

<b>Department</b> Department of Mathematics			<b>Academic Year</b> 2022-2023	<b>Date</b> 01/12/2022	
<b>Course Unit Code</b> FİZ2111	<b>Course Unit Title</b> Physics I		<b>Semester/Year</b> Fall / 2	<b>Number of ECTS Credits</b> 3	
<b>Language of Instruction</b>	Turkish				
<b>Type of Course Unit</b>	Compulsory				
<b>Prerequisites and co-requisites</b>	-				
<b>Address of course</b>	-				
<b>Local Credit</b>	<b>Theoretical</b>	<b>Practical</b>	<b>Laboratory</b>	<b>Presentation</b>	<b>Project</b>
2	2	0	-	-	-
<b>Name of Lecturers</b>	Associate Professor Fethi DAĞDELEN				
<b>Assistants</b>	-				

<b>Course content</b>	Physics and Measurement. Position and Velocity Vectors, Acceleration Vector, Angular Velocity and Velocity, Vectors and Scale Quantities, Some Properties of Vectors, Problem Solutions, One Dimension Motion, Constant Acceleration Motion, Mass Law, Second Law of Newton Mass Force, Mass, Newton's Third Law, Problem Solving, Some Applications of Newton's Laws, Friction Force, Friction Force, Problem solving, Other applications of Newton's laws, Problem solutions, Circular motion and other applications of Newton's laws, Problem solutions, Work and kinetic energy, Work done by constant force, Work done by variable force, Problem solutions, Kinetic energy, Work-Energy theorem , Power, Problem solutions, Potential Energy and Energy Problem Solving, Linear Momentum and Collisions, Impulse and Momentum, Collisions, Flexible and Inelastic Collisions in One Dimension, Problem Solutions, Problem Solving, Problem Solving, Problem Solving, Collisions in two dimensions, Mass center, Problem solutions
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Weekly Detailed Course Contents	
Week	Topic
1	Physics and measurement
2	Vectors, vector and scalar quantities, some properties of vectors, problem solutions
3	Single dimension motion, constant acceleration motion, sudden speed and speed, free fall, problem solutions
4	Motion in two dimensions, position and velocity vectors, acceleration vector, inclined motion, circular motion, problem solutions
5	Law of motion, concept of force, first law of Newton, mass, second law of Newton Mass gravity-weight, Newton's third law, problem solutions
6	Some applications of newton's laws, friction force, problem solutions
7	Circular motion and other applications of Newton's laws, problem solutions
8	Work and kinetic energy, constant force work, variable force work, problem solutions
9	General application
10	Kinetic energy, work-energy theorem , power, problem solutions
11	Potential energy and conservation of energy, conservative and non-conservative forces, conservative forces and potential energy, problem solutions
12	Conservation of mechanical energy, work of non-conservative forces, problem solutions
13	Linear momentum and collisions, impulse and momentum, collisions, flexible and inflexible collisions in one dimension, problem solutions, collisions in two dimensions, mass center, problem solutions
14	A brief evaluation of the course content and topics

<b>Course Resources</b>	Physics for Science and Engineers Volume I, Translation Kemal Çolakoğlu
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<b>Assessment Methods and Criteria</b>	<b>In-Term studies</b>	Quantity	Percentage (%)
	<b>Mid-Term Exams</b>	1	40
	<b>Quizzes</b>	-	-
	<b>Assignments</b>	-	-

	<b>Projects</b>	-	-
	<b>Term assignment</b>	-	-
	<b>Laboratory</b>	-	-
	<b>Other</b>	-	-
	<b>Final exam</b>	1	60
<b>On Assessment Methods and Criteria</b>	A grade of success; the relative evaluation system or the discretion of the instructor. In order to be taken into consideration in the courses in which the relative evaluation system and teaching staff's discretion are applied, the final exam score of the student must be at least YSAS. Students who fall below this score are considered to fail directly. For the courses that can not be evaluated with the relative evaluation system, the letter grades of the success grades are determined by the consent of the instructor teaching the table by 100 points by the Senate, using the distribution of the raw success grades at the end of the semester. A student who has received a grade AA, BA, BB, CB or CC grade is deemed to have completed that course. A student who has received one of the grade DC or DD grades is deemed to have fulfilled that course condition. In order for a student who takes DD and DC letters to be counted as successful, the GNO must be at least 2.00. A student who receives a graded FF grade is considered to have failed that course		

<b>Percentage of Course Category (%)</b>	<b>Mathematics and Basic Sciences</b>	100
	<b>Computer Sciences</b>	0
	<b>Programming Design</b>	0
	<b>Social sciences</b>	0

<b>Course Outcome</b>	Students studying in the fields of science and mathematics,
<b>Aims of the course</b>	To teach the concepts such as motion, force, speed, energy, which are found in the student, General Physics (mechanical)
<b>The way of processing course</b>	Face to face

<b>Relation of the course with program outcomes</b>				
Learning outcomes		1	2	3
<b>1</b>	To have advanced theoretical and applied knowledge in a way to prioritize the scientific approach supported by textbooks containing up-to-date information in the field, application tools and other resources			
<b>2</b>	Adapting and transferring the knowledge gained in the field to secondary education			
<b>3</b>	Ability to independently carry out an advanced study in the field			
<b>4</b>	Be aware of the necessity of lifelong learning and continuously improve their professional knowledge and skills.			
<b>5</b>	Using a foreign language at least at the European Language Portfolio B1 General Level, following the information in the field and being able to communicate with colleagues			
<b>6</b>	To be able to use information and communication technologies together with computer software at minimum advanced level of European computer license required by the field.			
<b>7</b>	Have the ability to make oral and written presentation in native language			
<b>8</b>	Having the ability to understand spoken English and use English at reading level			
<b>9</b>	To have the ability to assimilate mathematical concepts and understand the relationships between them, to recognize different aspects of the same concepts and relationships		X	
<b>10</b>	To have the ability to define and formulate the relationships between items in non-mathematical disciplines in the language of mathematics.			X
<b>11</b>	To have the ability to use mathematical knowledge in different problems			X
<b>12</b>	Having the ability to develop computer programs using mathematical knowledge			
<b>Contribution of the course: 1:No 2:Partially 3:Completely</b>				

**Preparer:** Associate Professor Fethi DAĞDELEN

**Preparation date:** 01/12/2022