Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Physics I (Mechanics)	FZK101	1. Semester	4 + 2	5.0	6.0

Prerequisites	None
Language of Instruction	Turkish
Course Level	Bacheclor's Degree (First Cycle)
Course Type	Compulsory
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. Ahmet ERDEM
Instructors	Prof. Dr. Ahmet ERDEM Assoc. Prof. Dr. Kıvanç SEL
Assistants	
Course Objectives	This course is an introduction to classical mechanics. We will discuss kinematics, dynamics, and Newton's laws.
Course Content	Topics to be covered in this course include physics and measurement, vectors, motion in a plane, the laws of motion, circular motion, work and energy, conservation of energy, linear momentum and collisions, rotation of a rigid object about a fixed axis, rolling motion, angular momentum and tork, static equilibrium and elasticity, oscillatory motion, the law of gravity.
Course Learning Outcomes	1) Explore the basic principles of mechanics. 2) Express the movement laws by equations 3) Explore different forms of energy and energy conservation 4) Adopt problem-solving skills 5) Interpret mechanical problems as the basis of classical mechanics.

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Introduction: Physics and Measurement	Course presentation, practise, homework	
2. Week	Vectors	Course presentation, practise, homework	
3. Week	Motion in One Dimension	Course presentation, practise, homework	
4. Week	Motion in Two Dimensions	Course presentation,	

Quick Access

Physics
- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information
- Course Information
- Weekly Course Content
- Resources
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		practise, homework	
5. Week	The Laws of Motion	Course presentation, practise, homework	
6. Week	Circular Motion and Other Applications of Newton’s Laws	Course presentation, practise, homework	
7. Week	Work and Kinetic Energy	Course presentation, practise, homework	
8. Week	Midterm Exam	Written exam	
9. Week	Linear Momentum and Collisions	Course presentation, practise, homeworkLecture	
10. Week	Rotation of a Rigid Object About a Fixed Axis	Course presentation, practise, homeworkLecture	
11. Week	Rolling Motion, Angular Momentum and Tork	Course presentation, practise, homeworkLecture	
12. Week	Static Equilibrium and Elasticity	Course presentation, practise, homework	
13. Week	The law of gravity	Course presentation, practise, homeworkLecture	
14. Week	Oscillations	Course presentation, practiseLecture	
15. Week	General review	Lecture,PracticeLecture	
16. Week	Final Exam	Written exam	

RESOURCES

Recommended Sources
Serway, R.A.: 1992, Physics For Scientists & Engineers with Modern Physics, Third edition, Saunders Golden Sunburst Series, Saunders College Publishing.
Bueche, A.: 1986, Introduction to Physics for Scientists, McGraw-Hill.
Fishbane, P., Gasiorowicz, S., Thornton, T.: 1996, Physics for Scientists & Engineers, Prentice Hall. Inc.

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Midterm exam+Assignment+Practise (40 %), Final exam (60 %)		
In-Term Studies	**Quantity**	**Percentage**
Mid Term Exam 1	1	30
Assignment 1	1	10
Total	2	40
End-Term Studies	**Quantity**	**Percentage**
Final Exam	1	60
Total	1	60
Contribution Of In-Term Studies To Overall Grade		40
End-Term Studies		60
Total		100

COURSE CATEGORY

Course Category	Percentage
Core Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
PY1	5	5	5	5	5	5
PY2	5	5	5	5	5	5
PY3	5	5	5	5	5	5
PY4	5	5	5	5	5	5
PY5	5	5	5	5	5	5
PY6	5	5	5	5	5	5
PY7	5	5	5	5	5	5
PY8	4	4	4	4	4	4
PY9	4	4	4	4	4	4
PY10	4	4	4	4	4	4
PY11	4	4	4	4	4	4
PY12	3	3	3	3	3	3
PY13	4	4	4	4	4	4
PY14	4	4	4	4	4	4
PY15	4	4	4	4	4	4

*DK = Course's Contrubution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

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ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Final Exam	1	2	2
Mid Term Exam 1	1	2	2
Assignment 1	10	1	10
Application/Practice	14	2	28
Class Hours (14 weeks)	14	6	84
Final Exam Preparation	1	3	3
Mid Term Exam Preparation	1	3	3
Preliminary Study	14	2	28
		Total Workload	160
		Total Workload / 25.5 (s)	6.27
		ECTS Credit of the Course	6