



**Code and Name:**

**FİZ5630 RADIATION PHYSICS**

**Unit:**

Graduate School of Natural and Applied Sciences

**Detail:**

**Period:** 2023-2024

**Status:** Optional

**Class:** 1

**Credits:** 3-0-0-3

**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**

**Monday**

**Tuesday**

**Wednesday**

**Thursday**

**Friday**

**Saturday**

**Weekly**

**Program:**

-

**Rendering:**

Face-to-face lessons per week 3 It will be done on an hourly basis.

**Place:**

YY: -

**UE:**

**Purpose:**

Learning the properties and protection methods of radiation, which is widely used in our daily life.

**Material:**

Physics for Radiation Protection , James E. Martin

**Student Responsibility :**

Lesson To be present at the exams, to submit assignments on time and to take exams

**Weekly Lesson Plan**

Week	Topic	Method
1	Forces in Atoms and Energy , Binding Energy	YY
2	Important Discoveries and Interactions in Radiation Physics	YY
3	Radiation and Types of Radiation	YY
4	Biological Effects of Ionizing and Non-Ionizing Radiation	YY
5	Half-Life	YY
6	Nuclear Energy	YY
7	Nuclear Fission and Products	YY
8	Interaction of Radiation with Matter	YY
9	Radiation Shielding	YY
10	Determination of Properties of Gamma Radiation Absorbers	YY
11	Neutron Sources	YY
12	Neutron Shielding Materials	YY
13	X-Rays	YY
14	Changes of Metals and Alloys Against Radiation	YY

**Assessment and Evaluation**

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

**Course Outcomes:**

1	Student Types of radiation and learns its behavior
2	Learns the interaction of radiation with matter and methods of protection
3	Learn the basic physics concepts that are important in radiation shielding
4	Have an idea about the production of alternative materials to the materials used in radiation shielding
5	

### Course-Specific Explanations:

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



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**Course Syllabus Form**

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