

Knowledge Engineering

Academic Year: (2023 / 2024)

Review date: 30-03-2023

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)

Algorithms and Data Structures (Course: 1/Semester: 2)

Artificial Intelligence (Course: 2/Semester: 2)

Logic (Course: 1/ Semester: 2)

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to Knowledge Engineering
2. Phases of development of a knowledge-based system
3. Knowledge based systems:
 - 3.1 Production rule systems
 - 3.2 Automated planning systems
4. Processes of analysis, design and implementation of knowledge-based IT solutions

LEARNING ACTIVITIES AND METHODOLOGY

- * Theoretical lectures: 1 ECTS. Mainly oriented to the acquisition of the theoretical knowledge of the subject' competences
- * Practical lectures: 1 ECTS.
- * Individual work: 1,5 ECTS. Oriented, among others, towards the competences related to planning, analysis, synthesis, critic reasoning, or concept acquisition
- * Practice: 2 ECTS. Oriented, among others, towards the competences related to work in teams, problem solving, work organization and written communication (written reports on their homeworks and projects)
- * Tutorials
- * Final exam: 0,5 ECTS

ASSESSMENT SYSTEM

The final score results from combining the scores obtained by the students both in their individual activities and when working in a team and always taking into account the effort invested by each student in the aforementioned activities. The evaluation includes the following ponderation:

Continuos assessment exercises: 30%
 Practical works (Lab): 30%
 Final exam: 40%

Minimal grade in the final exam to pass de subject: 4

% end-of-term-examination:	40
% of continuous assessment (assignments, laboratory, practicals...):	60

BASIC BIBLIOGRAPHY

- Nils J. Nilsson Artificial Intelligence: A New Synthesis, Morgan Kaufmann.
- Schreiber, Guus Knowledge engineering and management : the commonKADS methodology, MIT Press.
- Stuart Russell, Peter Norvig Artificial Intelligence: A Modern Approach, Pearson / Prentice-Hall.

