

Academic Year/course: 2021/22

## 60982 - Wireless technologies and services

### Syllabus Information

**Academic Year:** 2021/22

**Subject:** 60982 - Tecnologías y servicios inalámbricos

**Faculty / School:** 110 - Escuela de Ingeniería y Arquitectura

**Degree:** 623 - Master's Degree in Telecommunications Engineering

**ECTS:** 3.0

**Year:** 2

**Semester:** First semester

**Subject Type:** Optional

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. It is based on participation and the active role of the student favors the development of communication and decision-making skills. A wide range of teaching and learning tasks are implemented, such as lectures, tutored practical works, autonomous work, and tutorials.

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle. These include a repository of the lecture notes used in class, the course syllabus, as well as other course-specific learning materials, including a discussion forum.

Further information regarding the course will be provided on the first day of class.

#### 4.2. Learning tasks

This is a 3 ECTS course organized as follows:

- **Lectures** (30 hours). Lectures run for 2 weekly hours. The teacher explains the course contents and solves representative applied problems. Regular attendance is highly recommended.
- **Two tutored practical works** (20 hours). This activity will advance all proposed learning outcomes. Follow-up sessions will be conducted by the teacher in which each student will present their work.
- **Autonomous work** (25 hours). Students are expected to spend about 25 hours to study theory, solve problems, prepare sessions, and take exams.
- **Tutorials**. Teacher's office hours allow students to solve questions and discuss unclear course contents. It is advisable to come with clear and specific questions.

#### 4.3. Syllabus

The course will address the following topics:

- Block 0. Presentation of the course.
- Block 1. Fundamentals of wireless technologies and services
  - Identification of use scenarios.
  - Functional and operational requirements.
  - Regulatory framework
  - Existing technologies
  - Evolution of wireless technologies
- Block 2. Analysis, design and planning of the deployment of wireless services
  - Planning of wireless services
  - Design and analysis of wireless communications network deployments

#### **4.4. Course planning and calendar**

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 (<http://eina.unizar.es>).

#### **4.5. Bibliography and recommended resources**

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=60982>