The Hashemite University

Faculty of Science
Department of Physics

Course Description

Department: Physics	
Year: 2025/2026	**Semester:** Fall

Course Information	
Course Title	General Physics (I)
Course Number	1701081136
Course Credits	Three credit hours
Prerequisite	None
Course Duration	15-weeks
Instructor(s)	Dr. Ghassan Alna'washi
Course Time	Section 8: 13:00 – 14:30 Mon., Wedn. Section 9: 10:00 – 11:30 Mon., Wedn.
Office Location	Physics Building 106
E-Mails	alnawashi@hu.edu.jo
Office hours	11:30 – 12:30 Mon., Wedn.

Textbook	
Title	Physics for Scientists and Engineers with Modern Physics.
Authors	Raymond A. Serway and John W. Jewett
Publisher	Thomson, BROOKS/COLE
Edition	9th edition

References
(1) "**Fundamentals of Physics**" by David Halliday, Robert Resnick, and Jearl Walker, 5th Edi John Wiley and Sons, 1995.
(2) "**University Physics**" by F. Sears, M. Zemansky, and H. Young, 7th Edition, Addison Wes Publishing Company, 1987.

Evaluation Policy		
Assessment Type	Expected Date	Weight
1st Exam	**14/11/2024**	**30%**
2nd Exam	**26/12/2024**	**30%**
Final Exam	**To be announced later**	**40%**

Course Objectives

1. Develop a clear understanding of basic physical concepts in mechanics as an integral part of the student's overall education.
2. Develop the ability to deal with the physical concepts quantitatively (numerically).
3. Form a good foundation for follow-up courses in mathematics, physics and chemistry.
4. Demonstrate the applications of modern methods to a variety of problems in physics.
5. Develop the learning skills of the student in using computers as educational tools, problem solving and demonstration.
6. Enhance the ability of the student for self-learning.

Teaching and Learning Methods

1. Lecturing.
2. Special sessions for problem solving.
3. Teaching tools:
a) Simulations: Some simulation programs on PC that cover some of the topics in this course will be demonstrated throughout the course period.
b) Overhead projector and data show.

Course Major Topics:

Topics	Chapter in Text	Sections	Suggested Problems	
			Objective Questions	Problems: Section by Section in Textbook
Motion in One Dimension	Two	2.1- 2.7	1,5,6,10,15,18	1,3,4,13,15,19, 20, 24, 38, 48,50
Vectors	Three	3.1- 3.4	1,3,5,9,11	2,4,8,11,12,15,23,26,31,34,37,51,59
Motion in Two Dimensions	Four	4.1- 4.5	1,3,4,5,10,14	1, 3, 6, 9,15,20,29,36,40,42
First Exam 14/11/2024				
The Laws of Motion	Five	5.1-5.8	1,4,7,8,11	2,3, 5,8,15, 18, 22, 28,29,32, 36, 42,43, 49, 55, 63,65,66,83
Circular Motion	Six	6.1 & 6.2	1,4,5	1,4,6,7,13,16,37,39,45,54,63
Second Exam 26/12/2024				
Energy of A system	Seven	7.1-7.8	2,3,6,9,11,14	5,9,12,13,15,17,20,26,29,31,33,43,47,49,52
Conservation of Energy	Eight	8.1-8.5	4,5,6,7	3,5,6,8,12,15,18,22,23,29,38,39,59,63
Linear Momentum	Nine	9.1-9.6	4,5,6,7,9,10	2,4,11,13,14,19,22,23,30,33,34,37,41,45,49,51,52,54,71,77,79
Final Exam: to be announced later				

Attendance:

Attendance will be strictly enforced according to current university regulations that require the attendance of at least 85% of the total number of lectures. Students are responsible for the material covered in the class. Missing an exam without a valid excuse earns you zero points. Makeup exams are given to those with valid excuses.