	В	ASIC	PHYSICS I							
1	Course Title:	BASIC F	PHYSICS I							
2	Course Code:	FZK107								
3	Type of Course:	Compuls	sory							
4	Level of Course:	First Cyc	cle							
5	Year of Study:	1								
6	Semester:	1								
7	ECTS Credits Allocated:	6.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	2								
11	Prerequisites:	There is	no course prerequisite							
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	ace							
14	Course Coordinator:	Doç.Dr.	KEMAL SERTAN AKAY							
15	Course Lecturers:	Yrd. Doç	. Dr. Nilgün DEMİR							
16	Contact information of the Course Coordinator:	Doç. Dr. Sertan Kemal AKAY E-mail: kakay@uludag.edu.tr İş Tel: 0 224 29 41 719 Adres: Uludağ Üniversitesi Fen Edebiyat Fakültesi Fizik Bölümü, 16059 Görükle Kampüsü BURSA								
17	Website:									
18	Objective of the Course:	The aim ofthis course is to teach concepts related to mechanical, to explain physic laws and relation of between the physical concepts. To teach how is applied the physic laws to solve the problems.In addition, laboratory practices and to reinforce physics knowledge gained								
19	Contribution of the Course to Professional Development:									
20	Learning Outcomes:									
		1	The student can solve engineering problems by using the basic concepts of physics							
		2	The student can produce the solution to complex problems							
		3	The student can follow the scientific developments							
		4	The student can reinforce own information by doing the experiments in laboratory							
		5	The student can be analyzed the results and can be interpret							
		6	The student can be used the vector notation							
		7								
		8								
		9								
	1	10								
21	Course Content:									
		Co	ourse Content:							
Week	Theoretical		Practice							

_	Longth Managard time attended	Manking and distance in the laboratory, the creation of
1	Length, Mass and time standards, Dimensional analysis, Conversion of units	Working conditions in the laboratory, the creation of groups, and general information about laboratory
2	Vectors, Coordinate systems, Vector and scalar quantities, some of the properties of Vectors, Vector components and unit vectors	Drawing graph and determine the ways to be followed conclusions based on the received results
3	Motion, Position, Velocity, Instantaneous velocity, Acceleration, Motion diagrams, Motion with constant acceleration in one dimension, free falling bodies, The kinematic equations derived from the mathematical equation, Two-dimensional motion of position, Velocity and acceleration vectors, Motion in two dimensions with constant acceleration, Angular shot, Uniform circular motion, Tangential and radial acceleration, Relative velocity and relative acceleration	Taking measurements using Vernier caliper, micrometer and Sferometer
4	The laws of motion, Concept of Force, Newton's first law and inertial systems, Newton's second law, The force of gravity and weight, Newton's third law, Newton's laws in some applications, The friction force	Measurement of friction coefficient with the help of an inclined plane
5	Other applications of circular motion and Newton's laws, Newton's second law, The implementation of uniform circular motion, Non-uniform circular motion of accelerated systems	Determine calorimeters heat capacity and heat of a solid body
6	Energy and energy transfer, Work done by a constant force, Work done by the changing force, Kinetic energy and work-kinetic energy theorem, The conservation of energy	Reversible Measuring acceleration of gravity with the help of the pendulum
7	Potential energy, Potential energy of a system, Conservative and non conservative forces of conservation of mechanical energy, Mechanical energy change for nonconservative forces, The correlation between conservative forces and potential energy, The energy diagram	Determine the spring constant by using Hooke's law and the vibration method
8	Midterm exam + repeating courses	Midterm exam + repeating courses
9	Impulse and momentum, Linear momentum and collisions, Conservation of linear momentum, Collisions in one dimension, Collisions in two dimensions, The movement of center of mass system of particles, The movement of Rocket	Examination of movement of an object moving at constant velocity in one dimension
10	Rigid body rotation about a fixed axis, Moment of inertia, Parallel Axes Theorem, Perpendicular Axes Theorem, Torque, Determination of the Relationship between Torque and Angular Acceleration	Ballistic pendulum
11	Static, equilibrium conditions, the center of gravity, Stress, Strain, Modulus	Determination of resistance to flow of a liquid using Stokes' law
12	Gravitation, Newton's law of gravity, weight, and Kepler's laws of planetary motion	Moment of inertia
13	Simple harmonic motion, simple harmonic motion, period, amplitude, displacement, velocity and acceleration, simple harmonic motion of Energy, Simple pendulum, physical pendulum	Energy and momentum conservation
14	General Repeat	Control of the test reports
1		

	Textbooks, References and/or Other Materials:		 Raymond A. Serway, John W., (1995). "Fen ve Mühendislik için Fizik", Palme Yayıncılık Hugh D. Young, Roger A. Freedman, (2007) "Üniversite Fiziği", Pearson Education Yayıncılık Fishbane, Gasiorowicz, Thornton" Temel Fizik, Cilt I" 						
23	Assesment								
TERM L	EARNING ACTIVITIES	NUMBE R	WEIGHT						
Midtern	n Exam	1	40.00						
Quiz		0	0.00						
Home v	vork-project	0	0.00						
Final Ex	xam	1	60.00						
Total		2	100.00						
	ution of Term (Year) Learning Activitie s Grade	es to	40.00						
Contrib	ution of Final Exam to Success Grade)	60.00						
Total			100.00						
Measur Course	rement and Evaluation Techniques Us	ed in the							
24	ECTS / WORK LOAD TABLE								

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	3.00	42.00
Homeworks	14	5.00	70.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	0	0.00	0.00
Final Exams	1	2.00	2.00
Total Work Load			186.00
Total work load/ 30 hr			6.20
ECTS Credit of the Course			6.00

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ1 PQ2 PQ3 PQ4 PQ5 PQ6 PQ7 PQ8 PQ9 PQ1 PQ11 PQ12 PQ1 PQ14 PQ15 PQ16														
ÖK1	5	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK2	5	5	5	5	5	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	5	5	5	0	0	0	0	0	0	0	0
ÖK4	0	0	5	5	5	5	0	0	0	0	0	0	0	0	0	0

ÖK5	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6	5											o alifica			0	0
Contrib 1 very low 2 low ution Level:							3 1	Medi	um	,	4 Higl	h	5 Very High			