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# Philadelphia University

Faculty of Science  
Department of Basic Sciences and Mathematics.  
Physics Program



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## **General Physics (211109)**

### **Health Sciences**

#### **Course Syllabus**

**Course Title: General Physics For Health Sciences**

**Course Level : 1**

**Course Code : 211109**

**Course Prerequisite(s): N/A**

**Semester : Fall 2018**

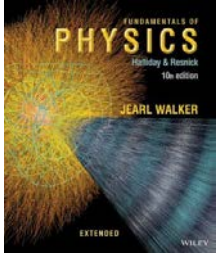
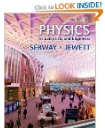
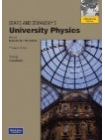


#### **Instructor**


**Dr. Zuheir Subhi Saleh El-bayyari**

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<b>(1) Academic Staff Specific</b>		
Name	<b>Zuheir Subhi Saleh El-bayyari, Ph.D.</b>	
Rank	Associate Professor	
Office number	1017	
Location	Faculty of Science	
Phone (work)	+ 962 6 4779000 ext. 2660	
e-mail (1)	zbayyari@rocketmail.com	
e-mail (2)	Z_bayyari@philadelphia.edu.jo	
<b>Office hours</b>	Sunday, Tuesday, and Thursday	08:10 – 09:00 AM 10:10 – 11:00 AM 12:00 – 13:00 PM
	Monday and Wednesday	08:00 – 09:00 AM 11:30 – 12:30 AM
	<ul style="list-style-type: none"> <li>• At any time my door is open.</li> <li>• Questions submitted via email are welcome at any time.</li> </ul>	
<b>Teaching Assistant</b>		
Name	N/A	
e-mail	N/A	
Office	N/A	

<b>(2) Basic Course Information and Description</b>	
<b>Course Title</b>	General Physics for Health Sciences
<b>Course Code</b>	0211109
<b>Credit Hours</b>	3.0 Credit Hours
<b>Weekly Hours</b>	3.0 Lecture Hours, 3.0 Office Hours
<b>Pre-requisites</b>	None
<b>Co-requisites</b>	None
<b>Catalogue Description</b>	This module is a first year physics course offered to students in the faculty of pharmacy, faculty of nursing and faculty of science (students of Genetic Engineering Department). The module will introduce the student to the basic language and ideas of physics that occur in all branches of science and technology. The course will also provide the students with a clear and logical presentation of the basic concepts and principles of physics, and to strengthen their understanding through a broad range of interesting applications to the real world. Topics include a review on : space and time; vectors; straight-line kinematics; circular motion; experimental basis of Newton's laws and some application; work, energy and power; elastic properties of materials; heat; temperature and the behavior of gases; thermodynamics; Thermal properties of matter, electric forces; fields and potentials, Mechanics of fluids, Light and geometrical optics.
<b>Assumed Knowledge</b>	This course is designed primarily for undergraduate students majoring in pharmacy, nursing, medicine, and genetic engineering. A major objective of this course is to develop the mathematical formalism necessary for solving the fundamental one and two dimensional problems of classical physics. Consequently a good foundation in calculus prior to have this or any physics course is highly recommended. Mainly, the course needs some knowledge of a one dimensional differential / integral calculus, and therefore calculus (1) is required. For the better, It is preferable that calculus (2) be taken prior to or concurrently with this course. The course assumes familiarity with physics at the level of high school physics. However, during the class if I base my explanation on any physical concept or use any mathematical techniques you have not seen

	before, tell me immediately, and I will go over it for quick review.															
<b>Delivery Methods</b>	Lectures explaining material, Problem solving, Lecture notes, Discussion by actively involving students in learning by asking questions that provoke thinking and verbal response.															
<b>Assessment Schemes</b>	Homework assignments, Two Midterm exams, Final Exam, Quizzes, might be a Project (short essay, Presentation, Poster,...etc).															
<b>Resources</b>	 <p style="text-align: center;"><b>Textbook</b></p>	<table border="1"> <tr> <td><b>Title</b></td> <td><b>Fundamentals of Physics</b></td> </tr> <tr> <td><b>Author</b></td> <td>D. Halliday, R. Resnick and Jearl Walker</td> </tr> <tr> <td><b>Publisher</b></td> <td>Wiley and Sons (WIE) <a href="http://eu.wiley.com/WileyCDA/WileyTitle/productCd-111854787X.html">http://eu.wiley.com/WileyCDA/WileyTitle/productCd-111854787X.html</a></td> </tr> <tr> <td><b>Edition</b></td> <td>10 edition</td> </tr> <tr> <td><b>Year</b></td> <td>August 5, 2013</td> </tr> <tr> <td><b>ISBN-10</b></td> <td>1118230728</td> </tr> <tr> <td><b>ISBN-13</b></td> <td>978-1118230725</td> </tr> </table>	<b>Title</b>	<b>Fundamentals of Physics</b>	<b>Author</b>	D. Halliday, R. Resnick and Jearl Walker	<b>Publisher</b>	Wiley and Sons (WIE) <a href="http://eu.wiley.com/WileyCDA/WileyTitle/productCd-111854787X.html">http://eu.wiley.com/WileyCDA/WileyTitle/productCd-111854787X.html</a>	<b>Edition</b>	10 edition	<b>Year</b>	August 5, 2013	<b>ISBN-10</b>	1118230728	<b>ISBN-13</b>	978-1118230725
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<p><b>Please Note that:</b> The textbook is a required purchase if you can afford buying your own copy. When the material in the class is too concise for your taste, you can turn to the textbook, which provides more detailed derivations and explanations of the results and formulas. It also has more worked examples and problems, problem-solving hints, etc.</p> <p>Homework problems will not be assigned from the textbook, because some copies of solution manuals are available with the students !. Instead, the problems in the text is open for all students to practice solving them, and in case of any difficulty in solving the problems, you can come to my office during the office hours to discuss your solutions with me. I believe that working out the problems in the text is absolutely essential to learning the material of this course. Trying to learn physics without doing problems is like trying to learn how to ride a car by reading a book. I strongly encourage students to get together in groups to discuss the problems, but of course the mere copying of solutions written by your friends or copying from solution manuals will not help you learn physics.</p>																
<b>Other Recommended Complements</b>																
	<p>▶ <b>Physics for Scientists and Engineers</b>, Raymond A. Serway and John W. Jewett., Cengage Learning <a href="http://www.cengage.com/us/">http://www.cengage.com/us/</a>, 9 edition, January 17, 2013, ISBN-10:1133954057, ISBN-13: 978-1133954057</p>															
	<p>▶ <b>Sears and Zemansky's University Physics With Modern Physics</b>, Roger A. Freedman, A. Lewis Ford , Francis Weston Sears , Hugh D. Young, Pearson Pub., 13 edition , 2011, ISBN-10: 0321762185, ISBN-13: 978-0321762184</p>															
	<p>▶ <b>Physics 9e</b>, John D. Cutnell and Kenneth W. Johnson, John Wiley and Sons (WIE), 9 edition, January 3, 2012, ISBN-10: 0470879521, ISBN-13: 978-0470879528</p>															
	<p>▶ <b>Physics for Scientists and Engineers: A Strategic Approach with Modern Physics</b>, Randall D. Knight , Addison-Wesley,2nd edition, October 4, 2007, ISBN-10: 0805327363 , ISBN-13: 978-0805327366</p>															

		▶ <b>Physics</b> , Joseph W. Kane, and Morton M. Sternheim, John Wiley and Sons (WIE), 2nd edition, August 24, 1988, ISBN-10: 0471638455, ISBN-13: 978-0471638452		
		▶ The above recommended complements is not a required purchase, but is recommended resources to have a look at them at the university library and read extra explanation on topics of the course.		
<b>Useful websites</b>	▶	Physics Student Book Companion Sites for Physics for Scientists and Engineers , Raymond A. Serway: <a href="http://www.brookscole.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&amp;discipline_number=13&amp;product_isbn_issn=0534408427">http://www.brookscole.com/cgi-wadsworth/course_products_wp.pl?fid=M20b&amp;discipline_number=13&amp;product_isbn_issn=0534408427</a>		
	▶	<a href="http://www.ux1.eiu.edu/~cfadd/1150/Hmwk/Ch02/Ch02.html">http://www.ux1.eiu.edu/~cfadd/1150/Hmwk/Ch02/Ch02.html</a>		
	▶	<a href="http://faculty.etsu.edu/lutter/courses/phys2010/index.htm">http://faculty.etsu.edu/lutter/courses/phys2010/index.htm</a>		
	▶	<a href="http://www.physics.umd.edu/courses/Phys121/Roberts/F06/lecture_notes.htm">http://www.physics.umd.edu/courses/Phys121/Roberts/F06/lecture_notes.htm</a>		
	▶	<a href="http://romano.physics.wisc.edu/winokur/phys207/">http://romano.physics.wisc.edu/winokur/phys207/</a>		
	▶	<a href="http://www.sfu.ca/phys/100/">http://www.sfu.ca/phys/100/</a>		
	▶	<a href="http://theory.uwinnipeg.ca/physics/">http://theory.uwinnipeg.ca/physics/</a>		
	▶	<a href="https://ocw.mit.edu/courses/physics/8-01-physics-i-fall-2003/">https://ocw.mit.edu/courses/physics/8-01-physics-i-fall-2003/</a>		
<b>Course Schedule</b>				
<b>Instructor</b>	<b>Section</b>	<b>Day</b>	<b>Time</b>	<b>Location</b>
Dr. Zuheir El-bayyari	1	Sun, Tues, & Thurs	11:10 – 12:00 AM	21005
Dr. Zuheir El-bayyari	2	Mon. & Wends.	09:45 – 11:15 AM	21005

<b>(3) Mode of Assessment</b>				
▶	<b>Allocation of Marks</b>			
▶	<b>Expected Appointment</b>			
<b>Assessment Instruments</b>	<b>Mark</b>	<b>Day</b>	<b>Date</b>	<b>Time</b>
First Examination	20	TB Announced by the Dept.	Sunday to Thursday	2:00 -- 3:00 PM
Second Examination	20	TB Announced by the Dept.	Sunday to Thursday	2:00 -- 3:00 PM
Homework's, Projects and (5) Short Quizzes	20	Each week	Sunday to Thursday	Lecture time
Final Examination	40	To Be Announced by Admission Department.	Sunday to Thursday	
<b>Total</b>	<b>100</b>			
<b>Other forms of assessment Extra</b> Homework's and Projects	<b>5 % - 10 %</b> <b>For extraordinary efforts such as:</b> <ul style="list-style-type: none"> <li>• Effective participation in class discussions.</li> <li>• Presenting solutions to some noticeable challenging problems.</li> <li>• Demonstrating experiment to study a particular educational learning outcome of the course.</li> <li>• Translating a term paper into an effective and powerful PPT slides..</li> </ul>			

<b>(4) Grades compatibility with other systems</b>								
<b>Percent grade</b>	90 -100	85 - 89	80 - 84	75 - 79	70 - 74	65 - 69	60 - 64	Below 60
<b>Letter grade</b>	A	B+	B	C+	C	D+	D	F
<b>Earned Points</b>	4.0	3.5	3.0	2.5	2.0	1.5	1.0	0.0

**Important Remark:**

Only grades that are closer less than 0.5 pt will be rounded to the next letter grade. For example, if you have 59.51 your grade will be rounded to 60 that is a D. However, a 59.49 will be rounded to 59 which is an F. No exceptions will be made.

**(5) General notes on exams**

▶	<b>Quizzes</b>	<p>It is critical to constantly measure the follow-up of the students regarding the class material, and to check their current state of knowledge and to test the material that has been covered in the class and homework's if it is assigned. Thus I use quiz strategy. Besides it will help students to do not fall behind, quizzes will help the instructor to recognize early the student's weakness points. Occasionally 4-5 a 10-minute sudden quizzes shall be given during the semester, and the lowest one quiz grade may be dropped. The dates of the quizzes are not shown on the course calendar. Generally speaking you will have one quiz every two weeks. The following points, display the guidelines for taking and grading quizzes:</p> <ul style="list-style-type: none"> <li>▶ Quizzes are composed of 1-5 conceptual problems.</li> <li>▶ Quizzes will count towards your final grade.</li> <li>▶ Quizzes are not an open text book or open notes.</li> <li>▶ We will utilize peer-to-peer learning methodology in solving the quizzes. The method is based on brainstorming with your next fellow.</li> <li>▶ The setup for each step must be shown on quizzes. Answers with no effort to show how you get it constitute a zero.</li> </ul>
▶	<b>50-minute Exams</b>	Two lecture periods during the last day of week 7 (exam #1) and week 12 (exam #2) will be used for 50-minute exams. Each exam will focus on all the material since the previous exam, and will include at least one problem that is at most a slight modification of a previously solved problem during the class session. Students will be assigned to exam rooms according to their sections.
▶	<b>Make-Up Exams</b>	The Make-up exams will be given one week after the original 50-minute exam, only for those who obtained an official excuse. The dates for the 50-minute exams are shown on the course calendar.
▶	<b>Final Exam</b>	The 2-hour final exam, which will cover the material from the entire course, will be held few days after the last lecture. There will be no make-up for the final exam.

**(6) Exam Rules**

▶	Exam is a vital evenhanded learning instrument to gauge students, qualitatively and quantitatively, on the course foremost theoretical concepts. The regulations regarding arrangements, attendance, and conduct, of examinations are summarized in the following points:	
▶	1.	There will be two- one hour exams during the semester (first and second exams) and a two – hour's final exam. All exams are closed book closed notes. The final exam is comprehensive but will emphasize the material covered after the second exam.
▶	2.	Prior to each exam, special review sessions will be arranged depending on our progress in the course..
▶	3.	A single equation sheet may be brought to the exam. However a sheet of useful equations will be provided at the time of the exam (Might happen!). Bring to mind, having equations available does not guarantee success-understanding is the key.
▶	4.	There will be no makeup exams and no grade will be dropped,
▶	5.	If an exam is missed verifiable circumstances will be considered.

▶	6.	Two exams on one day is not a sensible reason to postpone an exam; if you have three or more exams on the same day you must notify the instructor prior to the exam.
▶	7.	Date changes of a mid-semester exam is possible provided that: <ul style="list-style-type: none"> <li>• No date-change discussion inside the class.</li> <li>• The new date must be within one week of the assigned date.</li> <li>• A paper with the new date must be signed by all students and submitted to me or module coordinator or Department Chairperson.</li> </ul>
▶	8.	During the exams no outside material of any form is allowed. In case of any problem that emerges during the exam time all will be forwarded to the Associate Dean of Students Affairs of the Faculty of Science. / Students Committee  For further information regarding <b>academic honesty on conduct of examination</b> refer to our university academic honesty policy and other disciplinary procedures that can be found at: <a href="http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf">http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf</a>

### (7) Teaching Method

▶	<b>Duration</b>	16 weeks for each semester, 48 hours in total
▶	<b>Lectures</b>	45 hours in total, 3 per week (including two 1-hour midterm exams)
▶	<b>Tutorials</b>	13 in total, 1 per week.
		<b>Note that:</b> <b>Lectures:</b> will be given by Prof. Zuheir El-bayyari three per week, for 1 hour each, or two per week, for 1.5 hour each. I expect you to attend the lectures. The lectures will explain the concepts that you are expected to understand. Unfortunately, there is no live demonstrations during the class that are important to your understanding of the material or any lab to support you in this regard.
▶	<b>Lecture Notes</b>	Professor El-bayyari uses his own lecture notes to prepare for each class session. The whiteboards in the classroom will be used to detail information that is a subset of the information found in the lecture notes. Therefore, no lecture notes will be handed out to any student or put in the photocopy bookshop. It is your responsibility as a first year student to learn how to take your own notes during the lecture. Otherwise, for more information, discussion and explanation, you have to refer to the text book.

### (8) Instructions and Regulations

▶	For all students in the class	
	1.	Using mobile phones or any other electronic devices such as (Blackberries, IPods, PDAs) during lectures or exams is prohibited. Shut off your mobile phones and other electronic devices during the class, any one uses mobile will be asked to leave the lecture hall.
	2.	You are not allowed to disturb the class. If you miss the classroom the first 10 minutes you are not allowed to enter the classroom and you will be reported absent.
	3.	Side talks are not allowed, if you miss something or have a question, please, ask the instructor and not a student. Any student involved in side talks will be asked to leave the classroom. This is for the benefit to all students.
	4.	Students are expected to attend all classes, if you do not show up for more than 15% of the classes, you fail the course. There are no grades for attendance.
	5.	Quizzes have no make-ups, so try not to miss any!.
	6.	Students are expected to participate actively in the class during the discussion.
	7.	Check the department announcements regularly regarding the course.



8.	Be responsible for all class activities, announcements, and assignments when you miss a class.
9.	Do not hesitate to see me if you have any question during the office hours.
10.	Prior to class, look over the section that will be covered.
11.	Regularly check the university website at: <a href="http://www.philadelphia.edu.jo/">http://www.philadelphia.edu.jo/</a> .
12.	No make-up exam will be given; if you miss two exams, one exam only will be made up if the absence is appropriately justified. Missing two exams with no justifications will result with "Fail" in this class. The justification for missing an exam should be submitted no more than three days. Otherwise no makeup will be allowed. If you miss a final exam and you have a proper justification, an "incomplete" will be given until you make up the final exam at the beginning at the next semester and not earlier.
13.	During exams, students are allowed to bring a scientific conventional calculator not a programmable one
14.	Cheating is not tolerated. Students who cheat on an exam will be subjected to the university regulations regarding this matter. A second case of cheating will result in a failing grade for the course.

### (9) Module Objectives

▶ Our goal is to convey the excitement of the physicist's quest to understand nature at its deepest level, and to provide the knowledge and tools that you will need to continue your studies in science or pharmacy, medicine, and nursing. Hoping that you will enjoy the course.

**The main objectives of this introductory physics course are:**

1. To provide the students with a clear and logical presentation of the basic concepts and principles of vectors, Newtonian mechanics, elastic properties of solids, heat, kinetic theory of gases, thermodynamics, thermal properties of matter in general and other principles of physics;
2. Help students to develop and master mathematical techniques used to tackle , analyze, and solve simple physical problems associated with the topics to be covered in the module;
3. Master the technical and mathematical skills required in vectors, Newtonian mechanics elastic properties of solids, heat, kinetic theory of gases, thermodynamics, thermal properties of matter; mechanics of fluids, light and geometric optics.
4. Apply these concepts and laws in solving real world problems;
5. Increasing student motivation and improving student problem-solving and higher order thinking by introducing new learning methods e.g., participatory learning through the laboratory experiments;
6. To strengthen an understanding of the concepts and principles through a broad range of interesting applications to the real world;
7. Provide students with generic skills which will be of great use in his/her field of study e.g. critical thinking, and quantitative and symbolic reasoning;

In order to meet these objectives, emphasis will be placed on sound physical arguments. At the same time, students will be motivated through practical examples if available that demonstrate the role of physics in other disciplines including engineering, chemistry, and medicine.

### (10) Module Learning Outcomes

▶ By the end of this course the student is expected to gain understanding of the basic laws that govern everything in our world from the subatomic to the cosmic scale and will also learn much that will be important in his or her work in the science. The study of physics as a basic science is not particularly easy, but we believe it is rewarding, particularly for students planning further training in related sciences.




<b>Observable / Measurable learning outcomes</b>	
<b>On Successful completion of the module students would be able to</b>	
<b>▶</b>	<b>(A) Knowledge and understanding Skills</b>
<b>A.1.</b>	Identify the base quantities in the SI system.
<b>A.2.</b>	Describe the translational motion of a single particle in terms of position and inertial frames, inertia, velocity, acceleration; define work, energy, power, heat capacity, latent heat.
<b>A.3.</b>	Identify some basic laws in physics in the areas of classical mechanics and thermodynamics; including: The laws of motion, The law of conservation of energy, The ideal gas law, and The laws of thermodynamics, Coulomb's law in electrostatics, Equations and principles of fluids, Ray optics, and more.
<b>▶</b>	<b>(B) Intellectual Skills</b>
<b>B.1.</b>	Apply basic mathematical tools commonly used in physics; including: basic algebra, vector algebra, differentiation and integration.
<b>B.2.</b>	Calculate velocity, acceleration, work, energy, power, elastic constants of solids, Temperature, heat capacity, latent heat, pressure, thermal energy, electric forces and electric field Potential, continuity equation, and more.
<b>B.3.</b>	Apply some basic laws in physics in the areas of classical mechanics and thermodynamics; including: The laws of motion, The law of conservation of energy, The ideal gas law, The laws of thermodynamics, Mechanics of fluids, Light and geometrical optics.
<b>B.4.</b>	Convert a temperature between any two temperature scales, including the Celsius, Fahrenheit, and Kelvin scales.
<b>B.5.</b>	Apply the relationship between the temperature change and the length change, the area change or the volume change.
<b>B.6.</b>	Apply the equation that relates stress to strain and elastic modulus.
<b>B.7.</b>	Apply the equations and principles that control fluid mechanics.
<b>B.8.</b>	Apply basic laws in physics in the area of light and geometrical optics.
<b>▶</b>	<b>(C) Professional and Practical Skills</b>
<b>C.1.</b>	Draw a vector, a free body diagram, a p-v diagram, Ray optics, Diffraction and reflection patterns, and more ...
<b>C.2.</b>	Convert a physical situation articulated in English to a mathematical formulation, and then analyzes it quantitatively.
<b>C.3.</b>	Extend the basics of mechanics to thermodynamics and fluids mechanics.
<b>▶</b>	<b>(D) Transferable Skills</b>
<b>D.1.</b>	Explain the importance of the application of physics in science, pharmacy and medicine.
<b>D.2.</b>	Build a solid background for other studies related to physics or natural sciences.

<b>(11) Syllabus</b>			
Topics to be covered	Teaching Duration	Learning Outcomes	Assessment Tools
<b>Review on the first four chapters</b>			
<b>Vectors</b> Coordinates systems and frames of reference, vectors and scalars, some properties of vectors, components of a vector and unit vectors, the scalar product of two vectors.	[3 hours]	<b>A.1. A.2.</b> <b>B.1. C.1.</b> <b>C.2. D.1.</b>	<ul style="list-style-type: none"> <li>▪ All Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 1,3</li> </ul>
<b>Motion in a Straight Line</b> Displacement, Average velocity, Instantaneous velocity, average acceleration, instantaneous acceleration, one	[3 hours]	<b>A.1. A.2.</b> <b>B.1. B.2.</b> <b>C.1. C.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 1,3</li> </ul>

dimensional motion with a constant acceleration, applications.		<b>D.1.</b>	
<b>Newton's Laws of Motion</b> The concept of force, Newton's first law and inertial frames, inertial mass, Newton's second law, weight, Newton's third law, some applications of Newton's laws, Centripetal acceleration, uniform and non-uniform circular motion, some applications.	[5 hours]	<b>A.1. A.2. A.3. B.1. B.2. B.3. C.1. C.2. D.1.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 1,3</li> </ul>
<b>Work and Energy</b> Introduction, work done by a constant force, kinetic energy and the work energy theorem, power, applications.	[3 hours]	<b>A.1. A.2. A.3. B.1. B.2. B.3. C.1. C.2. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 1,3</li> </ul>
<b>Elastic Properties of Materials</b> General aspects of stress and strain, Young's modulus, elastic limit, shear modulus, bulk modulus, some applications	[3 hours]	<b>A.1. B.6. C.2. D.1.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 1,3</li> </ul>
<b>Heat, Temperature and the Behavior of Gases</b> Temperature scales, molecular masses, pressure, the ideal gas law, gas mixtures, temperature and molecular energies, diffusion .	[6 hours]	<b>A.1. A.3. B.4. C.1. C.2. D.1.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 2,3</li> </ul>
<b>Thermodynamics</b> Basic definitions, mechanical work, the first law of thermodynamics, the second law of thermodynamics, the Carnot theorem and the conservation of energy, entropy, applications on thermodynamics	[6 hours]	<b>A.1. A.3. B.1. B.3. B.4. C.2. C.3. D.1. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 2,3</li> </ul>
<b>Thermal Properties of Matter</b> Thermal expansion, heat capacity, molar heat capacity, specific heat capacity, latent heat of fusion, latent heat of vaporization, phase changes, heat conduction	[3 hours]	<b>A.1. A.2. B.2. B.5. D.1. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 2,3</li> </ul>
<b>Electric Forces , Fields and Potentials</b> Charge and matter, insulators and conductors, electric forces, electric field, electric field lines, electric potential, motion of a charged particle in a uniform electric field, electric current, resistance and Ohm's law, resistivity of different conductors, electrical energy and power	[5 hours]	<b>A.1. A.2. B.1. B.2. C.1. D.1. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 2,3</li> </ul>
<b>Mechanics of Fluids</b> Fluids, Density and Pressure, Fluids at rest, Pascal's Principle, Archimedes' Principle, The Equation of Continuity, Bernoulli's Equation, Applications.	[3 hours]	<b>A.1. A.3. B.1. B.7. C.2. C.3. D.1. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 3</li> </ul>
<b>Light and Geometrical Optics</b> Introduction, The Nature of Light, The Ray Approximation in Ray Optics, Wave Under Reflection, Dispersion, Total Internal Reflection, Diffraction Patterns from Narrow Slits, Young's Double-Slit Experiment.	[4 hours]	<b>A.1. A.3. B.1. B.8. C.1. D.1. D.2.</b>	<ul style="list-style-type: none"> <li>▪ Quizzes</li> <li>▪ Tutorials</li> <li>▪ Exam 3</li> </ul>

### (12) Tentative / Module Academic Calendar

	<b>Week</b>	<b>Subject</b>
	1	Vectors.
	2	Vectors, Motion in straight line.
	3	The laws of Motion.
	4	The laws of Motion and Circular motion.
	5	Circular motion, Work and Energy.
	6	Elastic Properties of Materials.

7	Heat and Temperature.
	<i>Last day for the first exam. Time table will be announced by the Department of Basic Sciences</i>
8	Temperature and the Behavior of Gases.
9	Temperature and the Behavior of Gases.
10	Thermodynamics.
11	Thermodynamics.
12	Thermal Properties of Matter
	<i>Last day for the second exam. Time table will be announced by the Department of Basic Sciences</i>
13	Electric forces, Electric fields, and Potentials
14	Mechanics of Fluids
15	Light and Geometrical Optics
16	Final Exam

### (13) Expected Workload / How to succeed in this course

▶	<p>This is a three-credit hour's class (excluding laboratory). The successful student typically spends 2-3 hours of concentrated effort for each hour spent in class. For a three-credit hour class this means up to nine hours per week, three hours in class and six hours outside of class, studying in groups and individually.</p> <p>Teaching and learning are mutual, integrated, simultaneous, action. To raise students learning abilities of physics a great effort must be done by students to improve their conceptual and analytical understanding of physics. Physics is very fascinating science but due to the sophisticated mathematics behind every physics concept and law, physics emerges as a very challenging and demanding subject. Moreover, because of its accumulative nature, as always new ideas will be building upon the older ones, physics seems a bit overwhelming.</p> <p>Students play a cardinal role in the teaching-learning process. Students feedback through students evaluation can improve and effective teaching methodology, while the effort exerted by students to utilizing and improving the accessible learning strategies would lead to a complete comprehension of a physics course.</p> <p>In the following I will draw the best "in my view" students learning strategies for studying physics. Mentoring students toward adopting a broad spectrum of learning strategies will make huge difference to the performance of students. The student learning strategies drawn below are sort of suggestions on how to dramatically students are able to improve their understanding of and therefore their grade in a physics course. The proposed studying guidelines are relevant only for physics courses taken by students majoring in physics, or any science disciplines and engineering.</p> <p><i>Here are some hints to help make these hours as productive as possible:</i></p>
1.	Attend class !
2.	Read the material to be presented before class. Don't fall behind !
3.	During lectures students must record the main concepts, arguments, and results.
4.	Come prepared and ask questions regarding the difficult areas after they are covered in Class.
5.	Make a neat copy of the lecture notes, review and extend them as soon as possible after class.
6.	Study the examples in the text and in the class.
7.	Do the homework assignments by yourself first of all.
8.	Students must spend time after the class to read through his/her notes and text book.
9.	Solve other problems from the text book that are similar to the assigned ones, or the ones covered in class.
10.	Re-read the sections in the text where you experience difficulties.
11.	It is critical to have a good foundation in mathematics at the level of calculus (1) prior to taking any physics course.

12.	A student who does have a good background in physics and/or math should plan to spend at least 6-8 hours a week reading the text book, reviewing the notes, and working homework problems.
13.	Get help from fellow students. Study groups are extremely useful!
14.	See the instructor. Utilize office hours, email, etc.
15.	Spend at least nine hours a week in concentrated effort, both in and out of class.
16.	Physics is a highly visual subject and many physics concepts are best conveyed by taking the advantages of the web resources.
17.	Relax; we all learn one step at a time.

#### (14) Homework Assignments

You will have four types of frequent homework assignments with regard to the course material; specifically, skimming each chapter before we take it up in class, reading your text book and reviewing your notes after every class, and performing your homework. The first three tasks will serve to keep your attention and interest up whilst the last task will help you to powerfully comprehend the material and build up your problem solving techniques. In fact working through problems is crucial to your understanding of a physics course and corresponding passing grade. It is the only way to learn most of physics, so please take the homework very seriously. You will be present with a sheet on the topic "How to do physics problems?" Performance of homework problems is subjected to the following guidelines and rules:

- ▶ Students may encounter three types of homework; namely team problems, non-team problems and online problem through Mastering Physics software's.
- ▶ Team problems, must be worked as team .In this case only one written copy of the solution is required per team but put all the team member's names on the sheet. The submitted solution sheet should be written in mutual manner.
- ▶ For the non-team problems, I expect you to write up your solutions individually. I encourage you to meet together in-groups to study, discuss and argue on the homework. However your write-up should show your insights of the problems.
- ▶ For non-team problems, before involving in group discussions I suggest that you initially attempt to solve the problems by yourselves, as this will help you to explore honestly your weaknesses.
- ▶ Selected problems will **NOT** be graded and included in the final grade determination.
- ▶ For team and non-team problems, if you cannot solve a problem try to write down why you are having difficulties.
- ▶ For team and non-team problems, just writing down a numerical answer for a problem will give you a zero point for that problem.
- ▶ Depending on time you will receive written solutions when problem sets are collected / submitted.
- ▶ For team and non-team problems, homework will be due in class next week of issue.
- ▶ For the online problem, the homework will be done online, using the Mastering Physics software available!. You need to log on to the system sited at with the following::

Section	Module ID on Physics Software
Applied Physics 1	<a href="http://ecourse.philadelphia.edu.jo/login/index.php">http://ecourse.philadelphia.edu.jo/login/index.php</a>
Applied Physics 2	Remark: The user name and password, if any, is the student university number.
General Physics 1	

Do the practice session to make sure you know how to use the software. Of course before that you need to register for the online Physics Software website above and follow the instructions.

- ▶ Any question concerning the homework can be directed to me in the office hours.

	<ul style="list-style-type: none"> <li>▶ For all types of homework, these are not acceptable: <ul style="list-style-type: none"> <li>▪ handing your homework to your friends;</li> <li>▪ copying your friend's homework;</li> <li>▪ Copying previous year homework.</li> </ul> </li>   <li>▶ Late assignments will be penalized by 5% deduction of the earned score for each working day beyond the deadline. However valid and verifiable excuse will be considered.</li> </ul>
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### **(15) Term Paper**

▶	<p>Preparing and presenting a term paper is aimed to improve the students communication skills, introduce students to the realistic application of class material, motivate students to learn more about multimedia facilities. Organization of your term paper must be subjected to the following rules:</p> <ul style="list-style-type: none"> <li>▶ The term paper must be on a topic relevant to the material we cover; it should explain the applications of the studied theoretical physical concepts to a particular technologist issue or natural phenomenon.</li> <li>▶ Term papers must be composed of contents, introduction, main body (theory, application ...), conclusion, and references. During lectures, I will elaborate further on the topic "How to write a scientific report?".</li> <li>▶ No more than two students should be shared in the same project.</li> <li>▶ Some suggestions pertaining to the topics of the term papers will be passed to you.</li> <li>▶ We will set up the two-person groups in the first weeks of classes.</li> <li>▶ In preparing his/her term paper students should make use of multi sources of references e.g. text books, published Journal paper, and web resources. A single, one type –reference term paper will not be accepted.</li> <li>▶ An extra credit will be given to the student/group who will suggest or will find a new problem or give an illustration of the application of a particular theoretical principle in other sciences, e.g. chemistry, biology, or every-day life employing the presented, in class, physical concepts.</li> <li>▶ An extra credit will be given to the student/group that will besides the hard and electronic copy of his/her/their term paper will translate it into a poster.</li> <li>▶ All term papers will be a minimum of five pages long plus a bibliography, typed, double-spaced, 12-pitch, with 1-inch margins all around.</li> <li>▶ Presenting your work to the class will be included in the final grade for the term paper.</li> <li>▶ Term papers will be due on the last week of classes.</li> </ul>
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### **(16) Student Portfolio**

▶	<p>The student portfolio is a collection of student notes, ideas, questions, and perspectives of the course material. The main purpose of the portfolio is to allow students to demonstrate what they have learned in class and to identify and assess his/her personal scientific growth in the subject. Further, preparation of the portfolio will help students to gain experiences in keeping record of the material covered in class in an organized manner. Encouraging students to reproduce and organize the class material can be served as an instrument to improve dramatically their study procedure and consequently complete their preparation for quizzes and exams. Finally, I believe that the major objective of having the portfolio is to document that all of the above learning outcomes have been met.</p> <p>Each student is required to design and keep a student portfolio in a two-ring binder. The portfolio</p>
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	<p>should be neatly organized and kept up to date. The portfolio should include the following entries:</p> <p>Table of contents.</p> <ul style="list-style-type: none"> <li>▶ All in-class handouts.</li> <li>▶ Class notes.</li> <li>▶ Homework assignments.</li> <li>▶ Quizzes.</li> <li>▶ Exams.</li> <li>▶ General media articles relevant to the course topics</li> <li>▶ Term paper.</li> <li>▶ Description of each chapter .Each description should contain :             <ol style="list-style-type: none"> <li>1. Summary of the main concepts.</li> <li>2. Illustration of the main concepts using videos and pictures out of hard or media articles.</li> <li>3. Application of those concepts in real life situations.</li> <li>4. Student reflections regarding the chapter content, class activities, and the obstacles that he/she has faced in studying the material.</li> </ol> </li> <li>▶ Challenging problems pertaining to the material we have covered.</li> <li>▶ All in-class conceptual problems.</li> <li>▶ Self-assessment statement.</li> <li>▶ All laboratory reports.(optional).</li> </ul> <p>Students are welcome at any time to talk about progress on their portfolios and to address any questions regarding the portfolio items. Portfolios shall be checked for completeness periodically during the semester and at the end of the semester. Student will be graded on the accessibility, readability, and intelligibility of his/her portfolio as well as the comprehension of the contents .The portfolios will be returned to students during the final week of class.</p>
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<b>(17) Academic Behavior and Honesty</b>	
▶	<p>Academic honesty is expected from all students. Therefore, during quizzes and exams, exchange of information with others is unacceptable. Cheating, plagiarism (using materials from sources without citation! i.e. presenting work as your own when it is not) fabricating data or references, or any use of notes or other materials, unless explicitly authorized will not be tolerated.</p> <p>The use of programmable calculators is not allowed absolutely!, a conventional calculator will be allowed for use when you authorized to do so such as in the exams. Anyone suspected of violating these guidelines will be charged with academic dishonesty and will be subjected to the university disciplinary procedures which may result in severe penalties, including failing the examination and possibly failing in the course. However, you are strongly encouraged to get together in groups to discuss the problem sets and the material presented in the course based on the principle that one's work is one's own.</p> <p>Our university academic honesty policy and other disciplinary procedures can be found at:  <a href="http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf">http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf</a></p>


<b>(18) Attendance Policy</b>	
▶	<p><b>Absence from lectures and /or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.</b></p>

	Our university attendance policy and other disciplinary procedures can be found at: <a href="http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf">http://www.philadelphia.edu.jo/PDF/laws/reg1.pdf</a>
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<b>(19) Students with Disabilities</b>	
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	If you have a Psychological and / or Physical disability or disabling medical conditions that could affect your performance in this course, Please see me privately at my office for a discussion of your disability-related academic needs and accordingly I can make the appropriate arrangements and actions according to Philadelphia University regulations. Also those students that have medical conditions (asthma, diabetes, ...etc.) are welcome if they wish to share with me any emergency medical information.
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<b>(20) Feedback</b>	
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	Concerns or complaints should be expressed directly and immediately to the course lecturer. At the end of the course, the students will fill a course evaluation form, evaluating the course contents, its teaching, learning, assessment methods, and the lecturer. Analysis of the students feedback will be useful to improve the quality of teaching and learning processes and related activities. For non-academic complaints or concerns you may refer to the students handbook or the university regulations.
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## APPENDICES

To objectively and subjectively assess the course Portfolio, term paper, and term paper presentation three rubrics (rating scales) for the evaluation procedures are designed. The rubrics contain a set of assessment criteria that specifies the required characteristics for each level of quality of the items of the graded activities. The rubrics would serve as a systematic guide for providing learners with the necessary feedback on the components of the course activities.

<b>APPENDIX A: Rubric to Assess Course Portfolio</b>			
<b>Assessment Dimensions 100 %</b>	<b>Grading Scale / Indicators</b>		
	<b>Exemplary 8 ⇒10</b>	<b>Satisfactory 6 ⇒ Less than 8</b>	<b>Unsatisfactory 4 ⇒ Less than 6</b>
<b>Completeness 30 %</b>	<ul style="list-style-type: none"> <li>All required materials are included.</li> <li>Contains a remarkable number of additional related materials.</li> <li>All issues raised in class are addressed, discussed, and outlined.</li> </ul>	<ul style="list-style-type: none"> <li>All required materials are included.</li> <li>Contains a number of additional related materials.</li> <li>Some of the issues raised in class are addressed, discussed, and outlined.</li> </ul>	<ul style="list-style-type: none"> <li>Some required materials are not included</li> </ul>
<b>Content &amp; Organization 30 %</b>	<ul style="list-style-type: none"> <li>Sections are well organized and clearly presented.</li> <li>Sections are creatively and logically ordered, with clear transition sentences.</li> <li>Resources for extra items are clearly and correctly listed and cited.</li> <li>Presentation of the portfolio elements shows an accurate and through understanding of the material presented in class physics concept and its applications, and therefore illustrates the achievement of all expected student learning outcomes.</li> <li>Reveals the student ability to powerfully use Technology in preparing written document.</li> </ul>	<ul style="list-style-type: none"> <li>Sections are organized and clearly presented.</li> <li>Sections are logically ordered.</li> <li>Some of the used resources for extra items are listed and cited.</li> <li>Presentation of the portfolio shows an understanding of the material presented in class physics concept and its applications, and therefore the achievement of the most of the expected student learning outcomes.</li> <li>Reveals the student ability to use Technology in preparing written document.</li> </ul>	<ul style="list-style-type: none"> <li>Sections are poorly organized</li> <li>Sections are illogically ordered.</li> <li>Presentation of the portfolio demonstrates that student has gained the minimum expected learning outcomes.</li> <li>Provides no evidence for familiarity with using Technology in preparing written document</li> </ul>
<b>Student Reflection 25 %</b>	<ul style="list-style-type: none"> <li>Demonstrates the student skill in deeply analyzing and critiquing scientific work</li> <li>Indicates student ability to effectively propose and come up with new ideas to improve course contents and teaching strategies.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates the student skill in analyzing and critiquing scientific work</li> <li>Indicates the student ability to propose and come up with new ideas to improve course contents and teaching strategies</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates the student skill in analyzing scientific work.</li> </ul>
<b>Overall Layout 15 %</b>	<ul style="list-style-type: none"> <li>Gives clear evidence of the excellent effort put in preparing the portfolio.</li> <li>Has attractive visual appeal</li> </ul>	<ul style="list-style-type: none"> <li>Gives evidence of the effort put in preparing the portfolio.</li> <li>Has reasonable visual appeal.</li> </ul>	<ul style="list-style-type: none"> <li>Shows no evidence for the effort put in preparing the portfolio.</li> </ul>

<b>APPENDIX B: Rubric to Assess Term Paper</b>			
<b>Assessment Dimensions</b> 100 %	<b>Grading Scale / Indicators</b>		
	<b>Exemplary</b> 8 → 10	<b>Satisfactory</b> 6 → Less than 8	<b>Unsatisfactory</b> 4 → Less than 6
<b>Aims &amp; Purpose</b> 10 %	<ul style="list-style-type: none"> <li>Covers a significant contemporary topic that is much related to the course outcomes.</li> <li>Employs an original approach to study the selected topic.</li> </ul>	<ul style="list-style-type: none"> <li>Covers a topic that is much related to the course outcomes.</li> <li>Employs a logical approach to study the selected topic.</li> </ul>	<ul style="list-style-type: none"> <li>Purpose of term paper is not clear.</li> <li>A poor approach is used to study the selected topic.</li> </ul>
<b>Completeness</b> 30 %	<ul style="list-style-type: none"> <li>All required elements and components of term paper (Abstract, Introduction, Main Body, Conclusions, and Resources) are evidently addressed and included.</li> <li>All issues related to the topic are noticeably addressed, and outlined.</li> </ul>	<ul style="list-style-type: none"> <li>All required elements and components of term paper (Abstract, Introduction, Main Body, Conclusions, and Resources) are included.</li> <li>All issues related to the topic are discussed.</li> </ul>	<ul style="list-style-type: none"> <li>Some required elements are missing.</li> <li>Not all issues related to the topic are discussed</li> </ul>
<b>Content &amp; Organization</b> 25 %	<ul style="list-style-type: none"> <li>Sections are well organized and clearly presented.</li> <li>Sections and sequenced concepts are creatively and logically ordered, with clear transition sentences.</li> <li>Presentation of the term paper elements shows an accurate and through understanding of all aspects of the chosen topic.</li> <li>Reveals the student ability to powerfully use Technology in preparing written document.</li> </ul>	<ul style="list-style-type: none"> <li>Sections are organized and clearly presented.</li> <li>Sections are logically ordered.</li> <li>Presentation of the elements of term paper shows an understanding of all aspects of the chosen topic.</li> <li>Reveals the student ability to use Technology in preparing written document.</li> </ul>	<ul style="list-style-type: none"> <li>Sections are poorly organized</li> <li>Sections are illogically ordered.</li> <li>Presentation of the elements of term paper shows that student has gained the minimum understanding of the basic aspects of the selected topic</li> <li>Provides no evidence for familiarity with using Technology in preparing written document</li> </ul>
<b>Writing Quality</b> 10 %	<ul style="list-style-type: none"> <li>Almost entirely free of spelling, punctuation, and grammatical errors.</li> <li>Sections are well written with strong sentence structure.</li> <li>Ideas and concepts are presented in a coherent and clear manner.</li> </ul>	<ul style="list-style-type: none"> <li>A few spelling, punctuation, and grammatical errors are detected.</li> <li>Sections are clearly written with good sentence structure.</li> <li>Ideas and concepts are presented in a clear manner.</li> </ul>	<ul style="list-style-type: none"> <li>Several spelling, punctuation, and grammatical errors are detected.</li> <li>Sections are unclearly written with weak sentence structure.</li> </ul>
<b>Resources</b> 10 %	<ul style="list-style-type: none"> <li>Good quality significant recourses are effectively utilized in writing the Term Paper.</li> <li>Resources are clearly and correctly listed and cited.</li> </ul>	<ul style="list-style-type: none"> <li>Some of the recourses utilized in writing the Term Paper are significant.</li> <li>Resources are clearly and correctly listed and cited.</li> </ul>	<ul style="list-style-type: none"> <li>Most of the recourses utilized in writing the Term Paper are insignificant.</li> <li>Resources are incorrectly listed and cited.</li> </ul>
<b>Overall Layout</b> 10 %	<ul style="list-style-type: none"> <li>Gives clear evidence of the excellent effort put in preparing the Term Paper.</li> <li>Reveals the writer ability to powerfully use Technology in preparing written document.</li> <li>Has attractive visual appeal.</li> </ul>	<ul style="list-style-type: none"> <li>Gives evidence of the effort put in preparing the Term Paper.</li> <li>Reveals the writer ability to use Technology in preparing written document</li> </ul>	<ul style="list-style-type: none"> <li>Shows no evidence for the effort put in preparing the Term Paper.</li> <li>Provides no evidence for familiarity with using Technology in preparing written document.</li> </ul>

**APPENDIX C: Rubric to Assess Term Paper Presentation**

Assessment Dimensions 100 %		Grading Scale / Indicators		
		Exemplary 8 ⇨ 10	Satisfactory 6 ⇨ Less than 8	Unsatisfactory 4 ⇨ Less than 6
Delivery and Quality 50 %	Eye Contact 10 %	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Maintains eye-contact with audience all OR most of the presentation time.</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Keeps irregular eye-contact with audience, and frequently goes back to notes</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Keeps very limited eye-contact with audience, and reads mostly from notes OR makes no eye-contact with audience and only reads from notes.</li> </ul>
	Verbal Quality 10 %	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• All OR most of the time speaks using very clearly understood language.</li> <li>• Employs variation of voice tones, and volumes.</li> <li>• Speech is almost entirely free of spelling, punctuation, and grammatical errors.</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Speaks using semi-clearly language.</li> <li>• Sometimes uses different voice tones.</li> <li>• Speech has some spelling, punctuation, and grammatical errors.</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Often mumbles and cannot be understood.</li> <li>• Projected voice mostly is not easily to be heard</li> <li>• Has low rate tone.</li> <li>• Speech has many spelling, punctuation, and grammatical errors.</li> </ul>
	Visual Aids 10 %	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Makes use of attractive and effective visual aids to emphasize the major points and maintain audience's interest.</li> </ul>	<ul style="list-style-type: none"> <li>• Makes use of visual aids to explain some of the important points of the presentation topic.</li> </ul>	<ul style="list-style-type: none"> <li>• Integrates superficial visual aids OR no visual aids are used during the presentation.</li> </ul>
	Slide Quality 10 %	<p><u>Slides:</u></p> <ul style="list-style-type: none"> <li>• Are well organized and creatively and logically ordered.</li> <li>• Contains appropriate information.</li> </ul>	<p><u>Slides:</u></p> <ul style="list-style-type: none"> <li>• Are semi-organized and logically ordered.</li> <li>• Contains adequate information.</li> </ul>	<p><u>Slides:</u></p> <ul style="list-style-type: none"> <li>• Are poorly organized and illogically ordered.</li> <li>• Contains insufficient minimal information.</li> </ul>
Knowledge 15 %	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Shows a good and accurate grasp of the presented material.</li> <li>• Answers all /most of audiences questions accurately and perfectly.</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Shows a good grasp of the presented material.</li> <li>• Answers correctly some questions of audience.</li> </ul>	<p><u>Presenter:</u></p> <ul style="list-style-type: none"> <li>• Does not have the required background.</li> <li>• Is unable to answer correctly audiences' questions.</li> </ul>	
Content & Organization 25 %	<ul style="list-style-type: none"> <li>• All required elements and components of the presentation (Introduction, Main Body, Conclusions, and Resources) are evidently addressed and included.</li> <li>• All of issues related to the topic are noticeably addressed, and outlined.</li> <li>• The presenter is able to complete the presentation in the assigned time period.</li> </ul>	<ul style="list-style-type: none"> <li>• All required elements and components of the presentation (Introduction, Main Body, Conclusions, and Resources) are included.</li> <li>• Most of issues related to the topic are addressed.</li> <li>• Presentation is ended slightly before OR after its assigned end period.</li> </ul>	<ul style="list-style-type: none"> <li>• Some required elements are missing.</li> <li>• Not all issues related to the topic are discussed.</li> <li>• Presentation is completed much before OR very beyond its scheduled time</li> </ul>	
Team Work 10 %	<ul style="list-style-type: none"> <li>• Harmonic transition between speakers.</li> <li>• Speakers participate equally in the presentation.</li> <li>• Speakers do not interrupt each other during presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Speakers participate almost equally in the presentation.</li> <li>• Some Interruptions occurs during presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Speakers participate unequally in the presentation.</li> <li>• Speakers frequently interrupt each other during presentation.</li> </ul>	

# Finally remember that

The syllabus is not a contract, but plan of action .It may be subjected to alteration during the semester by the instructor as the learning environment requires.