



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Radiation Protection							
Course Code		TG205		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		The biological effects of radiation This course aims to provide students knowledge about the basic principles of radiation protection, to gain skills and responsibility							
Course Content		Definition of radiation, radiation dose and its units, ionizing radiation effects on the human body, molecular and cellular radiobiology, early effects of radiation, the late effects of radiation, epidemiological studies, the basic principles of radiation protection itself radiation protection of workers, patients and protection from radiation in the near patients, hospitals radiation protection of personnel, protection of the environment radiation, the design characteristics of the radiology department, ionizing radiation of the room used design features, TAEA radiation safety regulation, radiation safety committees structure, other legislation related to radiation safety, making an emergency plan, implementation of emergency plans							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)		Lec. Nural ÖZTÜRK							

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

### Recommended or Required Reading

1	Nural Öztürk, Ders notları
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Week	Weekly Detailed Course Contents	
1	Theoretical	Definition and Characteristics of Radiation
2	Theoretical	Definition and Characteristics of Radiation II Radiation Dose and Units
3	Theoretical	Effects of Ionizing Radiation on the Human Body
4	Theoretical	Molecular and Cellular Radiobiology
5	Theoretical	Early Effects of Radiation
6	Theoretical	The Late Effects of Radiation
7	Theoretical	Epidemiological Studies
8	Intermediate Exam	midterm
9	Theoretical	Fundamental Principles of Radiation Protection
10	Theoretical	Fundamental Principles of Radiation Protection
11	Theoretical	He Radiation Protection employees, patients and their relatives on Radiation Protection, Hospital Personnel Radiation Protection, Environmental Radiation Protection
12	Theoretical	TAEA Radiation Safety Regulations, the Radiation Safety Committee Structure
13	Theoretical	Other Radiation Safety Related Legislation
14	Theoretical	Making and Implementation of Emergency Plans
15	Theoretical	Making and Implementation of Emergency Plans

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	0	2	28
Individual Work	5	3	1	20
Midterm Examination	1	8	3	11
Final Examination	1	14	2	16
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

\*25 hour workload is accepted as 1 ECTS



**Learning Outcomes**

1	Understands basic definitions and biological effects of radiation
2	Radiotherapy radiation safety and take the necessary measures in accordance with the radiation protection rules and apply them
3	Understand the legislation on radiation protection
4	Know the damages of radiation.
5	Knows radiation emitting devices and devices.

**Programme Outcomes (Medical Imaging Techniques)**

1	To be able to get information the working principles of Radiology, Nuclear Medicine and Radiotherapy devices, and distinguish their components, use these devices in accordance with operating instructions.
2	To be able to perform the procedures in accordance with the examination of Radiology and Nuclear Medicine imaging .
3	To be able to apply the radiotherapy treatment, planned by radiation physicist with instruction of radiotherapist.
4	To be able to develop and perform the film printing of the images that obtained by imaging techniques of Radiology, Nuclear Medicine
5	To be able to evaluate the images that obtained by imaging techniques of Radiology, Nuclear Medicine in terms of radiographic quality and takes the necessary measures.
6	To be able to know the medical and radiologic terminology, and pronounce and use them correctly
7	To be able to take the necessary measures in accordance with the rules of Radiation safety and protection from radiation, and apply them.
8	To be able to distinguish the anatomical structures on images, obtained by the conventional and cross-sectional imaging techniques of Radiology, Nuclear medicine.
9	To be able to communicate well with patient, their family and the hospital staff.
10	To be able to move with own professional duties, powers and responsibilities of the consciousness and apply the rules of professional ethics.
11	To be able to adapt to a multi-disciplinary team work.
12	To be able to have a basic knowledge of human physiology.
13	To be able to distinguish anatomical structures.
14	To be able to establish a cause-and-effect relationship between events.
15	To be able to have the ability of analytical thinking and problem solving.
16	To be able to apply the basic principles of first aid.
17	It has basic knowledge about human anatomy
18	Understanding the basic concepts and principles of physics while providing, in the medical field and in particular medical imaging students better understand the issues involving technical vocational courses
19	OHS 'basic concepts; work accidents, occupational diseases, occupational physicians, occupational safety specialist, İSGB, OSGB, hazard classes, risk assessment, OHS employee representatives is
20	Have basic knowledge about basic medical practices and makes applications

**Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High**

	L1	L2	L3	L4	L5
P5				5	
P6	5				
P7		5			
P9			5		
P11					5

