IoT Application Sectors

Academic Year: (2019 / 2020)   **Review date: 04/06/2019 06:23:22**

Department assigned to the subject: Electrical Engineering Department

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

% end-of-term-examination/test: 30

% of continuous assessment (assigments, laboratory, practicals…): 70

SE1 Participation in class (10%)
SE2 Individual or group work carried out during the course (60%)
SE3 Final exam (30%)

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