

### COURSE NAME

Name: **PHYSICS I**

Code: 101126

Curriculum: **DEGREE IN CIVIL ENGINEERING**

Year: 1

ECTS Credits: 6

Classroom hours: 60

Face-to-face classroom percentage: 40%

Non-contact hours: 90

Online platform: <http://www3.uco.es/amoodle>

### FACULTY DETAILS

Name: RINCÓN LIÉVANA, ROCÍO (Coordinator)

Department: PHYSICS area: APPLIED PHYSICS

Location of the office: Edificio Albert Einstein, ground floor

E-mail: [f32rilir@uco.es](mailto:f32rilir@uco.es)

Phone number: 957218266

### SKILLS

- CB1 Have and understand specific knowledge of the study area of the Degree that gives skills for the exercise of the profession of Technical Civil Engineering.
- CB2 Have and understand updated and cutting-edge knowledge related to the field of study of the degree of Technical Civil Engineering.
- CB3 Be able to apply the knowledge acquired to their work or vocation in a professional manner. Prepare and defend arguments in the relevant knowledge area.
- CB4 Solve problems within the study area of Civil Engineering.
- CB6 Disclose information, ideas, problems and solutions to both specialised and non-specialised public. CB7 Have the necessary learning skills to undertake studies with a high level of autonomy.
- CU2 Know and refine the user level of ITs.
- CEB4 Understand and master basic concepts regarding the general laws of mechanics, thermodynamics, fields and waves and electromagnetism, as well as application thereof to the solving of engineering-related problems.

### OBJECTIVES

Students should be able to:

- Understand theoretical operations, know them and be able to solve issues, problems and practical cases of:
- Statics of points.
- Statics of rigid bodies.
- Dynamics of points and of points systems.
- Dynamics of rigid bodies.

### CONTENTS:

#### 1. Theoretical contents

UNIT 1. INTRODUCTION TO THE STUDY OF PHYSICS. UNIT 2. STATICS.

UNIT 3. ANALYSIS OF STRUCTURES.

UNIT 4. KINEMATICS OF PARTICLES.

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UNIT 5. KINEMATICS OF RIGID BODIES. UNIT 6. KINETICS OF MATERIAL POINTS. UNIT 7. WORK AND ENERGY.

UNIT 8. DYNAMICS OF SYSTEMS.

UNIT 9. OSCILLATION.

UNIT 10. WAVES.

### 2. Practical contents.

Study of cases related to theoretical contents.