



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Introduction to Basic Physics							
Course Code		FİZ173		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	103 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Objective of this course is to introduce laws of motion and to apply them to various situations, and to establish a relationship between the force, work and energy while emphasizing universality of these concepts.							
Course Content		Vectors, Describing motion, Laws of motion and its applications, Work and energy, Conservation of Energy and Momentum, Rotational, Vibrational Motion and Waves. Laws of motions and fluid mechanics and thermodynamics.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Problem Solving					
Name of Lecturer(s)		Ins. Muhittin TURAN							

Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	30
Final Examination	1	70
Quiz	2	10

Recommended or Required Reading

1	Üniversite Fiziği Cilt I , H.D.Young, R.A.Freedman
2	Fen ve Mühendisler için Fizik 1 (Mekanik) , R.A. Serway, R.J. Beichner
3	Fiziğin Temelleri , David Halliday, Robert Resnick, and Pearl Walker

Week	Weekly Detailed Course Contents	
1	Theoretical	Physical quantities, vectors and scalars
2	Theoretical	Motion in one dimension
3	Theoretical	Vectors and Motion in two dimension
4	Theoretical	Laws of motion and dynamics
5	Theoretical	Circular motion and other applications of Newton's Laws
6	Theoretical	Work, kinetic and potential energy
7	Theoretical	Linear momentum and collisions
8	Intermediate Exam	Midterm Exam
9	Theoretical	Rotation of rigid bodies, Rolling motion and angular momentum
10	Theoretical	Rotation of rigid bodies, Rolling motion and angular momentum
11	Theoretical	Elasticity and vibration motion
12	Theoretical	Waves and basic properties
13	Theoretical	Introduction to fluid physics
14	Theoretical	Kinetic theory and heat and temperature
15	Theoretical	Thermodynamics Principles and basic examples

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	4	70
Quiz	2	2	0.5	5
Midterm Examination	1	10	2	12
Final Examination	1	14	2	16
Total Workload (Hours)				103
[Total Workload (Hours) / 25*] = ECTS				4

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	
2	
3	
4	
5	

Programme Outcomes (Machinery)

1	To be able to know general properties and usage areas of industrial materials and make selection.
2	Design of machine elements.
3	To be able to make production using machining and welding machines without machining.
4	To be able to make measurement and quality control processes with machine tools for measuring and control equipment.
5	To be able to make necessary corrections in order to determine the mistakes by using the necessary non-destructive test methods in welded parts and to eliminate these mistakes.
6	Preventive measures to prevent the occurrence of these faults by preliminarily determining the faults that will occur in the machines as statistical data and to make necessary interventions in case of breakdown.
7	They can make drawings of work pieces on CAD station and apply them on CNC looms. Ability to operate and use CAD / CAM and AUTOCAD package programs.
8	To be able to transfer engineering science and technology to practice by making calculations in the direction of scientific principles.
9	It can repair the elements in pneumatic and hydraulic systems which are indispensable elements of automatic control systems and can regulate their work.
10	The student who is trained as a machine technician during the whole program knows that industrial task definition in the field of work is error finding, problem solving, decision making, planning of functions and activities and they can be achieved by aiming to acquire these characteristics.

Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

	L1	L2	L3	L4	L5
P4	2	2	2	2	2
P8	2	2	2	2	2
P10	1	1	1	1	1

