Universidad Zaragoza

Year : 2019/20

60933 - Integration of technologies and telecommunication systems

Syllabus Information

Academic Year: 2019/20
Subject: 60933 - Integration of technologies and telecommunication systems
Faculty / School: 110 - Escuela de Ingeniería y Arquitectura
Degree: 533 - Master's Degree in Telecommunications Engineering
ECTS: 5.0
Year: 2
Semester: First semester
Subject Type: Compulsory
Module: ---

1.General information

1.1.Aims of the course

The aim of the course Integration of telecommunication technologies and systems is to provide the student with a global vision of the activities and applications of telecommunications technologies and systems and to prepare the student with the ability to find the best solutions to problems of technology integration and systems of Telecommunication Engineering.

1.2.Context and importance of this course in the degree

The Integration of telecommunication technologies and systems course is in the 3rd semester of the Master's Degree in Telecommunications Engineering. This course is mandatory in engineering, regardless of its branch. In this course the student is directed towards the integration and application of the technical concepts and skills acquired during the master's degree for their development in a real business and economic environment.

1.3.Recommendations to take this course

The Integration of telecommunication technologies and systems course is included in the Technological Management of Telecommunication Projects module, within the Master's Degree in Telecommunication Engineering.
This subject has a marked multidisciplinary character within the capabilities of telecommunications technologies so it is convenient that the student has acquired the basic knowledge and skills of these disciplines.
It is recommended to have the capacity for autonomous learning and with initiative in the development of small projects, individually and also in working groups.

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

- **M1 Lectures**. Presentation of the main course contents combined with the active participation of students. This activity will take place in the classroom. This methodology, supported by the the student's autonomous work (M14) is designed to provide the students with the necessary theoretical aspects of the course.

- **M8 Practice sessions**. Sessions of problem-solving and practical cases proposed by the teacher, related to the lectures. Students may present individually or in groups their results under the teacher's supervision. This activity will take place in the classroom.
- **M9 Laboratory sessions**. In small groups, students do a series of practical tasks.
- **M4 Guided assignment**. Students prepare an assignment in groups, under the teacher's supervision.
- **M10 Tutorials**. Teacher's office hours to review and discuss the materials and topics presented in both lectures and practice sessions.
- **M11 Assessment**. A set of tests used in the evaluation of the student. The details are in the "Assessment" section.

4.2.Learning tasks

The course includes the following learning tasks:

- Lectures by renowned experts.
- Lectures for the introduction of different technologies.
- Supervised practice sessions to carry out small projects.
- Assignment either individually or in groups.

4.3.Syllabus

The course will address the following topics:

1. Scenario applications of ICTs in different sectors.
2. Introduction to Design Thinking.
3. Introduction to LabView. Application to practical cases.
4. Introduction to Arduino and Arduino development projects.
5. Elaboration of small projects.
6. Presentation of projects using innovative techniques.

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.

4.5.Bibliography and recommended resources

There is no bibliography for this course.