

29606 - Physics II

Syllabus Information

Academic Year: 2019/20

Subject: 29606 - Physics II

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 430 - Bachelor's Degree in Electrical Engineering

ECTS: 6.0

Year: 1

Semester: 430-First semester o Second semester

107-Second 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 is based on the following:

According to the new Bologna framework, in this subject, there are planned both classroom and non-attendance activities for the students. This agenda will be available to the students at the beginning of the spring semester.

The active learning methodology is applied in the course. The lecturers propose a series of in-class and out-class activities, both individual and group activities.

In most of the in-class activities, students will work in teams and cooperatively, promptly helped by the lecturer, leaving individual tasks to be carried outside the classroom.

Students will have all the training materials and support needed in the Digital Teaching Ring (ADD), loaded synchronously with the lectures and laboratory sessions.

4.2.Learning tasks

The course includes the following learning tasks:

THEORETICAL ACTIVITIES

Detailed program of the unit, notes, basic bibliography, proposed exercises, etc.: All the necessary materials will be provided at the beginning of each unit.

Detailed study guide where the student can find the tasks to be carried out and their delivery deadlines.

In-class activities consist of short questions or multiple-choice about the theory. Many of these tasks are solved in cooperation with other students.

When a large group of students encounters difficulties in the study of some parts of the theory, they can be taught by the lecturer in a master class on request.

PROBLEM-SOLVING ACTIVITIES

Problem-solving sessions will be organized using cooperative learning techniques. In some cases, the session will end with a brief explanation by the lecturer of key difficulties of the exercise. Out-class work includes a review of the exercise.

Active learning methodologies may be tested during the course both for theory and problem-solving learning.

4.3.Syllabus

The course will address the following topics:

Part I: Electrostatics

Part II: Electric current and Magnetostatics

Part III: Maxwell's equations and electromagnetic waves.

4.4.Course planning and calendar

Schedule sessions and presentation of works

Classroom activities: Three hours per week in-class sessions.

Laboratory sessions: 2 hours, one every two weeks.

They will be held according to the schedule established by the Faculty administrators and published prior to the start date of the course. All details about the organization and learning activities issues will be available on the website of the course (ADD).

4.5.Bibliography and recommended resources