uc3m Universidad Carlos III de Madrid

Agents and Multiagent Systems

Academic Year: (2022 / 2023) Review date: 16-05-2022

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: CARBO RUBIERA, JAVIER IGNACIO

Type: Electives ECTS Credits: 3.0

Year: 1 Semester: 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

JAVA Programming

OBJECTIVES

The goal of the subject is to provide the student with enough ability and knowledge about agents and multiagent systems through its application on a board game. These kind of games often have distributed nature, require privacy, intelligence and planning. In order to achieve such goal, students have to acquire understanding of the distributed AI concepts.

DESCRIPTION OF CONTENTS: PROGRAMME

- Introduction to agents: key concepts and its role in actual Al.
- Communication and coordination among agents.
- Intelligence of agents
- Applications of 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

The final score results from combining the scores obtained by the students both in their practical homeworks and the partial exams. The evaluation includes the following weights:

3 Practical homeworks: 66.66% (22.22 each one)

2 Partial exams: 33.33% (16.66 each one)

Minimal grade in any part: None

% end-of-term-examination:

% of continuous assessment (assignments, laboratory, practicals...):

BASIC BIBLIOGRAPHY

- Michael J. Wooldridge Reasoning about rational agents, MIT Press, 2000
- Michael J. Wooldridge An introduction to multiagent systems, John Wiley & Sons, 2002