MARMARA UNIVERSITY - FACULTY OF ENGINEERING

2017-2018 Fall

PHYS1102 Physics II

COURSE DESCRIPTION FORM

Offering Department	Department of Computer Engineering		Undergraduate must course
Course Code	PHYS1102		
Course Name	Physics II		
Language of Instruction	English		
ECTS	4		
Contact Hours	Theoretical (T): 3	Practice (U): 0	Laboratory(L): 0
Pre-requisites			
Instructor	**Name**	Assoc. Prof. Mustafa Alevli	
	E-mail	mustafaalevli@marmara.edu.tr	
Course Materials	**Mandatory**	Hugh D. Young and Roger Freedman 14th edition 2016. *Sears and Zemansky's University Physics with Modern Physics for Scientists and Engineers*, Pearson Education	
	Recommended	Serway & Beichner , Physics 6th ed. Halliday & Resnick, Fundementals of Physics 8th ed.	
Course Objectives	Introduction to basic concepts and methods related with electricity and magnetism.		
Course Content	Electric fields, Gauss's law, Electric potential, Capacitance, Dielectrics, Current and resistance, dc circuits, magnetic fields and sources of magnetic fields, Faraday's law and Lenz's law, Inductance, Ac circuits		
Learning Outcomes	**LO1**	Explain the concepts such as electric charge, electric potential, electric field and Gauss's law.	
	LO2	Solve problems related with basic direct-current circuits.	
	LO3	Explain the concepts such as magnetic fields and forces.	
	LO4	Solve problems related with basic alternating current circuits.	
	LO5	Explain the basic concepts of electromagnetic fields.	

Program Outcomes		**LO1**	**LO2**	**LO3**	**LO4**	**LO5**	**LO6**	**LO7**
PO1	Sufficient knowledge of mathematics, science (a) and computer engineering (b) (1); ability to use theoretical and practical knowledge in these areas in complex engineering problems (2).	1a	1a	1a	1a	1a		

	No	**Week**	**Subjects**
Subjects (Knowledge, Skills and Behaviours),	**K1**	1-2	Electric charge and electric field, Gauss's law
	K2	3-5	Electric potential, capacitance, dielectric, electromagnetic field
	K3	6	Direct current circuits
Contributions of Subjects to Learning Outcomes,	**K4**	7	Magnetic field and forces
	K5	8-10	Sources of magnetic field, electromagnetic induction, Faraday's law
	K6	11-13	Alternating current, AC circuits, RLC circuits
Assessment Methods	**K7**	14	Electromagnetic fields
	K8		
	K9		
	K10		

Assessment Methods and Weights	**No**	**Type**	**Weight**	**Implementation Rule**	**Make-up Rule**
	MF	Midterm-Final	100%		The students who fail to take the midterm exam due to one of the excuses listed in the Marmara University Excuse Examination Directive inform the department secretary within five days following the exam. Those who are accepted by the board of directors in accordance with the principles determined by the Senate, use the right of examination in the make-up exam period specified in the academic calendar. The make-up exam for the final exam is given in the make-up exam week.
	Q	Quiz	-		
	H	Homeworks			
	P	Projects	-	-	
	R	Reports			
	S	Presentation			
	P	Participation / Interaction			
	L	Class/ Laboratory/ Field Work			

	O	Others			
	TOTAL		100%		

Determining Letter Grades

• The letter grades will be determined based on the midterm and final exams.
• In order to determine the letter grade, a curve or catalog based method will be followed based on the total average scores of the students.
• The final exam score and the total average score of the student must be at least 35 to pass the course.
• According to Marmara University Undergraduate regulations, the weight of the final exam must be at least 40 out of 100.

Assessment	Midterm 1	Midterm 2	Final	TOTAL
Weight	40	20	40	100

Teaching Method, Student Work Load

Time Applied by the Instructor

No	Method	Explanation	Hours
1	Lectures	Lectures are given in class using the board or via presentations. Example questions are solved to enhance the concepts.	14*3=42
2	Problem Session/ Practice	Problems related to the course topics are solved on the board.	
3	Laboratory	Experiments are done in the laboratory or theoretical concepts covered during the lectures are practiced using computer exercises.	
4	Interactive Courses	Questions are asked to students during lectures and they are encouraged to guess the answers (peer learning is also in this category)	
5	Field Work	Students attend activities outside the campus.	
6	Midterm	Midterm exam is given during the midterm week.	2
7	Final	Final exam is given during the final exam week.	2

Estimated Time to be Allocated by a Student

8	Projects	The students carry out research about the problem given in the project, design and implement their solution and prepare a report.	
9	Homeworks	The students solve the problems given as homework.	
10	Pre-class learning of Course Material	The students study and learn the new subjects from course materials.	
11	Review of Course Material	Students review the course subjects from course materials to prepare for the exams and homeworks.	54
12	Office Hour	Students ask questions to the instructor or the assistant during office hours.	2
TOTAL			102

Academic Honesty

Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students.

In case academic dishonesty is observed, the first authority is the instructor of the course. The instructor may decide to give the student zero for the homework(s)/lab(s)/exam(s), give the letter grade FF, or may take disciplinary action.