



**The Hashemite University**  
**Faculty of Science**  
**Department of Physics**

**Course Description**

<b>Department:</b> Physics	
<b>Year:</b> 2016/2017	<b>Semester:</b> First

<b>Course Information</b>	
<b>Course Title</b>	General Physics (I)
<b>Course Number</b>	110102101
<b>Course Credits</b>	Three credit hours
<b>Prerequisite</b>	None
<b>Course Duration</b>	14-weeks

<b>Instructor</b>	<b>Dr. Nabil Al-Aqtash</b>
<b>Course Time</b>	
<b>Office Location</b>	Physics 104
<b>Office Hours</b>	Sun, Tues 9:00-10:00 Mon, Wed 9:30-10:30

<b>Textbook</b>	
<b>Title</b>	Physics for Scientists and Engineers with Modern Physics.
<b>Authors</b>	Raymond A. Serway and John W. Jewett
<b>Publisher</b>	Thomson, BROOKS/COLE
<b>Year</b>	2014
<b>Edition</b>	9 <sup>th</sup> edition

<b>References</b>	
(1) “ <b>Fundamentals of Physics</b> ” by David Halliday, Robert Resnick, and Jearl Walker, 4 <sup>th</sup> Edition, John Wiley and Sons, 1995.	
(2) “ <b>University Physics</b> ” by F. Sears, M. Zemansky, and H. Young, 7 <sup>th</sup> Edition, Addison Wesley Publishing Company, 1987.	

<b>Evaluation Policy</b>		
<b>Assessment Type</b>	<b>Expected Date</b>	<b>Weight</b>
<b>First Exam</b>	To be announced.	30%
<b>Second Exam</b>	To be announced.	30%
<b>Final Exam</b>	To be announced.	40%

<b>Course Objectives</b>
<ol style="list-style-type: none"> <li>1. Develop a clear understanding of basic physical concepts in mechanics as an integral part of the student's overall education.</li> <li>2. Develop the ability to deal with the physical concepts quantitatively (numerically).</li> <li>3. Form a good foundation for follow-up courses in mathematics, physics and chemistry.</li> <li>4. Demonstrate the applications of modern methods to a variety of problems in physics.</li> <li>5. Develop the learning skills of the student in using computers as educational tools, problem solving and demonstration.</li> <li>6. Enhance the ability of the student for self-learning.</li> </ol>

<b>Schedule</b>				
<b>Week #</b>	<b>Topics</b>	<b>Chapter in Text</b>	<b>Sections</b>	<b>Suggested Problems</b>
1	Physics and Measurements	One	1.3	9, 10, 13
2&3	Motion in One Dimension	Two	2.1- 2.6	1, 3, 15, 21, 28, 29, 38, 51, 53
4	Vectors	Three	3.1- 3.4	1, 2, 15, 23, 37, 51
5	Motion in Two Dimensions	Four	4.1- 4.5	1, 9, 13, 15, 16, 20, 40, 41
6&7	The Laws of Motion	Five	5.1-5.8	15, 18, 19, 22, 32, 33, 42, 55, 61, 65
8	Circular Motion	Six	6.1 & 6.2	1, 8, 9, 11, 13, 16, 19
9 & 10	Work and Energy	Seven	7.2-7.8	2, 9, 12, 14, 17, 26, 31, 34, 49, 51
11&12	Potential Energy	Eight	8.1-8.5	3, 5, 7, 14, 22, 23, 38
13 & 14	Linear Momentum	Nine	9.1-9.6	2, 11, 19, 23, 31, 33, 41, 42, 50, 51