PHYSICS

1	Course Title:	PHYSICS	
2	Course Code:	FZK1085	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	4.00	
8	Theoretical (hour/week):	3.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	0	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç.Dr. ERCAN PİLİÇER	
15	Course Lecturers:	Yrd. Doç. Dr. Nil KÜÇÜK, Yrd. Doç. Dr. Cengiz AKAY, Yrd. Doç. Dr. Hüseyin OVALIOĞLU, Yrd. Doç. Dr. Mehmet ÖZER	
16	Contact information of the Course Coordinator:	epilicer@uludag.edu.tr, 0 224 29 41 711, Yrd. Doç. Dr. Ercan PİLİÇER, Uludağ Üniversitesi Fen Edebiyat Fakültesi, Fizik Bölümü 16059 Görükle Kampüsü Bursa, Türkiye	
17	Website:		
18	Objective of the Course:	Basic concepts and principles of physics is given clear and logical manner	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Understand and use basic concepts and principles of physics problem solving
		2	Information on the vector and scalar quantities can be obtained
		3	Newton's laws of motion (1 and 3), and the concept of torque learns
		4	Learn two-dimensional problem solving and use the laws of motion, Newton's 2nd law
		5	Movement in one dimension, time, speed and acceleration, and they learn the concepts of use in problem solving
		6	Movement in two dimensional, time, speed and acceleration, and they learn the concepts of use in problem solving
		7	Work, energy and power, solve physics problems by using the potential energy and energy conservation
		8	Learn the subject of linear momentum and collisions
		9	Learns the concepts of Rigid-body rotation around a fixed axis, rotational motion
		10	Angular momentum and torque
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Length, Mass and time standards, Dimensional analysis, Conversion of units	
2	Vectors, Coordinate systems, Vector and scalar quantities, some of the properties of Vectors, Vector components and unit vectors	
3	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	
4	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	
5	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	
6	Other applications of circular motion and Newton's laws, Newton's second law, The implementation of uniform circular motion,	
8	Energy and energy transfer, Work done by a constant force, Work done by the changing	
9	theorem, The conservation of energy Potential energy, Potential energy of a	
10	forces of conservation of mechanical energy, Mechanical energy change for	
11	between conservative forces and potential energy, The energy diagram	
12	and collisions, Conservation of linear momentum, Collisions in one dimension, Collisions in two dimensions, The movement of center of mass system of particles, The Rigid body rotation about a fixed axis, Moment of inertia, Parallel Axes Theorem, Perpendicular Axes Theorem	
13	Angular Momentum and Angular Momentum Conservation, Torque, Determination of the Relationship Between Torque and Angular Acceleration	
14	General Review and Problem Solutions	

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	3.00	42.00
Practicals/Labs	0	0.00	0.00
Self study and preperation	13	3.00	39.00
Homeworks	13	3.00	39.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	2.00	2.00
Others	14	2.00	28.00
Final Exams	1	2.00	2.00
Total Work Load			152.00
Total work load/ 30 hr			5.07
ECTS Credit of the Course			4.00

22	Textbooks, References and/or Other Materials:	1. “Fundamentals of Physics”, David Halliday, Robert Resnick, (2008), Wiley. 2. “University Physics”, Hugh D. Young, Roger A. Freedman, (2007) Pearson Education. 3. “Physics for Scientists and Engineers”, Raymond A. Serway, John W., (1995) Palme
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	40.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	ECTS / WORK LOAD TABLE

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	3	2	2	3	2	2	4	2	3	3	2	2	0	0	0	0
ÖK2	3	3	2	3	2	3	3	3	2	3	4	2	0	0	0	0
ÖK3	5	5	4	3	2	5	3	4	3	3	3	2	0	0	0	0
ÖK4	5	5	5	3	2	5	3	5	3	4	4	2	0	0	0	0
ÖK5	5	5	5	3	2	5	3	4	3	4	5	2	0	0	0	0
ÖK6	5	5	5	4	2	4	5	3	2	3	5	3	0	0	0	0
ÖK7	5	5	5	3	2	3	3	3	2	3	3	3	0	0	0	0
ÖK8	4	4	4	3	2	2	3	3	2	3	4	4	0	0	0	0
ÖK9	4	4	4	3	2	3	3	2	2	4	3	4	0	0	0	0
ÖK10	4	4	4	3	2	4	3	4	3	3	5	3	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	1 very low	2 low	3 Medium	4 High	5 Very High