

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-1004	Physics II Laboratory (Electricity and Magnetism)	0.00	4.00	0.00	2.00	4.00
Course Detail						
<b>Course Language</b>	: Turkish					
<b>Qualification Degree</b>	: Bachelor					
<b>Course Type</b>	: Compulsory					
<b>Preconditions</b>	: Not					
<b>Objectives of the Course</b>	: In this course, basic laws and concepts of electric and magnetism will be studied experimentally in the laboratory, knowledge attained in the theoretical course will be put to use.					
<b>Course Contents</b>	: The topics covered in this course include metric systems, measurements, laboratory study methods, capacitors, magnetism.					
<b>Recommended or Required Reading</b>	: Physics II Laboratory (Electricity and Magnetism) Sheets, 2018.					
<b>Planned Learning Activities and Teaching Methods</b>	: Projector, computer, laboratory equipment. Lecture, laboratory, group work, practice.					
<b>Recommended Optional Programme Components</b>	: --					
<b>Instructors</b>	: Res. Assist. Dr. Naci Erkan					
<b>Instructor's Assistants</b>	: --					
<b>Presentation Of Course</b>	: Face to face.					

## Course Outcomes

## Upon the completion of this course a student :

- 1 Prove basic physics laws experimentally.
- 2 Adopt skills in using various tools in physical experiments.
- 3 Collect the data in an experimental setup and interpret results.
- 4 To do individual experiments.
- 5 To do the work with a group.

## Preconditions

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## Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week			*Laboratory study methods: Units		*Projector, computer, laboratory equipment. Lecture, laboratory, group work, practice.
2.Week			*Laboratory study methods: Metric systems and their applications		
3.Week			*Laboratory study methods: Uncertainties in measurements, meaningful numbers		
4.Week			*Laboratory study methods: Uncertainty calculations, per cent error, normalization, some statistical methods		
5.Week			*Laboratory study methods: Report preparation technique, graphics plotting		
6.Week			*Ohm Principle Application Experiment		
7.Week			*Equipotential Surfaces Denevi		
8.Week			*Preparation for experiment: Capacitors and their work principles		
9.Week			*Connections of Capacitors Experiment		
10.Week			*Resistor and Capacitor Network Experiment		
11.Week			*Preparation for the experiment: Magnetism		
12.Week			*Biot-Savart Principle Experiment		
13.Week			*Magnetic Force Measurement Experiment		
14.Week			*Review of the experiments.		

## Assesment Methods %

1 Report Writing : 40.000

2 Final : 60.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Preparation for final	1	6.00	6.00
Final Exam	1	2.00	2.00
Class Hours (14 weeks)	14	4.00	56.00
Preliminary Study	14	2.00	28.00
Report Writing	6	3.00	18.00
			Total : 110.00
			Sum of Workload / 30 ( Hour ) : 4
			ECTS : 4.00

Program And OutcomeRelation

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	4	4	4	5	4	4	5	4	4	4	3	4	4	4	3	5	3	3	4	2	4	4	3	5
L.O. 2	4	4	4	5	4	4	5	4	4	4	3	4	4	4	3	5	3	3	4	2	4	4	3	5
L.O. 3	4	4	4	5	4	4	5	4	4	4	3	4	4	4	3	5	3	3	4	2	4	4	3	5
L.O. 4	4	4	4	5	4	4	5	4	4	4	3	4	4	4	3	5	3	3	4	2	4	4	3	5
L.O. 5	4	4	4	5	4	4	5	4	4	4	3	4	4	4	3	5	3	3	4	2	4	4	3	5

Ders/Program Çıktıları İlişkisi

P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24	P.O. 2
4	4	5	5	4	4	4	3	4	4	4	4	4	3	2	5	3	3	4	2	4	4	3	5	3