



ASU
جامعة العلوم التطبيقية الخاصة
APPLIED SCIENCE PRIVATE UNIVERSITY



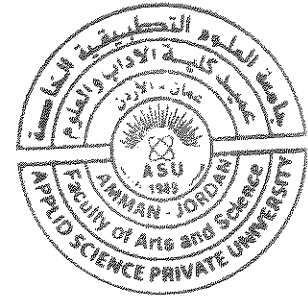
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المستوى الذهبي

جامعة كل العرب

Faculty of Arts and Science
Course Syllabus
Second Semester 2020 / 2021

Course Title: General Physics (2) Lab
Course No.: 1501221
Prerequisite: 1501220
Concurrent: -
Department: Basic Science and Humanities
Coordinator: Tasneem Alayed



Instructors:

Name	Office Number	Office Phone	Office Hours	E-mail
Tasneem Alayed	215	1412	(9:00-10:00) Sun, Tue, Thu (9:00-10:00) Mon, Wed.	t_ibrahim@asu.edu.jo

Course Description:

This course consists of a set of laboratory experiments related to the topics and principles of General Physics (2) offered along with it.

Learning Outcomes :

Upon completion of the course, this module should lead to the following outcomes:

A. Knowledge and Understanding (student should) :

- A1) Understand the basic concepts in Physics lab.
- A2) Recognize electric components and lab equipment.
- A3) Realize the importance of Physics in our life.

B. Cognitive and Intellectual Skills :

- B1) Summarize conclusions based on observations and data.
- B2) Develop scientific and logical thinking.
- B3) Develop the ability to learn faster, easier and better.

C. Subject specific skills :

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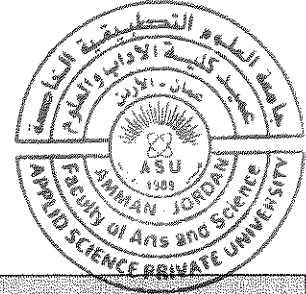
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- C1) Compare experimental measured values to the accepted theoretical values.
C2) Recognize safety instructions and procedures in the lab.

D. Transferable Skills :

- D1) Acquire experimental work skills.
D2) Acquire data analysis skills.
D3) Demonstrate communication skills with others.



Course Contents and Schedule:

Week	Topics	Topic Details
1	Introduction	- Introduction
2	Electrochemical Equivalent of Copper	- Electrochemical equivalent - Electronic charge
3	Electric Field and Equipotential Surfaces	- Uniform & non uniform Electric Field - Equipotential surfaces
4	Resistors in Series and in Parallel	- Ohm's law - Series & Parallel combinations
5	The Potentiometer	- Calibrate of voltage - Electromotive force (emf)
6	Determination of Unknown Resistance using Wheatstone Bridge	- Wheatstone Bridge - Resistance
7	The Resistivity of a Conductor using Wheatstone Bridge	- The effect of the dimensions of a wire on its resistance.
8	Charging and Discharging of Capacitor	-RC circuit - Charging of capacitor - Discharging of capacitor -Time constant
9	Kirchhoff's Laws	- Kirchhoff's Current Law - Kirchhoff's Voltage Law
10	Power Transfer	- Maximum power transfer.
11	Electromagnetic Induction	- Generate an inductive current.
12		
Final Exam		

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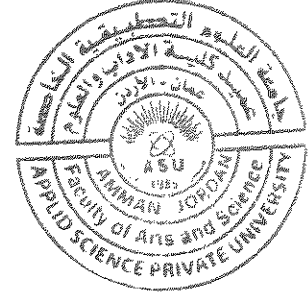


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Teaching Methods:

- Traditional lectures
- Experimental demonstration
- Group work and discussions



Evaluation:

Midterm Exam	30%	(14/4/2021)
Reports	20%	
Final Exam	50%	
Total	100%	

Textbook :

- Lab Manual of Physics 1501221

References :

- Physics for Scientists and Engineers, with Modern Physics; 9th edition, Serway/Jewett, 2014.

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المستوى الذهبي

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Subject Coordinator

Tasneem Alayed

Signature:

Head of Curriculum Committee

Dr. Husam Miqdad

Signature:

Department Head

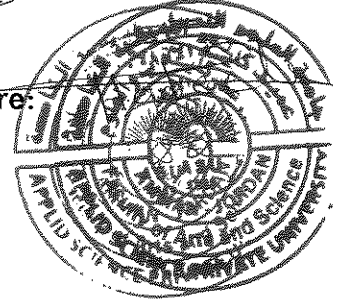
Dr. Husam Miqdad

Signature:

Dean Faculty

Dr.Hadeel Ail saed

Signature:



Copy to:

- Department Head.
- Head of Curriculum Committee.
- Course File.

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