

Academic Year: ( 2022 / 2023 )

Review date: 25-05-2022

Department assigned to the subject: Department of Electrical Engineering

Coordinating teacher: AMARIS DUARTE, HORTENSIA ELENA

Type: Compulsory ECTS Credits : 3.0

Year : 1 Semester : 1

## OBJECTIVES

### Basic skills

CB6 Acquire and understand fundamental knowledge which provide a base or opportunities for the development and/or application of original ideas in a research context

CB7 Application of the acquired knowledge and their ability to solve problems in new environments (or multidisciplinary) contexts related to their area of study

CB8 ability to integrate knowledge and make judgments based on information that, being incomplete or limited, includes reflections on social and ethical responsibilities linked to the application of their knowledge and judgments

CB9 ability to communicate their findings and knowledge to specialized and non-specialized audiences in a clear and unambiguous way

### General skills

CG2 Ability to compile and analyze existing knowledge in the different areas of IOT, autonomously, and the ability to make a proposal of possible solutions to the problems posed.

CG4 Ability to work as a team, integrating multiple multidisciplinary teams.

CG6 The ability to apply acquired knowledge and solve problems in media environments in the broadest and most multidisciplinary contexts, with the ability to integrate knowledge.

## LEARNING RESULTS

Students acquire knowledge about the possibilities of IoT application in the health, industrial and business sector.

## DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction IoT: Basic concepts, social impact
2. IoT in smart cities
3. IoT in the transport sector
4. IoT in the financial sector
5. IoT in the industry: logistics and Distribution
6. IoT applications in the connected home
7. IoT in the health sector
8. IoT in the energy sector
9. IoT in defense
10. Legal challenges of emerging technologies (IA, IoT, DLT)
11. Responsibility derived from autonomous systems (AI): autonomous vehicles, robots and decision-making processes based on algorithms
12. Case studies

## ASSESSMENT SYSTEM

SE1 Participation in class (10%)

SE2 Individual or group work carried out during the course (90%)

<b>% end-of-term-examination:</b>	0
<b>% of continuous assessment (assignments, laboratory, practicals...):</b>	100

#### BASIC BIBLIOGRAPHY

- Buyya, Rajkumar ; Dastjerdi, Amir Internet of Things: Principles and Paradigms , Morgan Kaufmann, 2016
- Salazar Soler, Jorge. Silvestre Bergés, Santiago Internet de las cosas: , European Virtual Learning Platform for Electrical and Information Engineering, 2016

#### ADDITIONAL BIBLIOGRAPHY

- Ejaz, Waleed, Anpalagan, Alagan Internet of Things for Smart Cities, Springer, 2019