Code and Name:	**FİZ5740 SEMICONDUCTOR DETECTORS**
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 Weekly Program:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Rendering:	**3 lessons per week will be held face-to-face.**
Place:	**YY:** Faculty of Science, Department of Physics **UE:**
Purpose:	**It will be aimed to create the basic infrastructure of the Solar Energy and Applications course for graduate students.**
Material:	**The course will be taught using the book and lecture notes.**
Student Responsibility :	

Weekly Lesson Plan

Week	Topic	Method
1	Course Introduction, Weekly Course Topics Overview, Course Objective, Fundamental Concepts.	YY
2	Energy Bands and Band Models for Semiconductors.	YY
3	Concepts of Conductors, Insulators, and Semiconductors, and Classification of Semiconductors.	YY
4	p-Type and n-Type Detectors and Their Corresponding Band Models.	YY
5	p-n Junctions, Electron-Hole Pairs.	YY
6	Behavior of p-n Junctions in Forward and Reverse Bias.	YY
7	Current voltage characteristics and characteristics	YY
8	Midterm Exam	YY
9	Electrical Properties of the p-n Junction and the Ideal p-n Junction.	YY
10	Electric Field and Potential, Depletion Region Width	YY
11	Capacitance and Maximum Electric Field.	YY
12	Semiconductor detectors and their classification	YY
13	Principles of Semiconductor Detectors and Charge Collection.	YY
14	General review and achievement evaluation	YY

Assessment and Evaluation

	Method		Number	Weight
Break Exam	Exam	Face to face	1	% 50
	Quiz	It will not be done.	-	
	Homework	Research assignments can be given according to the course flow .	2	
	Project	It will not be given.	-	-
General Exam	Face to face		1	% 50

Course Outcomes:

1	Learning the relationship between semiconductor and detector
2	Learning related formulas, equations and proof gains.
3	Learning the applicability of the achievements in scientific studies.
4	To understand the applicability and usability of the course in Physics and other disciplines.
5	

Course-Specific Explanations:

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