

## 28801 - Basic physics I

### Información del Plan Docente

|                  |   |
|------------------|---|
| Academic Year    | 2018/19   |
| Subject          | 28801 - Basic physics I                               |
| Faculty / School | 175 - Escuela Universitaria Politécnica de La Almunia |
| Degree           | 424 - Bachelor's Degree in Mechatronic Engineering    |
| ECTS             | 6.0   |
| Year             | 1   |
| Semester         | First semester  |
| Subject Type     | Basic Education                                       |

### Module

#### 1.General information

##### 1.1.Aims of the course

##### 1.2.Context and importance of this course in the degree

##### 1.3.Recommendations to take this course

#### 2.Learning goals

##### 2.1.Competences

##### 2.2.Learning goals

##### 2.3.Importance of learning goals

#### 3.Assessment (1st and 2nd call)

##### 3.1.Assessment tasks (description of tasks, marking system and assessment criteria)

#### 4.Methodology, learning tasks, syllabus and resources

##### 4.1.Methodological overview

###### **The learning process that is designed for this subject is based on the following:**

The subject consists of 6 ECTS credits, which represents 150 hours of student work on the subject during the semester. 40% of this work (60 h.) Will take place in the classroom, and the rest will be autonomous. One semester consist of 15 teaching weeks. To make the timing is used to measure the school week, in which the student must devote to the study of the subject 10 hours.

##### 4.2.Learning tasks

###### **The program includes the following activities:**

## 28801 - Basic physics I

- Theoretical classes: theoretical activities so fundamentally expository given by the teacher.
- Practical classes: practical discussion activities and conducting exercises conducted in the classroom and requiring high student participation.
- Laboratory Practice: Practical activities in laboratories.
- Group tutorials.
- individual tutoring.

### 4.3.Syllabus

The program of the subject includes six topics:

- I. Kinematics
- II. Dynamics of one and several particles. Static.
- III. Rigid body dynamics
- IV. oscillatory movement
- V. Elasticity and fluids
- VI . Thermodynamics

### 4.4.Course planning and calendar

Planning for weeks about the subject is as follows:

|       |   |    |                |     |     |        |    |                |    |    |    |    |                |    |
|-------|---|----|----------------|-----|-----|--------|----|----------------|----|----|----|----|----------------|----|
| Week  | 2 | 3  | 4              | 5   | 6   | 7      | 8  | 9              | 10 | 11 | 12 | 13 | 14             | 15 |
| Topid | I | II | II             | III | III | III/IV | IV | IV             | V  | V  | VI | VI | VI             | R  |
| Exams |   |    | 1 <sup>o</sup> |     |     |        |    | 2 <sup>o</sup> |    |    |    |    | 3 <sup>o</sup> |    |

### 4.5.Bibliography and recommended resources