



The Hashemite University
Faculty of Science
Department of Physics

Course Description

Department: Physics	
Year: 2012/2013	Semester: Second

Course Information	
Course Title	General Physics (I)
Course Number	110102101
Course Credits	Three credit hours
Prerequisite	None
Course Duration	16-weeks

Instructor	Office	Office hours
Prof. Awni Hallak	Phys. Building -104	Mon., Wed.: 11:00-12:00 Tues.: 10:00-11:00

Textbook	
Title	Physics for Scientists and Engineers with Modern Physics.
Authors	Raymond A. Serway and John W. Jewett
Publisher	Thomson, BROOKS/COLE
Year	2010
Edition	8 th edition

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

Evaluation Policy		
Assessment Type	Expected Date	Weight
First Exam	To be announced by the Dean's office	25%
Second Exam	To be announced by the Dean's office	25%
Final Exam	To be announced by the Dean's office	50%

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 problems 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.

Week #	Topics	Chapter in Text	Sections	Suggested Problems
1	Physics and Measurements	One	1.1,1.3	9, 10, 13
2	Motion in One Dimension	Two	2.1- 2.7	1, 3, 8, 17, 21, 28, 43, 60
3	Vectors	Three	3.1- 3.4	2, 8, 14, 25, 37
4&5	Motion in Two Dimensions	Four	4.1- 4.5	1, 5, 7, 9, 15, 18, 32, 50
First Exam; Chapters: 1-4				
6	The Laws of Motion	Five	5.1-5.8	7, 13, 20, 28, 30, 41, 47, 48
7	Circular Motion	Six	6.1 & 6.2	1, 6, 14, 18, 54
8&9	Energy of a System	Seven	7.2-7.8	1, 9, 11, 15, 22, 31, 39, 41, 45, 49
10	Conservation of Energy	Eight	8.1-8.5	5, 7, 15, 19, 22, 23, 29, 37, 63
Second Exam; Chapters: 5-8				
11	Linear Momentum	Nine	9.1-9.6	1, 4, 6, 11, 21, 26, 29, 34, 56
12&13	Rotational Motion	Ten	10.1-10.9	3, 7, 15, 21, 26, 29, 35, 40, 45, 50, 60, 71
14&15	Angular Momentum	Eleven	11.1-11.4	1, 5, 12, 20, 25, 30, 34, 62
Final Exam; Chapters: 1-11				