



The Hashemite University
Faculty of Sciences
Course Syllabus
Department of Physics

Course Title:	General Physics Lab. (1)	Course Number:	110102103
Designation:	Compulsory	Prerequisite(s):	110102101
Instructor:	Manar Alobeid	Instructor's -mail:	manarm@hu.edu.jo
Office Hours:	10:00 – 11:00: Sunday, Tuesday *		

Course Description : In this lab students have an opportunity to see the principles those are studied in the lecture illustrated by simple experiments. They learn simple experimental techniques to observe and collect data. Besides, they use simple methods to analyze and interpret data, and learn how to estimate errors quantitatively.

Textbook:

Physics 103 manual. Authors: N. Saleh and B. Bulos, 2nd edition, Jordan University, 1983.

Major Topics Covered:

	1, 2, 3, 4, 5, 6, 7, 9, 11, 12, 13, 14, 16, 18, 19, 20, 21
11/10→15/10	General Instructions
18/10→22/10	Experimental Errors and Data Analysis
25/10→29/10	Collection and Analysis of Data
1/11→5/11	Measurements and Uncertainties
8/11→12/11	Vectors: Force Table
15/11→19/11	Kinematics of Rectilinear Motion
22/11→26/11	Boyle's Law
29/11→3/12	Practical Exam
6/12→10/12	Simple Pendulum
13/12→17/12	Specific Heat Capacity of a Metal
20/12→24/12	Force and Motion
To be announced later	Mid Exam
To be announced later	Final Exam

*Contact hours include lectures, and exams

Specific Outcomes of Instruction (Course Learning Outcomes):

After successfully completing this laboratory course you should at least be able to:

- ⇒ Demonstrate basic experimental skills by practicing setting up the experiment, caring about the instruments, and precisely following the procedure to find results with minimum experimental error. **(a, b, c, e)**
- ⇒ Estimate experimental errors in measured and derived quantities. **(a,c)**
- ⇒ Do some physical approximations and modeling, by applying physical laws to real problems, and connecting mathematical predictions with experimental results. **(b,c)**
- ⇒ Show basic communication skills by working in groups on a laboratory experiment. **(d,f)**

Student Outcomes (SO) Addressed by the Course:

#	Outcome Description	Contribution
Physics Student Outcomes		
(a)	a recognition of universal physical laws relevant to the problem, and ability to use the relevant laws to the problem.	H
(b)	Set up experiments to measure physical quantities, record data, analyze results, and fit the data with appropriate mathematical formulas.	H
(c)	an ability to evaluate the limitations of problem solutions.	H
(d)	an ability to function on multidisciplinary teams	M
(e)	an understanding of professional and ethical responsibility	M
(f)	an ability to communicate effectively	M
(g)	an understanding of the impact of physics and science on society.	L
H=High, M= Medium, L=Low		

Grading Plan:	Reports and quizzes	20 Points
	Midterm exam	25 Points
	Practical exam	15 Points
	Final exam	40 Points

General Notes: Here are few requests that we ask so this laboratory can function in an ordinary manner and provide the maximum amount of educational benefits:

1. Attendance for all experiments is obligation. Three or more unexcused absences will result in a failing grade. Any labs that were missed cannot be taken later, unless a valid medical reason is presented, or very special circumstances arise. You are required to notify your lab instructor of your absence immediately if you wish to not receive a zero for the absent lab(s).
2. You will work in groups of three or four students each. Each group should work in its assigned area, and should not interrupt other groups' area.
3. Your laboratory reports are important for determining your grade in the course. You have to write them neatly on the provided sheets. Graphs must be submitted on graph paper.
4. You will perform each experiment in cooperation with your partner in lab; each student must work independently to write his/her report. **EACH PERSON'S REPORT MUST BE COMPLETELY HIS OWN.** If it appears that two students have worked together on the write-up, each person will receive a zero for the lab report.
5. Eating, drinking, or smoking, are not allowed in the laboratory. Besides, it is prohibited to use cell phones in the laboratory, so turn it off.