



Code and Name: FIZ5560 PHYSICS OF NUCLEAR MEDICINE

Unit: Graduate School of Natural and Applied Sciences

Detail: **Period:** 2023-2024 **Status:** Optional **Class:** 1 **Credits:** 2-2-0-3 **ECTS:** 6 **Language:** Turkish

INSTRUCTOR

Title, Name and Surname:

Phone:

Email:

Social Account: -

Student Day and Time:

COURSE ASSISTANT

Title, Name and Surname:

Phone:

Email:

Social Account:

Student Day and Time:

Lessons Weekly Program:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			-			

Rendering: Face-to-face lessons per week 4 It will be done on an hourly basis.
Place: **YY:** - **UE:** -

Purpose: To acquire detailed knowledge about atoms, radioactivity, radioactive decay, and their units; to learn nuclear medicine imaging techniques; to gain an in-depth understanding of radiation protection in nuclear medicine; and to obtain comprehensive information on the production of radiopharmaceuticals and radionuclides.

Material: Nuclear Medicine Physics, Istanbul University, 2000

Student Responsibility : Attending classes, submitting assignments on time, and participating in exams.

Weekly Lesson Plan	Week	Topic			Method	
	1	Introduction to Radioisotopes, Radioactive Disintegration, Units,			YY	
	2	Fundamentals of Radioactivity, Radiation, Properties of EMD, Nuclear Families			YY	
	3	Nuclear Imaging Methods, Detection of Radiation			YY	
	4	Semiconductor Detectors, GAMA Cameras			YY	
	5	Nuclear Census Statistics, SPECT			YY	
	6	PAD			YY	
	7	Radiation Protection, Dose Intake			YY	
	8	Dose Intake			YY	
	9	Radiation Dozimetre			YY	
	10	Diagnosis and Radionuclei Used			YY	
	11	Radiation Protection from the Perspective of Nuclear Medicine I			YY	
	12	Radiation Protection from the Perspective of Nuclear Medicine II			YY	
	13	Radiopharmaceuticals and Radionuclei			YY	
	14	Production of Radionuclei			YY	
Assessment and Evaluation	Method				Number	Weight
	Break Exam	Exam	Face		1	% 50
		Quiz	-		-	
		Homework	-			
		Project	-		-	-
	General Exam	Face		1	% 50	
Course Outcomes:	1	Detailed information about Atom, Radioactivity, Radioactive Disintegration and Units is obtained.				
	2	Learns Nuclear Medicine Imaging Methods. Obtain the in-depth knowledge required for Radiation Protection in terms of Nuclear Medicine.				
	3	Have detailed information on radiopharmaceuticals and the production of radionuclei.				
	4					
	5					

Course-Specific Explanations:

UE: Distance Education; **YY:** Face-to-Face Education

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