

FIZ103 PHYSICS I		CIVIL ENGINEERING	
Semester	Credit Structure		
	Lecture	Recitation	Laboratory
1	3	1	-
Language	English		
Compulsory / Elective	Compulsory		
Prerequisites	None		
Catalog Description	Units. Vectors One and two dimensional motion. Force and motion. Kinetic energy, and work. Potential energy and conservation of energy principle. Particle systems. Collision. Conservation of linear momentum. Rotational motion. Equilibrium of rigid bodies. Gravitation. Periodic motion.		
Course Objectives	To provide students a clear and logical presentation of the basic concepts and principles of physics, and to strengthen understanding of concepts and principles through a broad range of interesting real world applications. To motivate students through physical examples that demonstrate the role of physics in other disciplines.		
Course Outcomes	Improved skills in capability of analysis and solving engineering problems.		
Textbook and /or References	Raymond A. Serway, “Physics For Scientist and Engineers”, 3 <sup>rd</sup> Edition, Saunders College Publishing, Florida, 1992 Halliday D. ve Resnick, “ Fundamentals of Physics ” 3 <sup>rd</sup> Edition, John Wiley Inc. New York, 1974		
Assessment Criteria		Quantity	Percentage
	Midterm Exams	2	50
	Quizzes		
	Homeworks		
	Projects		
	Term Paper		
	Laboratory Work		
	Other		
	Final Exam	1	50
Course Category by Content (%)	Mathematics and Basic Sciences	80	
	Engineering Science	20	
	Engineering Design	--	
	Social Sciences	--	
Instructors	Prof. Dr. Mehmet ÇAKMAK		

COURSE PLAN	
Week	Topics
1	Vectors
2	Motion in one Dimension
3	Motion in two Dimensions
4	The Laws of Motion
5	Circular Motion and Other application of Newton's Laws
6	Work and energy
7	Potential Energy and Conservation of energy, Linear Momentum of Collisions
8	FIRST MIDTERM EXAM
9	Rotation of a Rigid body around a fixed Axis and Torque
10	Rolling Motion, Angular Momentum and Torque
11	SECOND MIDTERM EXAM
12	Static Equilibrium and Elasticity
13	Oscillatory Motion
14	The Law of Universal Gravitation

RELATIONSHIP BETWEEN THE COURSE AND DEPARTMENT CURRICULUM				
	Program Outcomes	1	2	3
1	An ability to apply knowledge of mathematics, science, and engineering			X
2	An ability to design and conduct experiments, as well as to analyze and interpret data		X	
3	An ability to design a system, component, or process to meet desired needs		X	
4	An ability to function on multi-disciplinary teams		X	
5	An ability to identify, formulate, and solve engineering problems			X
6	An understanding of professional and ethical responsibility		X	
7	An ability for effective written and oral communication in Turkish and English		X	
8	The broad education necessary to understand the impact of engineering solutions in a global and societal context			X
9	A recognition of the need for, and ability to engage in life-long learning		X	
10	A knowledge of contemporary issues		X	
11	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice		X	
<b>Contribution of the course : 1:None 2:Partially 3:Completely</b>				