BASIC PHYSICS II

1	Course Title:	BASIC PHYSICS II	
2	Course Code:	FZK1072E	
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:	English	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç.Dr. HÜSEYİN OVALIOĞLU	
15	Course Lecturers:	Doç. Dr. Hüseyin OVALIOĞLU, Yrd. Doç. Dr. Sertan Kemal AKAY, Yrd. Doç. Dr. Cengiz AKAY	
16	Contact information of the Course Coordinator:	Doç. Dr. Ercan PİLİÇER, epilicer@uludag.edu.tr, 0224 2941711, UÜ Fen Edebiyat Fakültesi, Fizik Bölümü 16059 Görükle Kampüsü Bursa	
17	Website:		
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:		
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	Demonstration experiment

22	Textbooks, References and/or Other Materials:	1. Raymond A. Serway, John W., (1995). “Fen ve Mühendislik için Fizik”, Vol. 2, Palme Press. inc 2. Hugh D. Young, Roger A. Freedman, (2007) “Üniversite Fiziği”, Vol.2, Pearson press. İnc. 3. Fishbane,Gasiorowicz,Thornton”Temel Fizik, Vol.2”
23	Assesment	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	3.00	42.00
Homeworks	13	3.00	39.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	14	2.00	28.00
Final Exams	1	2.00	2.00
Total Work Load			185.00
Total work load/ 30 hr			6.10
ECTS Credit of the Course			6.00

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	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	5	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	0	5	5	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	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**