BASIC PHYSICS II

1	Course Title:	BASIC PHYSICS II
2	Course Code:	FZK1072
3	Type of Course:	Compulsory
4	Level of Course:	First Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	2
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Prof. Dr. ÖZKAN ŞAHİN
15	Course Lecturers:	Doç. Dr. Ürkiye Akar TARIM
16	Contact information of the Course Coordinator:	Prof. Dr. Özkan ŞAHİN E-mail: osahin@uludag.edu.tr İş Tel:(0224)2941706 Adres: BUÜ Fen Edebiyat Fakültesi, Fizik Bölümü, 16059 Görükle Kampusü, Bursa
17	Website:	none
18	Objective of the Course:	The aim of course is to teach concepts related to electricity and magnetism , to explain electricity laws and relation of between the physical concepts. To teach how is applied the physic laws to solve the problems.
19	Contribution of the Course to Professional Development:	Gains the ability to solve electric and magnetism problems.
20	Learning Outcomes:	
	1	The student can solve engineering problems by using the basic concepts of electricity and magnetism.
	2	The student can produce the solution to complex problems.
	3	The student can follow the scientific developments.
	4	The student can reinforce own information by doing the experiments in laboratory.
	5	The student can be analyzed the results.and can be interpret.
	6	The student know the working principle of the basic circuit elements.
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21	Course Content:	

Course Content:

Week	Theoretical	Practice
1	Electric Charges, Insulators and Conductors, Coulomb's law	Working conditions in the laboratory, the creation of groups, and general information about laboratory

2	Electric Field, Electric Field of Continuous Charge Distribution, Electric Field Lines	Drawing graph and determine the ways to be followed conclusions based on the received results
3	Gauss Law and Applications	Coulombs law
4	Electric Potential and Energy	Determination of the electric field plate capacitor
5	Capacitance and Dielectrics	Joule law
6	Current and Resistance	Alternative flow frequency
7	Direct Current Circuits	Wheatstone bridge
8	Midterm exam + repeating cources	Midterm exam + repeating cources
9	Magnetic Fields	The calculation of inductance L
10	Sources of the Magnetic Field	Biot Savart law
11	Faraday's Law / Inductance,	Measurement of the magnetic forces acting on the wire current
12	Alternative Current Circuits	Determination of the dielectric coefficients of different substances
13	Alternative Current Circuits	Control of the test reports
14	Maxwell Equations	Control of the test reports

22	Textbooks, References and/or Other Materials:	1. Raymond A. Serway, John W., (1995). “Fen ve Mühendislik için Fizik”cilt 2, Palme Yayıncılık. 2. Hugh D. Young, Roger A. Freedman, (2007) “Üniversite Fiziği ”Cilt 2, Pearson Education Yayıncılık. 3. Fishbane,Gasiorowicz,Thornton”Temel Fizik, Cilt 2”

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical	R	14	3.00	42.00
Midterm Exam	1	40.00		
Practicals/Labs		14	2.00	28.00
Quiz	0	0.00		
Self study and preperation		14	3.00	42.00
Homework project	0	0.00		
Homeworks		0	0.00	0.00
Final Exam	1	60.00		
Projects		0	0.00	0.00
Total	2	100.00		
Field Studies		0	0.00	0.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00		
Midterm exams		1	2.00	2.00
Others		14	5.00	70.00
Contribution of Final Exam to Success Grade		60.00		
Final Exams		1	2.00	2.00
Total		100.00		
Total Work Load				188.00
Measurement and Evaluation Techniques Used in the Course		Measurement and evaluation are carried out according to the principles of Bursa Uludağ University Associate and		
Total work load/ 30 hr				6.20
ECTS Credit of the Course				6.00

24	**ECTS / WORK LOAD TABLE**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	5	5	0	0	5	0	5	0	0	0	0	0	0	0	0	0
ÖK2	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0

ÖK5	5	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**