AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Diploma Study I								
Course Code	FİZ435		Couse Level	First Cycle (Bachelor's Degree)					
ECTS Credit	7	Workload	176 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	The aim is to supply overall laboratory knowledge and to improve research skills for analyzing physical systems.								
Course Content	Subject determination, article investigation, examination and comprehension of articles, method determination.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Discussion								
Name of Lecturer(s)	Assoc. Prof. Fatih ERSAN, Assoc. Prof. Melis GÖKÇE, Prof. Aytaç Gürhan GÖKÇE, Prof. Cesur EKİZ, Prof. Ethem AKTÜRK								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	70
Quiz	2	10
Assignment	2	10

Recommended or Required Reading	
1	Üniversite Fiziği Cilt I , H.D.Young, R.A.Freedman
2	2- Fen ve Mühendisler için Fizik 1 (Mekanik) , R.A. Serway, R.J. Beichner
3	3- Fiziğin Temelleri , David Halliday, Robert Resnick, and Pearl Walker
4	5- Lectures on Physics I, R. Feynmann

Week	Weekly Detailed Course Contents	
1	Theoretical	Subject determination, article investigation.
2	Theoretical	Subject determination, article investigation
3	Theoretical	Investigation about the subject
4	Theoretical	Scanning the literature about the subject
5	Theoretical	Determination of the methods
6	Theoretical	Determination of the methods
7	Theoretical	Developing the methods related with the subject
8	Intermediate Exam	Midterm Exam
9	Theoretical	Testing the methods on the known examples
10	Theoretical	Applying the methods to the subject and problem
11	Theoretical	Determination of the difficulties of problem
12	Theoretical	Solving the problem
13	Theoretical	Solving the problem
14	Theoretical	Testing the solution and generalization
15	Theoretical	Project preparation

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	4	3	98
Assignment	2	2	3	10
Quiz	2	2.5	0.5	6
Midterm Examination	1	28	2	30

Final Examination	1	30	2	32
			Total Workload (Hours)	176
			[Total Workload (Hours) / 25*] = **ECTS**	7
*25 hour workload is accepted as 1 ECTS				

Learning Outcomes	
1	Should be able to define the problem
2	Should be able to obtain relevant information of the problem.
3	Should be able to determine the approximation procedure.
4	Should be able to formulate the problem.
5	Should be able to suggest solutions to problem
6	Should be able to solve the problem
7	Sould be able to examine the solution of the problem

Programme Outcomes *(Physics)*	
1	To understand the importance of physics by understanding the general concepts of physics, matter and energy
2	To be able to define the movements of matter and to distinguish the characteristics of movements under different force (potential)
3	Be able to say the meaning of Lagrange and Hamiltonian formulations of the movement and apply them to simple problems,
4	To be able to express the fundamental concepts such as time, space, force, momentum and energy in the movements of matter close to the speed of light and be able to solve and interpret the simple problems related to
5	To be able to establish the relationship between electric and magnetic forces and to be able to illustrate their applications to technology and solve problems related to the movement of particles in electric and magnetic fields
6	Be able to say the basic laws of electromagnetics and apply them to problems, illustrate their applications to simple technology
7	To be able to tell the reasons of the differences between the classical cases and the quantum scale and explain the reasons
8	Explain the concepts of discontinuity, uncertainty, matter-antimatter, indecisiveness of quantum physics with examples and explain simple problems related to the subject.
9	To be able to solve the problems of micro-particles under different simple potentials and be able to say their meanings
10	To be able to establish the relationship between the movements and properties of multi-particle systems and the laws of probability and solve simple problems
11	To be able to illustrate the laws, meanings and applications of thermodynamics and use them
12	Be able to use their knowledge about quantum physics and mechanics in explaining some properties of atoms and nuclei
13	To be able to show the meanings of some theoretical concepts by experimenting, and develop a strong relationship between thought and the real world, develop analytical thinking
14	To be able to apply the meanings of the basic laws of physics, their comprehension of universality and the relations between them and the unity of the laws of nature.
15	Use computer to solve physics problems
16	To be able to understand the problems by using their analytical knowledge skills and to propose solutions by dealing with the laws of physics
17	Be able to use the knowledge of physics to understand new technologies
18	To be able to tell the relations between symmetry and conservation laws in laws of physics

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

	L1	L2	L3	L4	L5	L6	L7
P1	4		4	4			
P2	4	4			4		
P3				4	4		
P7			4		4		
P9			4		4		
P10						4	
P12			4		4		
P13	4	4				4	
P15		4		4			
P16	5	5		5		4	4
P17			5	5	4	5	4
P18		4		4	4	4	