UNIVERSIDADE LUSÍADA
LISBOA

Course Unit Program
Introduction to Physics

Academic Year 2023/2024

1. Organic Unit

Faculty of Business and Economic Sciences

2. Course

Computer Engineering

3. Cycle

1st

4. Course Unit

Introduction to Physics (L9007)

5. Scientific Area

6. Curricular Year

1st

7. Type of Curricular Unit / Semester

2nd Semester

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8. Class type and workload (work time)

Theoretical classes:	
Practical classes:	
Theoretical-Practical Classes	30,00
Tutorial Guidance:	20,00

9. ECTS Credits

6,00

10. Scientific Area Coordinator

11. Regent

Prof. Doutor JOAQUIM MESQUITA DA CUNHA VIANA

12. Assistants

13. Teaching Language

Portuguese

14. General Objectives

To teach the Basic concepts related to Mechanics and Waves.

15. Specific Objectives

Introduce the students to the main principles of movement, work and energy.

16. Skills to be acquired

To analyze the characteristics of bodies in motion.

17. Teaching Methodology

Lecturing Will be based on the oral transmission of information related to the subjects being studied, followed by the resolution of adequately related exercises.

18. Course Unit Program

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1. Introduction
2. Motion in one dimension
3. Motion in two dimensions
4. Vectors
5. Newton's laws
6. Work and Energy
7. Colisões
8. Circular motion
9. Waves
10. Wave motion
11. Sound

19. Assessment Methods

According to the school's internal regulations, grading will have a continuous component, as well as a frequency test.
The continuous component will consist of:
Class attendance
2 theoretical tests
Practical assignments
In case the student gets benefit from it, the final grade will be limited to the grade obtained in the frequency test, otherwise average of the grades achieved in the frequency test and the continuous component will be considered.

20. Didactic Resources

21. Sustainability Objectives

4. Quality Education
5. Gender Equality
9. Industry, Innovation and Infrastructure
11. Sustainable Cities and Communities

22. Keywords

Mechanics
Motion
Wave
Sound
Newton

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23. Main Bibliography

Author(s):	Jewett & Serway		
Title:	Physics For Scientists and Engineers With Modern Physics		
Edition:	10ª	Year:	2018
Local:			
Publisher:	Cengage Learning		

Author(s):	Giancoli		
Title:	Principles with Applications		
Edition:	Global Edition	Year:	2016
Local:			
Publisher:	Pearson Education		

Author(s):	Tipler & Mosca		
Title:	Física Para Cientistas e Engenheiros Vol 1		
Edition:	6ª	Year:	
Local:			
Publisher:	Freeman		

24. Complementary Bibliography

Author(s):	J.D. Deus et al		
Title:	Introdução à Física		
Edition:	3ª	Year:	2014
Local:			
Publisher:	Escolar Editora		

Author(s):			
Title:			
Edition:		Year:	
Local:			
Publisher:			

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Ficha técnica MIP / MIP Datasheet	
Título / Title	Course Unit Program 'INTRODUÇÃO À FISICA': Academic Year 2023/2024
Autor / Author	Prof. Doutor JOAQUIM MESQUITA DA CUNHA VIANA
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Descritores / Descriptors	-
Colaborador(es) / Colaborator(s)	-
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