

Course syllabus Physics 101 Lab Fall 2018

Instructor: Donia Georgi
Office: C014 (Physics Lab)
Tel: 2224 8399 Ext. 3711
Email: dgeorgi@auk.edu.kw



Office hours: Sunday: 9 – 11 am Monday: 8.30 – 12.30
--

I. Course Description:

The main objective of this course is to help the students in understanding the concepts of mechanics and measurements by simple step by step method. The topics included in this course are experiments in measurements & mechanics. Laboratory experiments are to reinforce many physical concepts discussed in the lecture course.

II. Objectives:

- To enhance the understanding level of concepts in mechanics.
- To develop skills in communication and ability to work in groups.
- To enhance ability in experimental design, data and error analysis and report writing.
- To become acquainted with the related instrumentations and experimental techniques.
- To help students understand the role of direct observation in physics and to distinguish between inferences based on theory and the outcomes of experiments
- To develop basic skills of experimental physics and data analysis, which students can utilize in a variety of career fields.

III. Learning Outcomes:

- Acquire knowledge of experimental techniques related to the concepts of mechanics;
- Gain experience in proper data collection methods graphical representation of data, data analysis and interpretation of results.
- Develop analytical and critical thinking.
- Work in teams.
- Prepare a satisfactory written report of the physics experiment.

IV. References:

- 1) Laboratory manual.

V. Lab Sessions:

- 10 experiments performed during the semester.
- One Midterm & One Final exam.
- Experiment # **1 - 4** for the MID-TERM.
- Experiment # **5 - 10** for the FINAL.

VI. Course Materials:

- 2 booklets for the Course, available in QUICKCOPY.
 1. Lab Manual
 2. Observation Booklets (Part -1 & Part -2)
- Students are required to bring LAB MANUAL, CALCULATOR & PENCIL to every lab.
- Observation Booklet should be submitted in Lab before leaving.

VII. Lab Weekly Syllabus:

#	Experiments.
1	Measurements
2	Density of Metals
3	Viscosity of Liquids
4	Hooke's Law
Review 1 / Absent Makeup week	
MID-TERM	
5	Simple Pendulum
6	Conservation of Energy
7	Friction
8	Accel. & Velocity on Inclined Plane
9	Efficiency on Inclined Plane
10	SHM using spring
Review 2 / Absent Makeup week	
FINALS	

VIII. Assessment:

- Weekly Lab reports **50%** (10 Labs × 5 %)
- Mid-term **25%**
- Final **25%**

IX. Attendance:

- Attendance is required at all labs without exception.
- An unexcused absence will result in a score of 0 points for the missed lab. (-5%)
- Do submit documented evidence in case of absence due to emergencies like
 - Inpatient medical care, death of an immediate family member
 - Academic activities, or national athletic activities
- As per university attendance policy, more than 15% absence would be “F”.
- Students who finish the semester with MORE THAN 2 ABSENCES will receive an **“F”**
- Opportunity for ONLY ONE ABSENT MAKEUP before each exam.
- Absent Makeup is with 25% penalty. $\left(\frac{7.5}{10}\right)$

• NO Makeup for Mid-term & Final Exams.

X. Grades: Passing Grade **70% **(C-)****

94 - 100	A
90 - 93	A-
87 - 89	B+
84 - 86	B
80 - 83	B-
77 - 79	C+
74 - 76	C
70 - 73	C-
67 - 69	D+
64 - 66	D
60 - 63	D-
0 - 59	F

XI. Disability Accommodation:

If you believe that you need accommodations for a disability, kindly arrange for an appointment with Dr. Huda Shaaban (hshaaban@auk.edu.kw) at the Counseling Center located at the earliest with the understanding that all disability-related accommodations require registration with the Counseling Center and are not applied retroactively.

POLICY GUIDELINES for Physics Lab

1. Lab METHODOLOGY:

- Initial 30 minutes of each session would be visual presentation about the experiment.
- START performing experiment AFTER PRESENTATION.
- Completed experiment reports must be submitted before leaving the lab.
- Observation booklet is not allowed to be taken home for completion of work.
- The graded lab reports will be returned for review during the next experiment.

2. ARRIVE on time.

- Being late will not be tolerated.
- Points will be deducted if entered late beyond attendance.

3. You will be working in GROUPS of 2 or 3 students.

- Perform experiment, & complete calculations IN GROUP with same equipment.
- However, submit INDIVIDUAL lab reports
- Your handwriting must be LEGIBLE/ READABLE, NEAT and CLEAR.

4. Lab DISCIPLINE/Code of CONDUCT

- DON'T WALK in & out of lab / INSIDE LAB during lab session
- Do not borrow or exchange equipment from another station.
- Avoid creating noisy atmosphere inside lab. Handle equipments carefully.
- Please get rid of any distractions during your lab session. Turn your cell phone off.
- INTER-GROUP discussions / LOUD IN-GROUP discussions are not tolerated.

5. Lab & Equipment SAFETY MEASURES:

- Never perform an unauthorized experiment.
- CLEAN UP your area before you leave the lab
- All equipments need to be left neatly at your station
- If any equipment is not working properly, notify immediately.
- NO WATER, FOOD or DRINKS of any kind in the laboratory

6. PLAGIARISM & Cheating

- The lab session is meant to be a collaborative effort IN GROUP.
- However COPYING OTHER GROUP'S WORK, presenting data that is not from your own recordings, WILL NOT BE TOLERATED
- Dishonest behavior during exam will earn you zero grades.
- The university takes all incidences of academic dishonesty seriously and acts accordingly.
