



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Vocational Physics							
Course Code		OTT109		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	4	Workload	100 (<i>Hours</i>)	Theory	2	Practice	0	Laboratory	0
Objectives of the Course		Introduction of Newtonian motion laws and their application to different situations, work and energy relations between different energies and laws of nature. establishment of relation with movement and force.							
Course Content		Physics and Measurement, Vectors, Motion in One Dimension, Motion in Two Dimensions, Laws of Motion and Dynamic, Circular Motion and Other Applications of Newton's Laws, Work, Kinetic and Potential Energy, Linear Momentum and Collisions, Rotational Motion and Torque, Static Equilibrium, Vibration and Wave Movement, Fluid Mechanics, Kinetic Theory and Introduction to Thermodynamics.							
Work Placement		NONE							
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	40
Final Examination	1	70

Recommended or Required Reading

1	University Physics Volume I, H.D.Young, R.A.Freedman
2	Physics for Science and Engineers 1 (Mechanics), R.A. Serway, R.J. Beichner
3	Basics of Physics, David Halliday, Robert Resnick, and Pearl Walker

Week	Weekly Detailed Course Contents	
1	Theoretical	Physics and Measurement, Vectors
2	Theoretical	Motion in One Dimension
3	Theoretical	Vectors and Motion in Two Dimensions
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
9	Theoretical	Rotation and Rolling Movement of Solid Bodies
10	Theoretical	Rotation of rigid bodies, rolling motion and angular momentum
11	Theoretical	Flexibility and Vibration Movement
12	Theoretical	Waves and Basic Features
13	Theoretical	Introduction to Fluid Physics
14	Theoretical	Kinetic Theory, Heat and Temperature

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	4	70
Midterm Examination	1	12	2	14
Final Examination	1	14	2	16
Total Workload (Hours)				100
[Total Workload (Hours) / 25*] = ECTS				4
*25 hour workload is accepted as 1 ECTS				



Learning Outcomes

1	The concepts of physics are related to experiments, the laws of the universe are based on simple concepts such as force, work and energy. demonstrate that it can be understood
2	To be able to identify the differences and relations between different movements in one and two dimensions with vector concept
3	Momentum ile ilgili açıklayabilmeli, momentum korunumunun nedenlerini gösterebilmeli
4	Apply Newton's equations of motion to fluids
5	Relate heat and energy to energy and motion

Programme Outcomes (Automotive Technology)

1	To be able to interpret and evaluate data, identify problems, analyze them, and develop evidence-based solutions by using basic knowledge and skills in the field.
2	Must be able to choose and effectively use the modern techniques, tools and information technologies necessary for field related applications.
3	Must be able to gain practical skills by examining relevant processes in industry and service sector on site.
4	They must be able to produce solutions, take responsibility for teams or do individual work when they encounter situations unforeseen in the field related applications.
5	Awareness of the need for lifelong learning; it must be able to follow the developments in science and technology and to constantly renew itself.
6	Must be able to use computer software and hardware at the basic level required by the field
7	Must have job security, worker health, environmental protection knowledge and quality awareness.
8	He must possess a level of foreign language knowledge that is capable of following the innovations in his area of expertise and communication techniques.
9	Must be able to acquire basic theoretical and practical knowledge about the field in mathematics, science and basic engineering.
10	It should have the ability to plan the processes / processes of the Automotive Program to meet the expectations of the sector.
11	To be able to design the systems and components related to the field by using technical drawing, computer aided drawing, designing using simulation programs and using various softwares, to be able to make basic sizing calculations, to be able to master professional plans and projects.

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

	L1	L2	L3	L4	L5
P1	4	3	4	5	4
P2	4	3	4	5	4
P3	5	5	3	4	3
P4	5	4	2	2	3
P5	4	4	5	4	3
P6	4	5	4	5	3
P7	5	3	5	3	5
P8	3	3	2	3	5
P9	3	4	3	5	4
P10	4	5	2	4	3
P11	5	4	3	4	3

