

Course Description	
Course Code	PHYS 103
Course Name	PHYSICS I
Prerequisite Courses	
Language of the Course	
Course Coordinator	
Instructor(s)	
Course Assistants	
The aim of the course	To teach physical principles those relate Newtonian mechanics to students whose are being ready to engineering career.
Course Content	The importance of learning physics is based on that it is a basic science. All engineers working on many different areas require applications of basic physical laws. Basic science, including physics, is the foundation of all engineering and technology.

Weekly Course Content	
Week 1	Physics and Measurement
Week 2	Motion in one dimension
Week 3	Vectors
Week 4	Motion in two dimensions, laws of motion
Week 5	Circular motion and other applications of Newton's laws
Week 6	Work and kinetic energy
Week 7	Potential energy and conservation of energy
Week 8	Midterm exam.
Week 9	Linear momentum and collisions
Week 10	Rigid body rotating around a fixed axis
Week 11	Rolling motion and the angular momentum
Week12	Static balance and elasticity
Week 13	Vibrational motion
Week 14	Universal law of attraction
Week 15	Final exam.

Course Learning Outcomes	
1	Understand how physics appeal to our sense of beauty as well as to our rational intelligence
2	To help to be developed of the physical intuition of students
3	To gain the ability of thinking analytically
4	Understand that no engineer could design any kind of practical device without knowing basic principles of physics
5	-
6	-

Contribution of the Course to Program Qualifications		Contribution Level
01	The student will have the ability to apply analytical approach, mathematics and science knowledge in software and engineering issues.	4
02	The student will have the ability to identify, define, formulate and solve a problem in software and computer systems.	4
03	The student will have gains scientific research skills in software and engineering problems, has the ability to design a system, part or process.	4
04	The student will have the ability to use the design capability, techniques and tools required for engineering applications.	4
05	The student will have the ability to design, implement and interpret experimental work and software projects by analyzing the results.	4
06	The student will have the ability to work between disciplines and teamwork.	4
07	The student will have the ability to work in international environments and adapt to different cultures.	5
08	The student will have verbal and written communication skills in Turkish and English.	4
09	The student will have the awareness of the necessity of lifelong learning and the ability to realize it.	4
10	The student will gain knowledge of legal issues with the awareness of professional and ethical responsibility.	4
11	The student will have managerial skills (leadership, organization, time and risk management, quality awareness, efficiency, etc.).	4
12	The student will have the ability to participate in social activities, to acquire regular sports habits and to use time in the best way.	4
13	The student will have the ability to find unusual ways and produce projects.	4
14	The student will have professional self-confidence, being an entrepreneur and taking initiative.	4
15	It is sensitive about the problems of the age and looks after the national interests.	4

ECTS WORKLOAD			
	Number	Duration (hours)	Number*Duration
Face to face education	14	4	56
Out-of-class study time (pre-study, reinforcement)	14	4	56
Homeworks	0	0	0
Presentation / Seminar preparation	0	0	0
Quizzes	0	0	0
Preparation for midterm exams	1	15	15
midterm exams	1	2	2
Project (Semester assignment)	0	0	0
Lab	0	0	0
field work	0	0	0
Preparation for the final exam	1	30	30
Semester final exam	1	2	2
Research	3	2	6
TOTAL WORKLOAD			167
ECTS			6

Evaluation		
SEMESTER EVALUATION	Number	Contribution Percentage
Midterm	1	100
Quiz	0	0
Homework	0	0
SEMESTER TOTAL		100
Contribution rate of mid-term evaluations to success		40
Contribution rate of the final exam to success		60
GRAND TOTAL		100

RESOURCES	
Textbook	Physics for Scientists and Engineers with Modern Physics, Vol. 1, by Raymond A. Serway, John W. Jewett
Helpful Resources	University Physics, Vol. 1, by Young, Freedman, Sears and Zemansky, Pearson Education Publishing