COURSE NAME

Name: **PHYSICS I**
Code: 101185
Curriculum: **DEGREE IN ENERGY ENGINEERING AND MINERAL RESOURCES** 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 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 Mining Engineering.
CB2	Have and understand updated and cutting-edge knowledge related to the field of study of the degree of Technical Civil Engineering.
CB3	Apply knowledge in professional contexts and develop and defend arguments in the field of knowledge of mining engineering.
CB4	Solve problems within the study area of Mining 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.

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.