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## Course syllabus

## Spring: 2022

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**Physics 116 - 02 Lab**

**Wednesday: 11 – 1:45 pm**

Onsite/ Online

**C014, Physics Lab**

**Instructor:** Donia Georgi

**Office Location:** C014, Physics Lab

**Email:** [dgeorgi@auk.edu.kw](mailto:dgeorgi@auk.edu.kw)

**Office Hours:**

Sunday	Monday
11 am – 2:00 pm	8 am – 11:00 am

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### **Course Description:**

This course is an introductory physics course for non-science majors. The course focuses on basic physics concepts and connections to everyday life in fields of mechanics and Measurements. The topics included in this course are experiments in measurements, Mechanics, Newton's laws of force, Work, Energy, Friction, Acceleration and Velocity. Laboratory experiments are to reinforce many physical concepts discussed in the lecture course.

### **Course 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.

### **Course Learning Outcomes:**

Upon successful completion of the course, students will:

- Acquire knowledge of experimental techniques in Electricity & Optics;
- Gain experience in proper data collection methods graphical representation of data
- Develop skills in data analysis and interpretation of results.
- Improve critical thinking and problem solving abilities.
- Be able communicate the scientific concepts clearly & evaluate results from the experiments

### **Academic Integrity**

- Students are expected to know & abide by the AUK policies and regulations.
- COPYING others 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 quite seriously and acts accordingly.

### **Disability Accommodation:**

If you believe you can benefit from accommodations for learning, physical, or mental health disability, [click here to book a session through the Counseling Center/Disability Services Booking Page](#), to ask about disability services at AUK, initiate an accommodation plan, or receive disability services. You can also email [counseling@auk.edu.kw](mailto:counseling@auk.edu.kw) if you need assistance in booking a session.

### **AUK Mission Statement:**

The American University of Kuwait is a liberal arts institution dedicated to teaching, learning, and scholarship. The University offers programs that provide students with the knowledge and skills necessary for lifelong learning and professional success. AUK enriches society by fostering an environment that encourages critical thinking, effective communication, personal growth, service, and leadership.

### **Department Mission Statement:**

The Department of Mathematics and Natural Sciences is committed to excellence in teaching, research, and scholarly activities. The Department prepares AUK students in different disciplines with the fundamental scientific and analytical skills critical to a quality liberal education. The Department strives to prepare students to be successful in their careers and promotes lifelong learning.

### Course Materials:

- **Lab Manual:** Booklet including procedure and formulas for all experiments.
- **Lab worksheets:** Separate lab assignment worksheets for each experiment

### Grade Distribution:

<b>Evaluation Type</b>	<b>Weight</b>
Weekly lab reports	50%
Midterm Exam	25%
Final Exam	25%
<b>Total</b>	<b>100%</b>

### Grading Scale:

<b>Letter Grade</b>	<b>Percentage</b>	<b>University Points</b>
A	94-100	4.0
A-	90-93	3.7
B+	87-89	3.3
B	84-86	3.0
B-	80-83	2.7
C+	77-79	2.3
C	74-76	2.0
C-	70-73	1.7
D+	67-69	1.3
D	64-66	1.0
D-	60-63	0.7
F	0-59	0.0

### Email Communication:

- In every communication to me, **include your full name, course, and section.**
- Replies to emails are done **ONLY** during business hours **8am – 4pm** on week days.
- If I do not respond within 24 hours, please re-send the email.
- Emails sent on weekends will be responded to on **Sunday.**

### Attendance Policy:

You are expected to attend every lab session. Any student who misses more than 15% of class sessions during a semester should expect to fail, unless she/he submits documented evidence to the course instructor of inpatient medical care, death of an immediate family member, academic instructional activities, or national athletic activities.

- Absent for more than 2 labs earn you FN. (Failure for non-attendance).

### Policy for Makeup:

- There will be NO makeup for exams.
- The only exception to the above policy are special cases such as; death of an immediate family member and documented medical care.
- You must contact the instructor before the scheduled exam.
- There is chance for ONE LAB absent make up for labs in the FINAL REVIEW week.
- Lab Absent makeup will be graded with 25% penalty.
- Provide documented evidence in case of inpatient medical care, death of an immediate family member, academic instructional activities, or national athletic activities no later than 48 hours from the time of missing assignment.

### Course Schedule

Date	#	Experiments.
Feb – 16	1	DMM Measurements & Syllabus
Feb – 23	2	Ohms Law
Mar - 9	3	Resistors in Series & Parallel
Mar – 16	4	Combination of Series Parallel resistors
Mar - 23	5	Non – Ohmic Devices
Mar - 30		Mid -Term
Apr - 6		Mid -Term
Apr – 13	6	Capacitance of Capacitors
Apr – 20	7	Series and Parallel Capacitors
Apr – 27	8	KVL
May – 11	9	KCL
May - 18		Final Exam
May – 25		Final Exam

## Course Guidelines / Student Responsibilities:

### 1. Course Delivery/Methodology:

On Campus students will be meeting in-person on **Wednesdays 11:00 am** in Physics Lab. ONLINE students will be attending **ZOOM Moodle** session same time **Wednesdays 11:00 am**. Worksheet for each experiment will be posted in MOODLE before each session separately.

1. Online Worksheet
2. On campus worksheet

The course content will be explained/ presented in lecture form using PPT slides in Lab and also through ZOOM.

### In lab Students

- You can **START** doing experiment & taking readings **AFTER PRESENTATION**.
- Before leaving lab **SUBMIT** your completed report in **MOODLE**.

### ONLINE Students

- Pictures from the experiment will be provided in the worksheet
- Take Readings from the provided pictures.
- Complete the calculations and graphing using the provided DATA in worksheet.
- **SUBMIT** your completed report **before 2:00 pm** in PDF in **MOODLE**
- **NO submission in MOODLE is considered ABSENT**
- **Any LATE email submissions will not be accepted.**

### Technology Issues:

- If you experience trouble submitting an assignment in MOODLE due to technology or internet issues please send me an email and include the **completed** assignment.
- Please make sure that **you email me the assignment before the deadline** as this documents that you did finish everything by the due date and time, but that you just had a technology issue.
- This will ensure that your assignment will be accepted, and you will not receive a late penalty/get a 0, etc.

### 2. Class Participation Policy

- ARRIVE to lab Or Join Zoom before class time.
- **Extreme LATE or repeated late entry to lab/zoom will affect your lab grades.**
- Attendance will be taken in the beginning of each session.
- For ONLINE students, **WEBCAM should be turned ON throughout the ZOOM session.**
- You will receive an **absent penalty (-25%)**, if the webcam is **switched OFF** during class presentation.

## **General Rules for Physics Lab**

- No student can work in the power lab without supervision of an instructor or a lab technician.
- Food, drinks, and smoking are strictly prohibited inside all laboratories.
- Work areas must be clear of all materials except those needed for work. Equipment that requires airflow or ventilation must also be clear of any material or obstacle to prevent overheating.
- Individuals may not leave an experiment unattended. Work areas must be cleaned before leaving. All ignition sources must be turned off and doors must be locked.
- If a piece of equipment fails while being used, it must immediately be reported to the lab instructor.
- Equipment may only be used after the instructor has shown how they are properly used.
- In case of any emergency (fire, blackout, electric shock), inform the lab technician or lab instructor immediately or call 112 or Campus Services for assistance.

### **Syllabus Changes:**

There may be changes to the schedule and syllabus during the semester. When this happens, I will inform you in class and over email.