

EASTERN MEDITERRANEAN UNIVERSITY
DEPARTMENT OF PHYSICS

COURSE CODE	PHYS111	COURSE LEVEL	First year
COURSE TITLE	General Physics	COURSE TYPE	FACULTY CORE
CREDIT VALUE	(2, 2) 3	ECTS VALUE	6 credits
PREREQUISITES	None	COREQUISITES	Basic Mathematics
DURATION OF COURSE	One semester	SEMESTER and YEAR	Fall 2019-2020

INSTRUCRORS	OFFICE
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<p>CATALOGUE DESCRIPTION</p> <p>Physical quantities, measurements and units. Vectors and motion in one and two dimensions. Particle dynamics and Newton's laws of motion. Work and energy. Electric fields, Coulomb's law, Gauss's law and electric potential. Capacitance and dielectric materials. Current and resistance, Ohm's law. Magnetic fields.</p>
<p>AIMS & OBJECTIVES</p> <ul style="list-style-type: none"> ▪ To introduce the fundamental concepts of classical mechanics, electricity, and magnetism. ▪ To provide students with a deeper understanding of fundamental laws and concepts of natural phenomena. ▪ To improve students' problem solving skills. ▪ To strengthen students' creative and systematic thinking capability.
<p>GENERAL LEARNING OUTCOMES (COMPETENCES)</p> <p>On successful completion of this course, all students will have developed knowledge and understanding of:</p> <ul style="list-style-type: none"> ▪ The concepts, theories, techniques and generalizing principles of classical mechanics, electricity and magnetism; ▪ 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. <p>On successful completion of this course, all students will have developed their skills in:</p> <ul style="list-style-type: none"> ▪ 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. <p>On successful completion of this course, all students will have developed their appreciation of, and respect for values and attitudes to:</p> <ul style="list-style-type: none"> ▪ 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	
A (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 (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
C (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.
D (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.
F (fail) Below 50%	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
NG nil grade	Those students who have less than 60% attendance record will be graded an NG by the department of physics. Those students who miss two exams, including the make-up exam, without showing any acceptable reason will be graded NG.

METHOD OF ASSESSMENT

Midterm #1Exam	25 points (EXACT DATE WILL BE ANNOUNCED BY THE RECTOR'S OFFICE VIA YOUR STUDENT PORTAL)
Midterm #2Exam	20 points (EXACT DATE WILL BE ANNOUNCED BY THE PHYSICS DEPARTMENT)
Lab Attendances	5 points (5 experiments; each one is 1 point)
Lab Examination	10 points (EXACT DATE WILL BE ANNOUNCED BY THE PHYSICS DEPARTMENT)
Final Exam	40 points (EXACT DATE WILL BE ANNOUNCED BY THE RECTOR'S OFFICE VIA YOUR STUDENT PORTAL)

IMPORTANT NOTES

Active participation to lectures is a must for successful completion of this course.

- There will be five lab sessions throughout the semester. Please refer to the schedule below for the specific date of each lab session. **Note that students who do not attend at least three practical lab sessions will not be allowed to sit for the lab exam.**
- If the student has attended the lab experiments in the previous semester, may be exempted from the experiments. But the lab grades prior to the current semester are invalid.
- Students repeating the course may request exemption from labs; in this case, Note that this is not applicable to students who attended less than three lab sessions in the previous semester. The exemption application has to be done online via department web link.

Make-up exam:

There is only one make-up exam that will be held (its date, place and time will be announced later). Those students who miss either of midterm exams or final exam can sit for make-up exam. **A letter grade of NG- will be given automatically to those students whose attendances for lectures, labs, tutorials is less than 60% or those students who miss two of the mentioned exams and yet do not attend the make-up.** No doctor report is needed to be entitled.

The re-sit exam application has to be done online via student portal.

Objections:

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.

TEXTBOOK (REQUIRED)

J. Walker, K. Franklin. and P. Muir , Introduction to Biological Physics for The Health Life Sciences

COURSE SCHEDULE

Lectures	Chapter(s) to be covered
1	Appendix B- Physics and Measurement Conversion Vectors
2,3	Chapter 1 – Kinematics(1-6)
4	Chapter 2 – Newtons Laws of Motion (1-3)
5	Chapter 3 – Motion in a Circle(1-5) and Chapter 4 – Static(1-6)
6,7	Chapter 5 – Energy(1-7)
MIDTERM 1#	
8,9	Chapter 11 – Pressure(1-4), Chapter 12 – Buoyancy(1-2) and Chapter 14 – Fluid Dynamics(1-4)
10	Chapter 23- Static Electricity(1-4), Chapter24- Electric Force and Electric Field(1-7) and Chapter 25-Electric Potential and Energy(1-6)
MIDTERM 2#	
11	Chapter 33– Atoms and Atomic Physics(1-6) and Chapter 34- The Nucleus and Nuclear Physics(1-5)
12	Chapter 35- Production of Ionising Radiation(1-5)
13	Chapter 39 – Magnetism and MRI(1-5)
FINAL	

GROUP	DAY/PERIOD	LAB 1	LAB 2	LAB 3	LAB 4	LAB 5
01	3/5-6	02OCT	16OCT	30OCT	27NOV.	11DEC..
02	3/7-8	02OCT	16OCT	30OCT	27NOV..	11DEC..
04	4/7-8	03OCT	17OCT	31OCT	28NOV..	12DEC..

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.

IMPORTANT NOTICE TO ALL STUDENTS REPEATING THE COURSE FOR A BETTER GRADE; WHATEVER GRADE YOU RECEIVE AT THE END OF THIS SEMSTER WILL REPLACE YOUR PREVIOUS GRADE.

PLEASE KEEP THIS COURSE SYLLABUS FOR REFERENCE AS IT CONTAINS IMPORTANT INFORMATION!