جامعة فلسطين التقنية - خضوري

Palestine Technical University-Kadoorie

PTU Kadoorie خضوري

دولـــة فلســـطين

وزارة التعليـم العـالي والبحـث العلمي

State of Palestine

Ministry of Higher Education & Scientific Research

Academic Quality Assurance Department			
Subject	**Course Syllabus –G. Phys. Lab2**		
Institution	**Palestine-Technical University -Kadoorie**		
College	**Applied Science**		
Department	PHYSICS		
Program	Applied physics		
Course Title	**G. Physics Lab 2**	**Course Number:**	**15020106**
Year	**2023/2024**	**Semester:**	S1/Fall
Prerequisite(s)	**Pre. or Co-req: General Phys. 2, phys. 15020102**		
Instructor	**Khaled Bararkat**		
Course description	General Physics lab II is a laboratory course organized one time per week to cover experiments related to the material of General Physics II, which supplies the student with the basic concepts in electricity and magnetism (EM) learned throughout :the course, they include Equipotential Surfaces, The Oscilloscope and AC Circuitry. Ohm's law, the potentiometer, Variation of resistance with temperature, Kirchhoff's law, AC bridge meter -capacitance, Magnetic field of earth, Current device, RC Circuit.		
Course Intended Learning Outcomes (CILOs)	After studying this course, the student is expected to be able to: **(1)** Learn and understand to use experimental apparatus to record data and obtain results for in experiments of electricity and magnetism. **(2)** Verify concept and formula learned lectures concerned with famous experiments in electricity and magnetism. **(3)** Learn to perform experiments in electricity and magnetism in lab. **(4)** Practice experimental working techniques, including observations, data analysis, graphing, and draw conclusions. **(5)** Develop skills to identify, analyze and perform final calculation to write a final report conducted to experiments electromagnetism		
Textbook(s)	Physics Laboratory Manual. Notes and discussion given by the instructor		
Other References	**1.** R. A. Serway, R. J. Beichner, and J. W. Jewett, Physics for Scientists and Engineers with modern physics, 9th edition, Saunders college Publisher, Thomson Brooks/Cole **2.** R. A. Serway and Chris Vuille, *College physics*, 9th Edition, vol.2, Thomson Brooks/Cole.		
Other Resources used (e.g. e-learning, field visits, periodicals, software, etc.)	E-learning – Moodle university page (PTUK Moodle)		

Course Teaching Methods	
Teaching Method	**CILOs**
(1) Lecture sessions, practical sessions	1,2,3
(2) Experimentations and Analysis	4,5
(3) Activities (practical), Quizzes, Reports, Exams	1,2,3,4,5

Assessment Type	Details/Explanation of assessment in relation to CILOs	Weight	Date(s)
Experimentation and Data collection(Lab sessions)	1,2,3	------	-------
Midterm Exam (practical +theoretical)	1,2,3,4	20%	W10
Lab reports	4.5	30%	
Activities and Quizzes	1,2,4,5	10%	
Final Exam	1,2,3,4,5	40%	Announced by Reg. Dep.
Total		100%	

CILOs	**Mapping to program ILOs**					
On successful completion of the course, students will be able to:	**1**	**2**	**3**	**4**	**5**	**6**
(1) Learn and understand to use experimental apparatus to record data and obtain results for in experiments of electricity and magnetism.	×	×				
(2) Verify concept and formula learned lectures concerned with famous experiments in electricity and magnetism.		×	×			
(3) Learn to perform experiments in electricity and magnetism in lab.						
(4) Practice experimental working techniques, including observations, data analysis, graphing, and draw conclusions.			×	×	×	
(5) Develop skills to identify, analyze and perform final calculation to write a final report conducted to experiments electromagnetism.			×	×	×	×

Course Calender				
Week	**Session**	**Experiment Title**	**Assessment**	**CILOs**
1st	**1**	Electrical instruments and error	Reports, assignments, Quizzes.	all
2nd	**2**	Equipotential Surfaces		
3rd	**3**	The Oscilloscope and AC Circuitry		
4th	**4**	Ohm's Law		
5th	**5**	The Potentiometer		
6th	**6**	Variation of resistance with temperature		
7th	**7**	Kirchhoff's law		
8th	**8**	AC bridge meter		
9th	**9**	Earth magnetic field		
10th	**Midterm**	**Covers the first 6 Exps.**	Exam Mid practical+ theoretical	1,2,3,4
11th	**11**	Current devices		
12th	**12**	RC-circuit		
13th	**13**	**Review**		
14th	**14**	Covers all experiments		1,2,4,5

Prepared by:	**Dr. Khaled Barakat**	**11/3/2024**