</b>	The formation of X-rays (electron target interaction), the formation of X-rays (anodic heat), the formation of X-rays (characteristic radiation), the formation of X-rays (bremsstrahlung radiation), X-ray emission (X-ray quantity), Radiographic quality, film factors, geometric factors, clinical significance of increased radiographic quality, strengthening screens, luminescence, screen characteristics, screen-film combination, cassette, maintenance of screens, fluoroscopic screens, Fluoroscopy, practical fluoroscopic technique, image enhancement, television, cinephography, tomography.

## Learning Outcomes of Course

#	Learning Outcomes
1	Based on the proficiency gained at the secondary level, it has theoretical and practical knowledge at the basic level supported by textbooks, application tools and other resources that contain up-to-date information in the field of Radiology,
2	Radiology has the knowledge of accessing, evaluating and applying basic scientific knowledge in the field of equipment, tools and maintenance.
3	Defines the importance of ethical principles and ethics committees for individuals and society.
4	To use knowledge and skills to use knowledge and skills at basic level in the field of radiology equipment maintenance and repair, take place responsibility / responsibility in planned studies.
5	Radiology uses basic computer programs and related technologies related to the equipment and maintenance area.
6	Radiology carries out a task independently by using the basic knowledge that it has about the equipment and maintenance area.

## Course Syllabus

#	Subjects	Teaching Methods and Technics
1	Maintenance and cleaning of the x-ray machine.	Lecture, Discussion, Question-Answer
2	Bath chemistry	Lecture, Discussion, Question-Answer
3	X-ray tube	Lecture, Discussion, Question-Answer
4	Operator consul	Lecture, Discussion, Question-Answer
5	X-ray confiners	Lecture, Discussion, Question-Answer
6	Formation of scattered radiation	Lecture, Discussion, Question-Answer

7	Control of scattered radiation	Lecture, Discussion, Question-Answer
8	Midterm	
9	Grid, grid characteristics	Lecture, Discussion, Question-Answer
10	grid performansının ölçülmesi	Lecture, Discussion, Question-Answer
11	Radiographic parameters	Lecture, Discussion, Question-Answer
12	Latent image	Lecture, Discussion, Question-Answer
13	özel X-ışını cihaz ve yöntemleri	Lecture, Discussion, Question-Answer
14	Screen maintenance	Lecture, Discussion, Question-Answer
15	Screen maintenance	Lecture, Discussion, Question-Answer
16	Final Exam	

## Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1	Temel Radyoloji Tekniği Editör Prof.Dr. Tamer Kaya		

## Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-Term Exam
2	60%	Final Exam	Final Exam

## Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1	Based on the proficiency gained at the secondary level, it has theoretical and practical knowledge at the basic level supported by textbooks, application tools and other resources that contain up-to-date information in the field of Radiology,	3	1,2
2	Radiology has the knowledge of accessing, evaluating and applying basic scientific knowledge in the field of equipment, tools and maintenance.	6	1,2
3	Defines the importance of ethical principles and ethics committees for individuals and society.	4	1,2
4	To use knowledge and skills to use knowledge and skills at basic level in the field of radiology equipment maintenance and repair, take place responsibility / responsibility in planned studies.	4,7,14	1,2
5	Radiology uses basic computer programs and related technologies related to the equipment and maintenance area.	2	1,2
6	Radiology carries out a task independently by using the basic knowledge that it has about the equipment and maintenance area.	5	1,2

PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method of Assessment.

## Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	4	56
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	0	0	0
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	3	3

8	Midterm Exam	0	0	0
9	Quiz	0	0	0
10	Homework	0	0	0
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	1	3	3
14	Final Exercise	0	0	0
15	Preparation for Final Exam	0	0	0
16	Final Exam	0	0	0
				<b>90</b>