Code and Name:	**FİZ5550 NUCLEAR RADIATION SPECTROSCOPY**
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:	Students, radiation how species interact with matter and how to interpret the spectrum that emerges after the interaction, and what that it makes sense they will learn. They will also learn the corrections that need to be made for an accurate and precise measurement of activity.
Material:	1. Radiation Detection and Measurement. Glenn F. Knoll 2. Principles of Radiation Interaction in Matter and Detection, Claude Leroy and Pier-Giorgio Rancoita
Student Responsibility :	Class participation, homework, project

Weekly Lesson Plan

Week	Topic	Method
1	Radiation Sources	YY
2	Radiation Interactions	YY
3	Census Statistics and Error Estimation	YY
4	General Features of Radiation Detectors	YY
5	Ionization Chambers	YY
6	Proportional Counters	YY
7	Geiger Müller Counters, Scintillation Detector Principles	YY
8	Photomultiplier Tubes, Photodiodes, Scintillated Radiation Spectroscopy	YY
9	Semiconductor Diode Detectors , Germanium Gamma Ray Detectors	YY
10	Solid State Detectors	YY
11	Slow and Fast Neutron Detection Methods and Spectroscopy	YY
12	Signal Processing and Characterization	YY
13	Linear and Logical Signal Functions	YY
14	Multi-Channel Signal Analysis	YY

Assessment and Evaluation

	Method		Number	Weight
Break Exam	Exam	Face	1	% 50
	Quiz	-	-	-
	Homework			
	Project			
General Exam	Face		1	% 50

Course Outcomes:

1	Students The concept of spectroscopy What n is, learn what it does and its uses , n ükleer fizikteki kullanım amacını kavrayacaktır.
2	Ö Pupil Around us Natural and artificial radio çekirdeklerin dağılımlarının nasıl belirlendiği konusunda bilgi sahibi olacaktır.
3	Students How to determine whether the substances around them are radioactive and, if they are radioactive, from which elements they originate. they will comprehend.
4	
5	

Course-Specific Explanations:

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