

### AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title	Radiation Security and Radiation Protection							
Course Code	TIP161		Couse Level		Short Cycle (Associate's Degree)			
ECTS Credit 3	Workload	76 (Hours)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course The aim of this course is to to gain knowledge, skills an					ects of radiation	on, basic prin	ciples of radiation	protection
Course Content Definition of radiation, radia cellular radiobiology, early principles of radiation prote radiation protection from pa design properties of radiolo TAEK radiation safety legis to radiation safety, emerge implementation of emerger		blogy, early e diation protec- tion from pa es of radiolo safety legisl ety, emerger	effects of radi ction, the em tient and pati gy departmen lation, radiation ncy plans	ation, late ployee itse ient relative nts, ionizin	effects of radi If radiation pro es protection, g design prop	ation, epidem otection, radia radiation pro- erties of the r	niological studies, ation from hospita tection of the envi ooms used in rad	the basic I staff, ronment, iation,
Work Placement	N/A							
Planned Learning Activities	Planned Learning Activities and Teaching Methods		Explanation	(Presenta	tion), Discuss	ion, Individua	al Study	
Name of Lecturer(s)								

### Prerequisites & Co-requisities

Equivalent Course

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

TG205

## **Recommended or Required Reading**

1 1100	diation and Radiation Protection Physics, James E. Martin, palm yayıncılık. 2. baskı
2 The	e Physics of Radiology, Horold Elfort johns, 4. edition, charles c thomas, publisher, USA
3 The	e Physics of Radiation Therapy, Faiz M Khan, Third Edition, Linpincott Williams & Wilkins
	nciples and Practice of Radiation Oncology, Fifth Edition, Edward C Halperin, Carlos A Perez, Luther W Brady, Linpincott Iliams&Wilkins

Week	Weekly Detailed Cour	se Contents
1	Theoretical	Definition and Properties of Radiation
2	Theoretical	Definition and Properties of Radiation Radiation Dose and Units
3	Theoretical	Effects of Ionizing Radiation on Human Body
4	Theoretical	Molecular And Cellular Radiobiology
5	Theoretical	Early Effects of Radiation
6	Theoretical	Late Effects of Radiation
7	Theoretical	Epidemiological Studies
8	Intermediate Exam	intermediate
9	Theoretical	Basic Principles of Radiation Protection
10	Theoretical	Basic Principles of Radiation Protection
11	Theoretical	Employee Protecting Himself From Radiation, Protecting Patient and Patient Relation from Radiation, Radiation Protection of Hospital Staff, Radiation Protection
12	Theoretical	TAEK Radiation Safety Legislation, Radiation Safety Committees Structure
13	Theoretical	Other Regulatory Legislation on Radiation Safety
14	Theoretical	Making Emergency Plans and Implementation

### **Workload Calculation**

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	3	2	70



Courses	Information	E
Course		FOIII

Midterm Examination	1		2	1	3
Final Examination	1		2	1	3
			T	otal Workload (Hours)	76
			[Total Workload	(Hours) / 25*] = <b>ECTS</b>	3
*25 hour workload is accepted as 1 ECTS					

Learn	ing Outcomes			
1	Definition of radiation			
2	Basic definitions about radiation and biological effects			
3	Radiotherapy takes the necessary precautions in accord	ance w	rith the radiation safety and radiation pr	otection rules.
4	Understands the biological effect of radiation on live			
5	Understands the legislation about radiation protection			

# Programme Outcomes (Medical Imaging Techniques)

1       THE ANATOMICAL STRUCTURE         2       HUMAN PHYSIOLOGY         3       APPLY FIRST AID FOR PATIENTS OR INJURIES         4       MAKING RADIOGRAPHY AND FILM BATHROOM, PRINTING PROCESSES         5       MAKING THE MAMOGRAPHY TEST         7       DOING ANGIGGRAPHY         8       MAKING MAGNETIC RESONANCE IMAGING (MRI)         9       MAKING COMPUTERIZED TOMOGRAPHY (CT) ANALYSIS         10       DOING THE BONE MINERAL DANCEITOMETER (DEXA)         11       ULTRASONOGRAPHY (USG)         12       GAMA CAMERA IMAGING         13       RADIOTHERAPY SIMULATION AND APPLICATION         14       RADIATION SAFETY AND RADIATION PROTECTION         15       MAKING BUSINESS ORGANIZATION AND PROVIDING PROFESSIONAL DEVELOPMENT         16       KEEPING RADIOLOGICAL ANATOMY         17       KEEPING RADIOLAGITERMS         18       To be able to use modern Turkish language knowledge and language skills.         19       To have knowledge about Ataturk's Principles and Revolution History         20       To communicate at a basic level in a foreign language         21       Knows cancer and its types. Know what needs to be done to prevent cancer         22       To increase student's awareness of gender equality         23       To have information about clinical b		
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<ul> <li>To know occupational ethics</li> <li>Understand the importance of teamwork</li> <li>The organizational chart of the institution will be able to understand.</li> <li>Will understand the importance of record keeping.</li> <li>To know the ethical dilemmas in health</li> <li>TTo gain educational and exploratory knowledge about control and protection against infectious diseases</li> <li>To evaluate the general condition of the patient or the injured to take the initiative</li> <li>To know the indications and contraindications of contrast agents</li> <li>To be able to use and maintain the right communication skills with patients and relatives</li> <li>To evaluate the behavior of patients and their relatives</li> <li>To evaluate the behavior of patients and their relatives</li> <li>To appendix the behavior of patients and their relatives</li> <li>To evaluate the behavior about health system</li> </ul>	25	To know family planning methods
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39 To have general information about health system	36	To be able to communicate with colleagues, patient and patient relatives at therapeutic level
	37	To evaluate the behavior of patients and their relatives
40 To learn the rights and obligations of health workers	39	To have general information about health system
	40	To learn the rights and obligations of health workers
41 Ability to gain theoretical knowledge about disaster recovery	41	Ability to gain theoretical knowledge about disaster recovery



42	To gain practical knowledge about disaster recovery and to be able to use them in accordance with ethical principles
43	To be able to explain the concepts related to substance abuse
44	Identify the needs of individuals with substance addiction
45	Working organization
46	Prepare promotional material with ready template
47	To be able to prepare personal web site
48	Knows pharmacological agents. know how to apply the drugs according to the indications and contraindications
49	To have knowledge about the effects of radiation on environment and human health.
50	Knows the concepts of quality standards, quality, standardization, standards and accreditation in health.
51	To know the rules of ergonomics
52	To learn the rules of behavior in social and business life
53	Ensuring the development of social sensitivity levels
54	To use their personal knowledge, skills and experiences for the benefit of the society as a team
55	Will be able to apply the basic tasks to use the operating system
56	Demonstrate behavior by understanding the information given about health.
57	Know the learning and teaching methods
58	Will have the ability to prepare educational material and conduct effective training.

