

Academic Year: ( 2016 / 2017 )

Review date: 23-04-2010

Department assigned to the subject: Department of Computer Science and Engineering

Coordinating teacher: FRAGA VAZQUEZ, ANABEL

Type: Electives ECTS Credits : 6.0

Year : Semester :

**COMPETENCES AND SKILLS THAT WILL BE ACQUIRED AND LEARNING RESULTS.**

This course intends to facilitate the study of Knowledge Organization Systems for Knowledge Management and Information Retrieval. Additionally, it intends to facilitate the acquisition of the necessary knowledge for the development of Information Organization and Management Techniques.

**DESCRIPTION OF CONTENTS: PROGRAMME**

- Topic 1. Information Organization and Classification.
- Topic 2. Structured Web Languages: XML and XSL.
- Topic 3. Knowledge Organization Systems: Monolingual & Multilingual Thesauri, Topic Maps, Ontologies.
- Topic 4. Metadata: Formats and editors, Microformats.
- Topic 5. Semantic Web, Fundamentals, Web Semantic Languages.

**LEARNING ACTIVITIES AND METHODOLOGY**

- Elaboration of Assignments Reports and presentations
- Obligatory presentation of a Report about the assignments realized during the course.
- Exercise 1. Creation of a Thesaurus using a document corpus and a domain selected. For that a schema must be created.
- Exercise 2. Various exercises on XML, XML Path, DTDs, Schemas.
- Exercise 3. Transforming the thesaurus generated in exercise 1 into a Topic Map.
- Exercise 4. Applying XSLT to the XML document generated in exercise 3.
- Exercise 5. Incorporation of metadata in semantic documents.
- Exercise 6. Creating an ontology formalised using the Topic Map generated in exercise 3 and enriched with metadata vocabularies developed in the previous exercise.

**ASSESSMENT SYSTEM**

1. Theoretic and practical knowledge over all topics of the course.
2. Quality and characteristics of the report and oral presentation of selected exercises.
3. Quality and characteristics of a Final Report and oral presentation of it if necessary, the report must focus on the global idea of knowledge gained by the student and an overview of all the exercises done during the course.
4. Students should be able to explain each of the KOS.
5. Students should be able to enumerate the XML main principles.
6. Students should be able to enumerate the main statements of each KOS learned in the course.
7. Students should be able to select the best KOS to be applied in one case study depending on the needs.
8. Students should be able to reflect the topics learned and the relations between topics in a final report.
9. Students should be able to assess similar work developed by peers.
10. Students should be able to evaluate which standard is most appropriate to be applied in a new assignment.
11. Students should be able to summarize, communicate and present their job to colleagues.