Knowledge Engineering

Academic Year: (2021 / 2022)   **Review date: 07-06-2021**

Department assigned to the subject: Computer Science and Engineering Department

Coordinating teacher: FERNANDEZ ARREGUI, SUSANA

Type: Compulsory ECTS Credits : 6.0

Year : 4 Semester : 1

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)

OBJECTIVES
To acquire the learning outcomes and competencies specified in the "Memoria Verifica" report of the title

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: 40%
Practical works (Lab): 30%
Final exam: 30%

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

% end-of-term-examination: 30

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

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.