MUTAH UNIVERSITY
College of Science
Department of Physics

Course Syllabus

Course Code	Course Name	Credits	Contact Hours
0302111	General Physics laboratory (1)	1	2T

INSTRUCTOR/COORDINATOR

Name	Dr. Emad Jaradat
Email/Office	ejaradat@mutah.edu.jo
Office Hours	https://academics.mutah.edu.jo/ejaradate
Classroom/Time	

TEXTBOOK

Title	Physics for Scientists and Engineers
Author/Year/Edition	Serway and Jewett, 9th edition
Other Supplemental Materials	
Title	Practical physics
Author/Year/Edition	G. L. Squires, University of Cambridge, 4th edition.

SPECIFIC COURSE INFORMATION

A. Brief Description of the Content of the Course (Catalog Description)

General physics laboratory provides students the ability to apply the concepts and physical laws that are introduced in lectures related to physics (1) and physics (2). Each class will have a short discussing about the theory part, the concepts and any formulas of the main topic for the experiment. Note: each student needs to turn in an individual lab report.

B. Pre-requisites (P) or Co-requisites (C)

General Physics (1) (0302101) **(P) or (C)**

C. Course Type (Required or Elective)

Required

SPECIFIC GOALS

A. Specific Outcomes of Instruction

Students will gain the ability to:
CLO1: Apply different procedures and techniques for each experiment [6]. **CLO2**: Learn about the various measuring devices to record the data [6]. **CLO3**: Apply equations related to physical laws to get quantitative results [6]. **CLO4**: Improve students' communication skills [3]. **CLO5**: Work effectively as a part of a team [5].

B. Student Outcomes Addressed by the Course

1	2	3	4	5	6	7
		✓		✓	✓	

BRIEF LIST OF TOPICS TO BE COVERED

List of Topics	No. of Weeks	Contact Hours
Introduction, Measurements	1	2
Vectors and force board	1	2
Rectilinear motion, Projectile motion	1	2
Uniform circular motion	1	2
Newton's laws (A)	1	2
Newton's laws (B)	1	2
Forces of friction	1	2
Conservation of energy	1	2
Linear momentum and collision (A)	1	2
Linear momentum and collision (B)	1	2
Rotational motion	1	2
Moment of inertia	1	2
Simple harmonic motion	1	2
Simple pendulum	1	2
Final Exam	-	-
Total	**14**	**28**

EVALUATION

Assessment Tool	Due Date	Weight (%)
Mid Exam	According to the university calendar	20
Course Work (Homework's, Quizzes, Projects, …etc.)	One week after being assigned	40
Final Exam	According to the university calendar	40

ABET's Students Learning Outcomes (Criterion # 3)		
Relationship to program outcomes		
ABET 1-7		**Electrical Engineering Student Outcomes**
1.		an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2.		an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic
3.	√	ability to communicate effectively with a range of audiences
4.		an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5.	√	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6.	√	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7.		an ability to acquire and apply new knowledge as needed, using appropriate learning strategies