Course Information								
Course Code	**T**	**P**	**L**	**C**	**ECTS**	**Type** C/E	**Language** TR/ENG etc.	**Year/Semester**
FİZ3052	**0**	**0**	**3**	**2**	**3**	**C**	**TR**	**3/SPRING**
Course Name (Turkish**)**	**Fizik Laboratuvarı-IV**							
Course Name (English**)**	**Physics Laboratory-IV**							

Unit/Program	Physics Department/Undergraduate Program
Course Prerequisite	No
Course Objectives	It is aimed to introduce the concepts of Theoretical Physics and to reinforce basic knowledge with experimental applications.
Course Outline	Thermodynamics and Atomic and Molecular Course Experiments
Textbook/ Material / Resources	Laboratory Test Sheet Booklet and auxiliary resources.
Internship Status	No

Course Precedents

University Name	**Program Name**	**Course Name**	**T-P-L-C; AKTS**	**Type**

The instructor who proposed the course (Title, Name and Surname)	*Signature*
Instructors who can teach the course (Title, Name and Surname)	*Signature*

Academic justification for the opening of the course? (The effect of course outcomes on program outcomes, etc.)
ECTS update for FIZ352 course

Brief explanation of the course (theoretical lecture, applications, laboratory, studio, off-campus activity, using software, etc.)
It will be processed in a face-to-face laboratory environment under the supervision of the relevant faculty members

External Stakeholder Opinions About the Course (It is expected that the opinions to be obtained from the business world that will employ your graduates or from real or legal persons outside the University who have expertise on the subject of the course will be specified. Proof documents must be attached to this form.)

Stakeholder Name	**Opinion** (It should be given as a summary, it should not exceed two lines.)

Weekly Course Content Distribution		
Week	**Theory**	**Application/Laboratory**
1	Basic Laboratory Principles	
2	Basic Quantities, Systems of Units, Physical Measurements and Errors	
3	Introduction of Laboratory Instruments	
4		Self-Heat
5		Thermoelectric Converter
6		Thermal Efficiency
7		Thermal Radiation
8		Determination of e/m
9	Midterm Exam	
10		Photoelectric Phenomenon
11		Millikan's Oil Drop Experiment
12		The Franck-Hertz experiment
13		Atomic Spectra
14		Excuse Test
15		
16		

Assessment			
Evaluation Criteria	**Activity**	**Custom**	**Contribution to Success Grade (%)**
	Midterm Exams	1	40
	Quizzes		
	Assignments		
	Projects		
	Term Paper		
	Laboratory		
	Other		
	Final Exam	1	60
		Sum:	100
Remarks			

Content Design and Subject Weight (%)	Mathematics and Basic Sciences	100
	Engineering Sciences	
	Social Sciences	
	Health Sciences	
	Educational Sciences	
	Culture and Art Sciences	
	Design Information	

Workload (ECTS) Calculation			
Events	**Number**	**Duration (Hours)**	**Total workload (Hours)**
Fieldwork			
Midterm Exam Application	1	1	1
Self-Study (including pre-class and exam preparation)			
Make-up Exam	1	1	1
Experiment and Observation	9	2	18
Class Participation (Theory)			
Homework			
Final Exam Practice	1	1	1
Laboratory	14	3	42
Article Review			
Writing an Article			
Reading			
Case Study			
Performance			
Problem Solution			
Project Preparation			
Project Submission			
Quiz			
Report Preparation	9	1	9
Submitting Reports			
Role/Drama Work			
Seminar			
Oral Exam			
Team/Group Work	9	1	9
Argument			
Application/Practice			
Other			
TOTAL WORKLOAD:			**81**
ECTS CREDİTS OF THE COURSE: *(The number obtained as a result of Total Workload/25 is calculated by rounding to the whole number.)*			**3**

Program Outcomes (PO) / **Learning Outcomes (LO)** *(Course Outcomes)*		1	2	3	4	5	6	7	8	9	10	11
1	Can carry out independent and collaborative studies on physics-related issues and use analytical thinking skills	**5**	**4**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**3**	**4**
2	Gain the knowledge and skills necessary to use experimental methods and data analysis techniques	**5**	**4**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**3**	**4**
3	Students have the ability to participate effectively in group work	**5**	**4**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**3**	**4**
4	Students gain the ability to take responsibility and have principles	**5**	**4**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**3**	**4**
5	Students' ability to make written and oral presentations improves	**5**	**4**	**4**	**4**	**5**	**4**	**5**	**5**	**4**	**3**	**4**

Organizer: Assoc. Prof. Dr. Köksal YILDIZ
Preparation Date: 20.05.2024