

29701 - Physics I

Información del Plan Docente

Academic Year	2016/17
Academic center	110 - Escuela de Ingeniería y Arquitectura
Degree	434 - Bachelor's Degree in Mechanical Engineering
ECTS	6.0
Course	1
Period	Half-yearly
Subject Type	Basic Education
Module	---

1. Basic info

1.1. Recommendations to take this course

1.2. Activities and key dates for the course

2. Initiation

2.1. Learning outcomes that define the subject

2.2. Introduction

3. Context and competences

3.1. Goals

3.2. Context and meaning of the subject in the degree

3.3. Competences

3.4. Importance of learning outcomes

4. Evaluation

5. Activities and resources

5.1. General methodological presentation

Subject's learning process to pass the subject is based on the following aspects:

1. Masterclasses where the lecturer will explain the main theoretical concepts as well as will illustrate the application of the theoretical material via exercises and practical cases. Active students' participation is intended in this activity. In parallel, the students should spend self-study time in order to take advantage of the masterclasses.
2. Laboratory sessions will be scheduled during the semester. Lab sessions' assessment will contribute to the single overall mark. Lab sessions' groups will consist of two or three members.
3. Supervised projects where students will work in problem solving tasks or a practical question proposed by the professor and related with the concepts learned in the subject.

29701 - Physics I

4. Self-study time, learning the subject as well as performing problem solving tasks. This activity is essential for the student's learning process as well as to have success to pass the subject.

5.2.Learning activities

5.3.Program

MECHANICS

Principles of mechanics

1. Kinematics.
2. Dynamics.
3. Rigid body dynamics.
4. Statics.

Applied mechanics

5. Oscillatory movement.
6. Elasticity.
7. Fluid dynamics.

THERMODYNAMICS

8. Heat and temperature. Heat transfer.
9. Thermodynamics processes. First principle.
10. Thermal machines. Second principle.

5.4.Planning and scheduling

5.5.Bibliography and recommended resources