

مختصر توصيف المقرر

(Course Information)

معلومات المقرر*

اسم المقرر:	تدريب عملي
رقم المقرر:	فيز 1912
اسم ورقم المتطلب السابق:	--
اسم ورقم المتطلب المرافق:	فيزياء عامة 1 فيز 101
مستوى المقرر:	الثاني
الساعات المعتمدة:	2 (0+4+0)
Module Title:	Practical Training
Module ID:	PHYS 1912
Prerequisite:	--
Co-requisite:	General Physics I PHYS 101
Course Level:	Second
Credit Hours:	2 (0+4+0)

Module

وصف المقرر :

Description

This introductory course aims to acquire the student of the knowledge and skills needed in the practical and project courses. This course will teach the student: 1) the theory of the fundamental statistical parameters (e.g. mean, median, percentage of errors, standard deviation, uncertainty etc.); 2) some important software that help in writing lab. reports (e.g. Office word, latex); software that are important in drawing and analyzing results in addition to writing equations (e.g. Excel, Origin); software that help the student present his work (e.g. PowerPoint); 3) how to use the internet to search for the information necessary of writing lab reports and projects.

Module Aims

أهداف المقرر :

1	Understanding the knowledge base of measurements error and the difference between random error and systematic error.	1
2	The development of students thinking on how to apply the software and scientific programs to read and describe physical problems, to use mathematics in solving physical problems efficiently	2
3	Know and use different searching engines to gather all necessary scientific information.	3

Learning Outcomes:

مخرجات التعليم:

1	<p>Knowledge</p> <ul style="list-style-type: none"> To digest the main statistical parameters using in measurements. To understand measurement errors To distinguish between random and systematic error. To compute the magnitude of the measurement error 	1
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2	Cognitive Skills <ul style="list-style-type: none"> Apply the physical concept of errors and how to analyze measurements Use mathematical equations to calculate the errors Learn how to translate realistic physical problems into the equations which describe them; solve these equations for the variables describing the problem; and interpret the results to describe the resulting behavior of the realistic physical system. Describe simple physical systems by graphing system variables, and interpret graphs of system variables. 	2
3	Interpersonal Skills and Responsibility <ul style="list-style-type: none"> The ability to interact professionally with others, to engage effectively in teamwork, and to function productively on multidisciplinary group projects. To qualify each student for the good writing skills so that they are able to communicate effectively and clearly To develop in each student good oral communication skills so that they are able to communicate effectively with others The report is required to demonstrate organizational skills and writing skills. 	3
4	Communication, Information Technology and Numerical Skills <ul style="list-style-type: none"> To develop the ability to argue scientifically with the instructor. To know how to use the computer program to analyze data, and make some simulation To know how to search the web for any updated information concerning the assigned experiment. To analyze the data with good mathematics and theory. 	4
5	Psychomotor Not applicable.	5

Course Contents:

محتوى المقرر:

ساعات التدريس (Hours)	عدد الأسابيع (Weeks)	قائمة الموضوعات (Subjects)
8	2	Errors' measurements, Uncertainty, and Main statistical parameters
8	2	Office Word program
8	2	Excel program (drawing)
4	1	Excel program (writing equations)
4	1	Power Point
12	3	Scientific program software (Origin)
8	2	Search engines (Google scholar, Saudi Digital Library)

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
			N A
سنة النشر Publishing Year	اسم الناشر Publisher	اسم المؤلف (رئيسي) Author's Name	اسم المرجع Reference
			N A