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:	Ghada Assayed	**Instructor's e-mail:**	ghadaa@hu.edu.jo
Office Hours:	10:00-10:30 Sunday, 10:30 –11:30 Monday and Wednesday *		

Course Description: In this lab students have an opportunity to see the principles that 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, 5, 8, 11	**2, 3, 4, 6, 7, 9, 10, 12, 15**	**13, 14**
5/10→9/10	Introduction	Introduction	Introduction
12/10→16/10	Experimental Errors and Data Analysis	Experimental Errors and Data Analysis	Experimental Errors and Data Analysis
19/10→23/10	Collection and Analysis of Data	Collection and Analysis of Data	Collection and Analysis of Data
26/10→30/10	Measurements and Uncertainties	Vectors: Force Table	Kinematics of Rectilinear Motion
2/11→6/11	Vectors: Force Table	Measurements and Uncertainties	Simple Pendulum
9/11→13/11	Kinematics of Rectilinear Motion	Simple Pendulum	Measurements and Uncertainties
16/11→20/11	Simple Pendulum	Kinematics of Rectilinear Motion	Vectors: Force Table
23/11→27/11	**Mid Term Exam** (to be announced later)		
30/11→4/12	Hook's Law	Work and Energy	Measuring the coefficient of friction
7/12→11/12	Work and Energy	Measuring the coefficient of friction	Hook's Law
14/12→18/12	Measuring the coefficient of friction	Hook's Law	Work and Energy
21/12→24/12 4/1→ 8/1	**Compensation days** **Final Exam** to be announced later**)**		

*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 sitting 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:	**Midterm exam: 35 Points** **Reports: 25 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 educational benefits:

1. Attendance for all experiments is an 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 must 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.