

60940 - High-Frequency Engineering

Syllabus Information

Academic Year: 2019/20

Subject: 60940 - High-Frequency Engineering

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 533 - Master's Degree in Telecommunications Engineering

ECTS: 2.5

Year: 2

Semester: First semester

Subject Type: Optional

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 methodology followed in this course is oriented towards achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as

- **Lectures.** The teacher explains the course contents with illustrative examples.
- **Practice sessions.** Based Problem-based learning and assignments so that the students learn by means of real problems in small groups under the teacher's supervision.
- **Laboratory sessions.** Sessions in special spaces with specialized equipment (laboratory, computer rooms).
- **Assignments.** Preparation of seminars, lectures, research papers, reports, etc. to be presented or submitted in class.
- **Assessment.** A set of written and oral tests, assignments, projects, etc. used to assess the student's skills.
- **Tutorials.** Meetings to review and discuss the materials and topics presented in lectures.

4.2.Learning tasks

The course includes the following learning tasks:

- **Lectures and practice sessions (7 hours).** Sessions in which the course contents are covered and problems and practical cases are solved.

- **Laboratory sessions** (18 hours). Sessions of 2/3 hours conducted in small groups take place in the High Frequency Laboratory (L3.06).
- **Assignments**. Practical project supervised by the teacher and based on the course contents (device simulation, measurement and result analysis of a selected topic). Students will do an oral presentation too. The assessment criteria include: correctness, analysis, a conclusion summary, and presentation skills.
- **Individual tutorials**. Meetings are flexible and agreed between students and the professor.

4.3.Syllabus

The course will address the following topics:

- Topic 1. Course Introduction
- Topic 2. High Frequency and Microwave Antennas
- Topic 3. Microwave Passive Circuits
- Topic 4. Microwave Active Circuits

4.4.Course planning and calendar

As far as assessment is concerned, midterm written examination dates will be announced by the university and be carried out in two parts, at mid-course and at the end of the course. It will be announced in advance.

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course, will be provided on the first day of class or please refer to the EINA website.

4.5.Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=60940&Identificador=C70300>