

# EASTERN MEDITERRANEAN UNIVERSITY

## DEPARTMENT OF PHYSICS

COURSE CODE	PHYS109	COURSE LEVEL	First year
COURSE TITLE	Basic Physics	COURSE TYPE	FACULTY CORE
CREDIT VALUE	(3, 0,0) 3	ECTS VALUE	6 credits
PREREQUISITES	None	COREQUISITES	None
DURATION OF COURSE	One semester	<b>SEMESTER and YEAR</b>	Fall 2019-2020

**INSTRUCTOR (Group 01) :** Masoumeh Izadparast

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**INSTRUCTOR (Group 02) :** Sara Kanzi

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### AIMS & OBJECTIVES

- To introduce the fundamental concepts of general physics
- To provide students with a deeper understanding of fundamental laws and concepts of natural phenomena.
- To improve students' basic mathematical skills and problem solving skills.
- To strengthen students' creative and systematic thinking capability.

### GENERAL LEARNING OUTCOMES (COMPETENCES)

On successful completion of this course, all students will have developed **knowledge** and **understanding** of: the concepts, theories, techniques and generalizing principles of classical mechanics; the mathematical forms of the laws and physical relationships and their application in solving problems; diagrammatic and graphical representation of physics problems and physical data; validation of theory through experiment/observation.

On successful completion of this course, all students will have developed **their skills in**: correctly using symbols and units; analytically/critically applying the theoretical concepts and methods covered in the course, and formulating appropriate equations to solve problems; using efficiently and effectively the textbook and other printed/electronic literature relevant to the course; using good scientific English for written and oral communication.

On successful completion of this course, all students will have developed their **appreciation** of, and respect for **values and attitudes** to: the discipline of physics as a fundamental branch of science that provides qualitative and quantitative explanations about the physical world;

being an open-minded, curious, creative and reasoned skeptic; being aware of ethical issues in science.

### GRADING CRITERIA

<b>A</b> (excellent)  ~85% and above	Excellent understanding of the concepts and the principles as demonstrated by correct and accurate knowledge and application of theory/laws in solving problems. Response to problems is clear, legible, concise and accurate. Excellent performance.
<b>B</b> (good)  ~70% and above	Better than average understanding of the concepts and the principles as demonstrated by correct and accurate knowledge and application of theory/laws in solving problems, but doesn't have the depth and outstanding quality of an "A". Response to problems is fairly clear, legible, but occasionally contains some inaccuracies. Performance exceeds the minimum requirements
<b>C</b> (average)  ~60 % and above	An average understanding of the concepts and the principles as demonstrated by reasonably correct knowledge and application of theory/laws in solving problems, but doesn't have any depth. Response to problems is reasonably clear, legible, but contains inaccuracies. It reveals a sufficient understanding of the material, but lacks depth in understanding and approach/application. Content and form don't go beyond basic expectations and/or display some substantial errors. Acceptable but non-exceptional performance that doesn't go beyond the minimum requirements.
<b>D</b> (barely sufficient)  ~50% and above	Minimal knowledge and barely sufficient understanding of the concepts and the principles as demonstrated by approximately correct application of theory/laws in solving problems. Response to problems is not very clear and is barely legible, and contains many inaccuracies. It reveals a minimum (confused) understanding of the material, and lacks depth in understanding and approach/application.

	Content and form do not adequately meet the basic expectations, and/or display significant errors. Performance demonstrates severe problems in one or more areas.
<b>F (fail)  Below 50%</b>	Work does not meet the most minimal standards. It reveals no understanding of the material, lack of basic academic skills and knowledge, or completely incomprehensible writing. Performance is not acceptable
<b>NG nil grade</b>	Not enough information to assign a letter grade.

<b>METHOD OF ASSESSMENT</b>	
First Midterm	30 points
Quiz	20 points
Final Exam	50 points
(EXACT DATES WILL BE ANNOUNCED BY THE RECTOR'S OFFICE VIA YOUR STUDENT PORTAL)	
<b>IMPORTANT NOTES</b>	
<b>Participation to lectures (Participation to class has to be at least 60% of the lectures):</b>	
Active participation to lectures is a must for successful completion of this course. Students failing to attend lectures on a regular basis may receive an NG grade. <b>If the student's attendance is below 60% automatically the grade NG will be assigned.</b>	
<b>Make-Up Exam:</b>	
There is only one make-up exam that will be held before the final exam (its date, place and time will be announced later). The Make-up exam covers all the topics studied in the semester. It is not restricted to the coverage of the exam that you have missed.	
<b>NG:</b>	
A letter grade of <b>F</b> will automatically be converted to an <b>NG</b> if a student does not attend to do lectures more than %20 percent. Also, if a student misses any two exams (Midterm, Make-Up, Final) without proving its reason with a formal/probative document will get <b>NG</b> .	
<b>Resit Exam</b>	
This exam will be made after the final exam. The students whose grade is D- of F can register for the resit exam. (The students who get NG from the course are not allowed to take the resit exam)	
<b>Objections:</b>	
Graded exam papers will be available for inspection upon request. According to the regulations of The University, any objections or re-grade requests should be made within a week of the announcement of grades.	

<b>TEXTBOOKS</b>
J. W. Jewett, Jr. and R. A. Serway, Physics for Scientists and Engineers with Modern Physics.
Halliday, Resnick, Walker, Principles of Physics.

<b>COURSE SCHEDULE</b>	
<b>Week</b>	<b>Chapter(s) to be covered</b> (according to Serway)
1	Introduction
2	Chapter 1 – Measurements and Units (Sections 1,5)
3	Chapter 3 – Vectors (Sections 1,2,3,4)
4	Chapter 2 – Motion in One Direction (Sections 1,3,4,7)
5	Chapter 5 – The Laws of Motion (Sections 1,2,3,4,5,6,7,8)

<b>6</b>	Chapter 6 – Circular Motion and Other Applications of Newton’s Laws (Sections 1,2)
<b>7</b>	Chapter 7 – Work and Kinetic Energy (Sections 1,2,3,5,6)
<b>8-9</b>	<b>Midterm</b>
<b>10</b>	Chapter 8 – Potential Energy and Conservation of Energy (Sections 1,2,3,4)
<b>11</b>	Chapter 9 – Linear Momentum and Collisions (Sections 1,2,3,4,5)
<b>12</b>	Chapter 12– Static Equilibrium (Sections 1,2)
<b>13</b>	Chapter 20- Heat and Thermodynamics (Sections 1,2,3)
<b>14</b>	<b>Final</b>

**ACADEMIC HONESTY –PLAGIARISM**

Cheating is copying from others or providing information, written or oral, to others. Plagiarism is copying without acknowledgement from other people’s work. According to university by laws cheating and plagiarism are serious offences punishable with disciplinary action ranging from simple failure from the exam or project, to more serious action (letter of official warning suspension from the university for up to one semester). Disciplinary action is written in student records and may appear in student transcripts.

**Please keep this course syllabus for reference as it contains important information.**

