



Code and Name: FİZ5260 ADVANCED SOLID-STATE 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: Face-to-face

UE: -

Purpose: To comprehensively examine Solid State Physics, which forms the foundation of applied physics.

Material: Solid State physics, Şakir AYDOĞAN, Solid State PHYSICS J.R. HOOK

Student

Responsibility

Conducting Research Before and After the Lecture.

Weekly Lesson Plan

Week	Topic	Method
1	Solid State Introduction to physics, the importance of the course	YY
2	Amorphous and crystalline Ingredients	YY
3	Crystal, braid, base definition	YY
4	Types of crystal mesh	YY
5	Heat capacity models	YY
6	Insulator, semiconductor and conductive materials	YY
7	Energy Band Diagram	YY
8	Electrical conductivity	YY
9	Thermal conductivity -Midterm Exam	YY
10	Dielectric Ingredients	YY
11	Magnetic Ingredients	YY
12	Superconductivity	YY
13	Solid State The importance of physics in physical science	YY
14	Solid State The importance of physics in materials science	YY

Assessment and Evaluation

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

Course Outcomes:

- 1 Distinguish between crystalline and non-crystalline materials
- 2 Understands the importance of heat capacity modeling
- 3 Identifies solid materials according to their electrical properties
- 4 Understand the working mechanism in magnetic, superconducting materials
- 5

Course-Specific Explanations:

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



T.C.
FIRAT UNIVERSITY
Course Syllabus Form

Document No	EGTM - 0001
Publication Date	13.09.2021
Revision Date	-
Revision No	0