

Academic Year: (2017 / 2018)

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Department assigned to the subject:

Coordinating teacher: MENDEZ RODRIGUEZ, EVA MARIA

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 0

OBJECTIVES

In this course, students will gain knowledge about:

- The concepts, characteristics and uses of different content representation vocabularies (taxonomies, thesauri, topic maps, ontologies, etc.) and choose the most suitable for each type of information service.
- The difference between metadata schema and scheme for representing subjects in any information domain.
- The most suitable standards for the creation and publication of vocabularies .
- Semantic tools and applications.
- RDF as the basic language to describe resources for the Web; SKOS to define vocabularies and OWL to further define ontologies.
- Specific software tools to build and publish vocabularies (thesauri, taxonomies, etc.) with RDF and SKOS.

Throughout the course, students will develop the following skills and abilities:

- Determine the type of vocabulary that best represents digital objects of a specific digital library or information service.
- Understand and select appropriate international standards for creating vocabularies and formalize them for the Web.
- Manage a project to develop a controlled vocabulary, thesaurus, thematic or functional classification system, ensuring vocabulary consistency and contemporaneity, and write user manuals and best practices guidelines for representing digital information objects.
- Manage specific software for the creation and maintenance of thesauri, ontologies, taxonomies and other vocabularies.

DESCRIPTION OF CONTENTS: PROGRAMME

The course is divided into 6 modules or learning units, covering various topics:

- UD1: Context, evolution and theoretical foundations of vocabularies
- UD2: Vocabularies for digital information systems, in practice
- UD3: Standards and specifications to develop and publish vocabularies for the Web
- UD4: Resource Description Framework: RDF and RDFs
- UD5: Simple Knowledge Organization Systems: SKOS
- UD6: Ontology Web Language: OWL

As for the 7 modules that develop the practical scenario, they are:

- SPOC-Module 1: Needs analysis / functional requirements of vocabularies
- SPOC-Module 2: Analysis of the environment. Search, analysis and selection of existing vocabularies
- SPOC-Module 3: The tools in the development and management of vocabularies
- SPOC-Module 4: Developing structure vocabularies (schema)
- SPOC-Module 5: Creating content vocabularies (concept scheme)
- SPOC-Module 6: Linked Open Vocabularies: our vocabularies in the web of linked data
- SPOC-Module 7: Evaluation and maintenance of vocabularies

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ASSESSMENT SYSTEM

% end-of-term-examination/test:	30
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% of continuous assessment (assignments, laboratory, practicals...):	70
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The assessment involves several methods:

- group work with individual and group assessment
- peer assessment
- self-assessment
- teacher assessment

At the time of the evaluation / qualification, students must be aware that:

- The completion of the activities does not mean the completion of the course.
- Students who do not follow the continuous assessment process, completing at least 50% of the assessment activities, will not pass the course in the ordinary examination.

The student's final grade for the ordinary call will be based on:

- Assessment of theoretical knowledge through objective tests: 30% Continuous assessment through the implementation of activities around a practical scenario: 70%
- Each of these aspects include various activities or measurable items to be done and assessed individually and/or in groups.

For those students who fail the ordinary examination, the supplementary assessment (July), will depend on the number of activities completed during the course (ordinary call) and the grade obtained.

In any case, the student will take a final exam comprising theoretical and practical questions on the course content units, including general and specific bibliography for each unit. This final exam will be credited at 75% of the result, thus, the maximum grade that can be obtained with this exam is a 7,5 out of 10.

BASIC BIBLIOGRAPHY

- COPE, Bill; Kalantzis, Mary; Magee, Lian. Towards Semantic Web: Connecting Knowledge in Academic Research. , Oxford: Chandos Publishing, , 2011.
- DOMINGUEZ, John; Fensel, Dieter; Hendler, James A. (eds.) Handbook of semantic web technologies: foundations and technologies: with 203 figures and 96 tables. , Berlin: Springer, , 2001.
- HAFFNER, Kimberly A. (ed.) Semantic Web: Standards, Tools and Ontologies. , New York: Nova Science, , 2010

- MILLER, Stephen J. Metadata for Digital Collections: A How-to-Do-It Manual. , London: Facet, , 2011
- PASTOR SÁNCHEZ, Juan Antonio Tecnologías de la Web Semántica. , Barcelona: UOC, , 2011.
- ZENG, Marcia; Qin, Jian. Metadata. , New York: Neal-Schuman, , 2008