

Course title	Code	semester	T+U	credit	ECTS
Physics 1		one	4 +2	4	6
Prerequisite Courses	None				
Language of the Course	English				
Course Level	Undergraduate				
Type of Course	Compulsory				
Course Coordinator					
Instructors					
Course Assistants					
The aim of lesson	The aim of this course; In the first year, to inform students about the basic concepts of physics and to introduce its importance in engineering, the use of physics in our daily life, the ability to interpret physics experiments and their benefits.				
Course Content	Vectors. Movement in one dimension. Movement in two dimensions. Newton's laws of motion and their applications. Newton's law of universal gravitation. Work and energy. Conservation of energy. Momentum and motion of systems. Static equilibrium of solid bodies. Rotation and angular momentum. Basic measurements. Balance experiment. Friction test. Oblique shot. Elastic and inelastic collision. moment of inertia. Centripetal acceleration. Physical pendulum.				
Course Learning Outcomes	At the end of this course, the student; 1) Comprehends the measures and basic unit systems. 2) Analyzes static, dynamic and kinematic processes and solves their problems. 3) Applies static, dynamic and kinematic processes to other engineering disciplines. 4) Applies basic physics rules to mechanical systems.				
Weeks	Topics				
one	Units and standards, Force, Graphical representation, Vectors, Components of a vector, Perpendicular component method				
2	Finding the resultant force, Vector sum and difference, Problems, Equilibrium, Newton's First Law, Newton's Second Law				
3	Examples of equilibrium, Friction force, Problems				
4	Equilibrium, Moment of a force, II. Condition of Equilibrium, Parallel forces, Applications				
5	Center of gravity, Applications, Problems				
6	Linear motion, Average velocity and instantaneous velocity, Average acceleration and instantaneous acceleration, Linear motion with constant acceleration				
7	Linear motion, Average velocity and instantaneous velocity, Average acceleration and instantaneous acceleration, Linear motion with constant acceleration				
8	Integration of velocity and path, Free falling bodies, Components of velocity, Problems				
9	Newton's Second Law, Gravity, Newton's Second Law, Mass, Units, Mass and Weight, Newton's general law of gravity				
10	Mass of supply and changes in g, Applications, Problems				
11th	Planar motion, Motion of a bullet, Oblique shot, Circular motion, Centripetal force, Applications				
12	What is work units, Work done when force changes, Kinetic energy, Gravitational potential energy, Applications				
13	Elastic potential energy, Work and energy principle, Power, Mass, Energy, Impulse and Momentum, Conservation of momentum, Problems				
14	An overview				
General Competencies					

In assessments, it is an important criterion for students to understand the main topics of this course and to use them in engineering field applications.

resources

- 1) Richards Sears, Wehr Zemansky, Modern University Physics, CI, Çağlayan Publishing House, Istanbul, 2004.
- 2) Douglas C. Giancoli, Physics for Scientists & Engineers, Akademi Publishing, Ankara, 2009.

Evaluation System

The dates, days and hours of the Midterm Exam, Quiz, Final Exam and Evaluations will be announced later, according to the decision of the Faculty Administrative Board.

WITH PROGRAM LEARNING OUTCOMES COURSE LEARNING OUTCOMES RELATIONSHIP TABLE											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
LO1	5										
LO2	4	4									
LO3	3					4					
LO4	4										
LO: Learning Outcomes OP: Program Outcomes											
Contribution Level	1 Very Low		2 Low		3 Medium		4 High		5 Very High		

Relation of Program Outcomes and Related Course

Course name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
Physics I	4	one				one					

