

Physics II

Academic Year: (2022 / 2023)

Review date: 25-04-2022

Department assigned to the subject: Physics Department

Coordinating teacher: CRUZ FERNANDEZ, ROSA MARIA DE LA

Type: Basic Core ECTS Credits : 6.0

Year : 1 Semester : 2

Branch of knowledge: Engineering and Architecture

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

The students should know Elemental Physics about Electricity and Magnetism at level of High School.

OBJECTIVES

1. Basic knowledge of the physical fundamentals related to electricity and magnetism.
2. Necessary skills for the development and resolution of problems of electricity and magnetism by using established methods.
3. Necessary skills to design experiments of electricity and magnetism and to interpret the obtained results and draw conclusions.
4. Necessary skills for the experimental techniques and the use of measurement equipments related with the electricity and magnetism.
5. Necessary skills to select and to use tools and methods to resolve problems of electricity and magnetism.
6. Necessary skills to combine the theory and experiments to resolve problems of electricity and magnetism.

DESCRIPTION OF CONTENTS: PROGRAMME

Coulomb law. Electric field. Gauss law. Electric potential. Conductors. Capacitors, dielectric and energy. Electric current. Magnetic forces and magnetic fields. Sources of magnetic field. Magnetic materials. Faraday-Lenz law. Electric oscillations. Electromagnetic waves.

LEARNING ACTIVITIES AND METHODOLOGY

Magister and practical teaching sessions. Also, it is necessary the attendance of students to laboratory sessions.

ASSESSMENT SYSTEM

The grade consists in 60% of the final exam and 40% of the continuum evaluation.

The attendance at laboratory sessions along with the practises delivery are obligatory in order to pass satisfactorily the subject.

The students have to obtain a remark of 3 over 10 in the final exam to make the median value of all evaluations.

% end-of-term-examination:	60
% of continuous assessment (assignments, laboratory, practicals...):	40

BASIC BIBLIOGRAPHY

- P. Tipler Physics, Vol 2, Ed. Reverte, 2005
- Serway-Jewett Physics for Scientists and Engineers, 9th edition Boston (USA), 2012
- W.Bauer and G.D. Westfall University Physics with Modern Physics, Vol 2, 2012