Sensitive Intelligent Environments: IoT (Internet of Things)

Academic Year: (2023 / 2024) **Review date: 16/05/2022 12:48:03**

Department assigned to the subject:

Coordinating teacher: CARBO RUBIERA, JAVIER IGNACIO

Type: Electives ECTS Credits : 3.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

- Artificial Intelligence (Year: 2 / Semester: 2)
- Logic (Year 1: /Semester: 2)

OBJECTIVES

The goal is to provide the student with knowledge about applications of Interner of the Things (IOT), through sensors that have autonomy and intelligence. The student has to end the semester knowing the foundations, methods and techniques of Distributed Artificial Intellligence (based on the agents paradigm).

DESCRIPTION OF CONTENTS: PROGRAMME

- Introduction to IoT: foundations, concepts and its relationship with distributed AI.
- Communication and coordination of autonomous sensors represented by agents.
- Intelligence of sensors-agents
- Applications of IoT using agents

LEARNING ACTIVITIES AND METHODOLOGY

* Theoretical lectures: Mainly oriented to the acquisition of the theoretical knowledge of the subject' competences
* Practical lectures: Mainly oriented to problem solving.
* Partial exams: Oriented to prove the understanding of theoretical lectures
* Practical homework: Oriented to prove the understanding of practical lectures, and towards the competences related to work in teams, work
organization and written communication (in written reports)
* Personal Tutorials

ASSESSMENT SYSTEM

% end-of-term-examination/test:	0
% of continuous assessment (assigments, laboratory, practicals…):	100

The final score results from combining the scores obtained by the students both in their practical homework and the partial exams. The evaluation includes the following weights:
3 Practical homework: 55%
3 Partial exams: 45% (15% each one)
Minimal grade in partial exams: 4 over 10

BASIC BIBLIOGRAPHY

- Michael J. Wooldridge An introduction to multiagent systems, John Wiley & Sons , 2002

- Michael J. Wooldridge Reasoning about rational agents, MIT Press, 2000