

Academic Year: (2023 / 2024)

Review date: 09-05-2022

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: FERNANDEZ ARREGUI, SUSANA

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Artificial Intelligence (Course: 2/ Semester: 2)

OBJECTIVES

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DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction
2. Games, Movies, Others
3. Classic Programming
4. Search for roads
5. Decision-making
6. Finite state machines, Script-based systems (scripting)
7. Game Theory, Planning
8. Automatic learning
9. Applications
10. Recommendation systems
11. Artificial creativity
12. Simulation systems

LEARNING ACTIVITIES AND METHODOLOGY

Lectures (1 ECTS)

-Oriented, among others, towards the competences related to knowledge of concepts, relations among them, techniques to be used, or ways to analyze and synthesize knowledge

Practice (3 ECTS)

- Oriented, among others, towards the competences related to work in teams, problem solving, work organization, or oral (presentation in public of projects or homeworks) and written communication (written reports on their homeworks and projects)

Individual work (1,5 ECTS)

-Oriented, among others, towards the competences related to planning, analysis, synthesis, critic reasoning, or concept acquisition (PO a,c,e,g, CECC4)

Tutorials

Final exam (0,5 ECTS)

ASSESSMENT SYSTEM

Combined assessment of diverse activities performed by the students either individually or in groups. The individual work of each student is also analyzed when working in groups.

- Formative assessment will be done through continuous feedback that would allow the student to assess what s/he knows and is expected from her/him

- Final grade will be composed of 50% of individual work and 50% of team work. Among the individual activities, assessment of activities performed during the course will be a 10% of the final student grade, and a final exam will be a 40% of the final grade.

% end-of-term-examination: 40

% of continuous assessment (assignments, laboratory, practicals...): 60

BASIC BIBLIOGRAPHY

- David M. Bourg, Glenn Seemann AI for game developers, O'Reilly, 2004
- Ian Millington, John Funge Artificial Intelligence for Games, Morgan Kaufmann, 2009
- Steve Rabin AI game programming wisdom (1,2,3,4), Charles River Media, 2002-2008

ADDITIONAL BIBLIOGRAPHY

- Mat Buckland Programming Game AI by Example, Wordware Pub, 2004
- Brian Schwab AI game engine programming, Course Technology, 2008
- S. Russell, P. Norvig Artificial Intelligence: A Modern Approach, Prentice Hall, 2010