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

EASTERN MEDITERRANEAN UNIVERSITY
DEPARTMENT OF PHYSICS

COURSE CODE	*PHYS101*	**COURSE LEVEL**	*Freshman*
COURSE TITLE	PHYSICS - I	**COURSE TYPE**	University Core in Physical/Natural Sciences
CREDIT VALUE	(4,1,0)4	**ECTS VALUE**	6
PREREQUISITES	None	**COREQUISITES**	MATH151
DURATION OF COURSE	One semester	**Semester and Year**	

	Name	**e-mail**	**Office**	**Office Hours**	**Telephone**
Instructor:					
Assistant:					

WEBSITE	https://lms.emu.edu.tr/

CATALOGUE DESCRIPTION
Physical quantities and units. Vector calculus. Kinematics of motion. Newton`s laws of motion and their applications. Work-energy theorem. Impulse and momentum. Rotational kinematics and dynamics. Static equilibrium.

AIMS & OBJECTIVES
- To introduce the fundamental concepts of motion necessary for engineering science and provide essential background for engineering students.
- 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.

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 in classical mechanics 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 of mechanics 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;
- performing scripted experiments as a team, analyzing and evaluating the data, and writing lab reports;
- 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	
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 does not 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 does not 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 do not go beyond basic expectations and/or display some substantial errors. Acceptable but non-exceptional performance that does not 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	Not enough information to assign a letter grade. 1. **Overall Attendance to the classes < 50% will lead automatically to the grade NG. All repeating students who fulfilled the attendance requirement of a course once, i.e., whose previous grade is not NG / W are exempted from the attendance requirement.** 2. **Laboratory Participation < 3 will lead automatically to the grade NG.** 3. **Missing any 2 two exams will lead automatically to the grade NG.**

METHOD OF ASSESSMENT

Midterm Exam	30 %	(to be announced in the Period: 30.10.2026-07.11.2026)
2 Quizzes	20 %	(each 10%) (Quiz 1: October 21, 2026 at 16:30h, Quiz 2: to be announced)
Lab Exam	5 %	
Lab Participation	10 %	
Final Exam	35 %	(to be announced in the Period: 04.01.2027- 12.01.2027)

TOTAL100 points

IMPORTANT NOTES

Attendance:

Active participation in lectures is a must for the successful completion of this course. **If a nonrepeating student's total attendance (classes, tutorials, laboratories, and exams) is below 50%, automatically the grade NG will be assigned. The same rule is also valid for repeating students having received a grade NG or W in the previous semester. Repeating students having received a grade D- or F are exempted from the attendance requirement.**

Make-up Exam:

According to the Examinations and Evaluations Regulation of Eastern Mediterranean University by Law students who have not attended any of the Midterm, In-term, or Final exams have to provide a valid excuse for not attending the exam within 3 working days after the exam in order to be granted the right to enter the make-up examination. **For any student missing more than one of the main exams (Midterm, In-term, and Final or the corresponding make-up exam), the grade NG will be assigned.**

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 following the announcement of grades.**

TEXTBOOK

E-book: Serway-Jewett, Physics for Scientists and Engineers, Technology Update, 10th Edition, CENGAGE Learning

REFERENCE BOOK

University Physics Volume 1
open source made available by Rice University and donors
https://openstax.org/details/books/university-physics-volume-1

COURSE CONTENT AND LECTURE SCHEDULE

Week	Dates	Topics
1	21.09-25.09	Introduction Chapter 1 – Physics and Measurement (Sections 1,2,3,4)
2	28.09-02.10	Chapter 3 – Vectors (Sections 1,2,3,4)
3	05.10-09.10	Chapter 2 – Motion in One Dimension (Sections 1,2,3,4,5,6,7,8,9) Chapter 7 – The scalar Product of Two Vectors (3)
4	12.10-16.10	Chapter 4 – Motion in Two Dimensions (Sections 1,2,3,4,5) Chapter 5 – The Laws of Motion (Sections 1,2,3,4)
5	19.10-23.10	Chapter 5 – The Laws of Motion (Sections 5,6,7,8) Chapter 13.1 – Newton's Law of Universal Gravitation
6	26.10-29.10 29.10 National Holiday	Chapter 6 – Circular Motion and Other Applications of Newton's Laws (Sections 1,2,3,4)
7	30.10-07.11	**Midterm Exam Period**
8	09.11-13.11	Period Chapter 7 – Energy of a System (Sections 1,2,4,5,6,7,8)
9	16.11-20.11	Chapter 13.5 – Gravitational Potential Energy
10	23.11-27.11	Chapter 8 – Conservation of Energy (Sections 1,2,3,4,5)
11	30.11-04.12	Chapter 9 – Linear Momentum and Collisions (Sections 1,2,3,4,5,6,7,9)
12	07.12-11.12	Chapter 10 – Rotation of a Rigid Object About a Fixed Axis (Sections 1,2,3,5,6,7,8,9)
13	14.12-18.12	Chapter 11 – Angular Momentum (Sections 1,3,4)
14	21.12-25.12	Chapter 12 – Static Equilibrium and Elasticity (Sections 1,2,3)
15	28.12-30.12	Revision
16	04.01-12.01	**Final Exam period**

LAB POLICIES

- Every student must attend five lab sessions throughout the semester as stated in the lab schedule below. Students who miss more than two lab sessions unexcused will be automatically given the grade NG.
- **All Students must attend the Lab-Sessions!**
- **All students must attend the Lab-exam!**

LAB Schedule:

GROUP	DAY/PERIOD	EXPERIMENT 1	EXPERIMENT 2	EXPERIMENT 3	EXPERIMENT 4	EXPERIMENT 5
01	1 / 7 - 8	28 SEP.	12 OCT.	09 NOV.	23 NOV.	07 DEC.
02	1 / 5 - 6	28 SEP.	12 OCT.	09 NOV.	23 NOV.	07 DEC.
06	1 / 3 - 4	28 SEP.	12 OCT.	09 NOV.	23 NOV.	07 DEC.
07	5 / 3 - 4	02 OCT.	16 OCT.	13 NOV.	27 NOV.	11 DEC.
08	5 / 7 - 8	02 OCT.	16 OCT.	13 NOV.	27 NOV.	11 DEC.
10	5 / 1 - 2	02 OCT.	16 OCT.	13 NOV.	27 NOV.	11 DEC.
12	5 / 5 - 6	02 OCT.	16 OCT.	13 NOV.	27 NOV.	11 DEC.

Note on Makeup Exams:

The makeup exam for the Midterm Exam, the Laboratory Exam, and the Final Exam will be conducted in the Period January 13- Januray 16 2027 and will be announced by the Deans Office.

Any student missing an Exam, i.e., Midterm, Lab-Exam, or Final, has the right to take a makeup exam.

The makeup exam will be granted upon application by email within one week after the exam to the coordinator of the course.

First application: For the first application for the makeup exam, an informal application stating that you missed the exam and requesting permission to enter the corresponding makeup exam will be sufficient.

Further applications: For all further requests for makeup exams, you have to present a valid excuse with corresponding documentation (i.e., doctor's report, flight pass, etc.) to get the right to attend the makeup exam.

Note on Resit Exam:
In case you fail the course, or you get a grade C-, D+, or D and having an academic warning in their transcripts are entitled to take the Resit Exam.

Calculation of the numerical total after the Resit Exam:
Laboratory Participation + Laboratory Exam + Resit Exam = numerical total
Laboratory Participation, Laboratory Exam with a total weight of 20% are the grades obtained throughout the semester. The Resit Exam will have the combined weight of the Midterm and Final exam, i.e. 80%, and will be added to those grades received during the semester. The Resit covers all topics taught during the semester.

The students who meet the above-mentioned conditions, must make an online application via portal to get the right to join the resit exam/exams. The application page will be available in portal between (19.01.2027-20.01.2027).

ACADEMIC DISHONESTY
Cheating is copying from others or providing information, written or oral, to others. According to university by-laws, cheating is a serious academic dishonesty case punishable with disciplinary action including a letter of official warning and/or suspension from The University for up to one semester. Disciplinary action is recorded in student's file and may appear in transcripts.
Use of AI: This course is governed by the EMU Artificial Intelligence Policy (Senate decision 26/559-01 of 18.11.2026); unless the instructor states otherwise, the Yellow (limited use) level applies, and all AI use must be declared.