

مختصر توصيف المقرر

(Course Information)

معلومات المقرر\*

اسم المقرر:	فيزياء عامة 2
رقم المقرر:	فيز 1022
اسم ورقم المتطلب السابق:	--
اسم ورقم المتطلب المرافق:	--
مستوى المقرر:	الأول
الساعات المعتمدة:	(0+2+3)4
<b>Module Title:</b>	General Physics II
<b>Module ID:</b>	PHYS 1022
<b>Prerequisite:</b>	General Physics 1
<b>Co-requisite:</b>	--
<b>Course Level:</b>	Second
<b>Credit Hours:</b>	4 (3+2+0)

Module Description

وصف المقرر :

This course is an introductory course for the fundamental principles of physics in fluid dynamics, oscillations and mechanical wave, and thermodynamics.

Module Aims

أهداف المقرر :

1	Understanding the fluid dynamics, oscillations and mechanical wave, and thermodynamics.	1
2	The development of students thinking on how to apply the physical principles to explain the physical phenomena.	2
3	The student should be able to read and describe physical problems, to use mathematics in solving physical problems efficiently.	3

Learning Outcomes:

مخرجات التعليم:

1	<b>Knowledge</b> <ul style="list-style-type: none"> <li>To know and describe the basic principles of fluids dynamics, waves and oscillations, temperature, heat and thermodynamics.</li> <li>To apply the formulas learned to solve the different applications of the related topics.</li> </ul>	1
2	<b>Cognitive Skills</b> <ul style="list-style-type: none"> <li>To distinguish between the simple and damped harmonic motion, properties of sound and mechanical waves, heat and temperature, and the three thermodynamic laws.</li> <li>To explain and justify the results obtained from the experiment.</li> </ul>	2

3	<b>Interpersonal Skills and Responsibility</b> <ul style="list-style-type: none"> <li>To participate in class discussion. Practice the safety and organizing rules of the laboratories.</li> <li>To act with self-reliance when working independently. Displays teamwork and shows professional commitment to ethical practice.</li> <li>The ability to interact professionally with others, to engage effectively in teamwork, and to function productively on multidisciplinary group projects.</li> <li>To develop in each student, the good writing skills so that they are able to communicate effectively and clearly</li> <li>The report is required to demonstrate proficient organizational skills and writing skills.</li> </ul>	3
4	<b>Communication, Information Technology and Numerical Skills</b> <ul style="list-style-type: none"> <li>To develop the team working skills necessary to perform effectively.</li> <li>To develop the ability to argue scientifically with the instructor.</li> <li>To know how to use the computer program to analyze the data, and make some simulation</li> <li>To know how to search the web for any updated information concerning the assigned experiment.</li> <li>To analyze the data with good mathematics and theory.</li> <li>To develop in each student good oral communication skills so that they are able to communicate effectively with others</li> </ul>	4
5	<b>Psychomotor</b> Not applicable.	5

Course Contents:

محتوى المقرر:

ساعات التدريس (Hours)	عدد الأسابيع (Weeks)	قائمة الموضوعات (Subjects)
<b>Theory</b>		
6	2	Oscillatory Motion
6	2	Wave Motion
6	2	Sound Waves
6	2	Superposition and Standing Waves
3	1	Temperature
6	2	Heat and the First Law of Thermodynamics
6	6	The Kinetic Theory of Gases
6	2	Heat Engines, Entropy, and the Second Law of Thermodynamics
<b>Practical</b>		
2	1	Measurements experiment

2	1	Viscosity experiment
2	1	Surface tension experiment
2	1	Specific heat capacity for liquids experiment
2	1	Specific heat capacity for solids experiment
2	1	Speed of sound in solids experiment
2	1	Thermal expansion experiment
2	1	Joule's equivalent experiment
2	1	Boil's law experiment)
2	1	Resonance experiment

**Textbook and References:**

الكتاب المقرر والمراجع المساندة:

سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم الكتاب المقرر Textbook title
9 <sup>th</sup> Ed. (2013)	<i>Cengage Learning</i>	<i>Raymond A. Serway and <a href="#">John W. Jewett</a></i>	<b>Physics for scientists and engineers</b> <i>ISBN-10: 013805715X</i>
سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم المرجع Reference
9 <sup>th</sup> Ed. (2011)	Cengage Learning	<i><a href="#">Raymond A. Serway</a>, <a href="#">Chris Vuille</a></i>	<b>College Physics</b> <i>ISBN-10:0840062060</i>
9 <sup>th</sup> Ed. (2012)	John Wiley & Sons	<i>John D. Cutnell, <a href="#">Kenneth W. Johnson</a></i>	<b>Physics</b> <i>ISBN-10: 0470879521</i>