

Academic Year: ( 2021 / 2022 )

Review date: 12-07-2021

Department assigned to the subject: Library and Information Sciences Department

Coordinating teacher: SAN SEGUNDO MANUEL, ROSA

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 2

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

Students of the Degree in Information Management and Digital Content

**OBJECTIVES**

The students at the end of the course must know:

Know the main classification and indexing systems

Structure knowledge through taxonomies

Description with metadata

Linked Open Data and Linked Open, Resource Description Framework Standards: RDF and RDFS

Management of descriptive logics for the creation and reasoning of ontologies

To know the functions of the labels and collaborative actions. Relational and automatic semantic processing

Use and apply the techniques, standards and other instruments used in the representation of electronic information for recovery by subject matter.

Distinguish and evaluate the characteristics and uses of different content representation vocabularies (taxonomies, thesauri, ontologies and others) and choose the most appropriate for each type of information or electronic information services -

Know and select the appropriate international standards for the creation of vocabularies.

Develop controlled vocabularies: classification systems, alphabetical headings, functions, ensure consistency and updating and draft user manuals for use.

Manage specific software ontologies, taxonomies and other vocabularies.

Analyze, advise and train producers, users and customers of digital information services, in relation to the treatment and thematic recovery of their information.

Use computer tools for the implementation, development and exploitation of semantic-based information systems that allow the processing and retrieval of human knowledge.

**DESCRIPTION OF CONTENTS: PROGRAMME****PART I: KNOWLEDGE ORGANIZATION****Topic 1: Systematic Knowledge Organization Systems****1.1. Concept of Digital Knowledge Organization Systems****1.2. Main Systems of Organization of digital knowledge****1.3. Digital UDC****1.3.1. Characteristics, structure and use of the UDC****1.3.2. Main classes****1.3.3. Auxiliary numbers****Topic 2: Systematic Knowledge Organization Systems: Universal Decimal Classification.****2.1. Class 0 General****2.2. Class 1 Philosophy****2.3. Class 2 Religion****2.4. Class 3 Social Sciences****Topic 3: Systematic Knowledge Organization Systems: Universal Decimal Classification****3.1. Class 5 Pure Sciences****3.2. Class 6 Applied sciences**

#### Topic 4: Systematic Knowledge Organization Systems: Universal Decimal Classification

- 4.1. Class 7: Fine Arts, Games, Shows and Sports
- 4.2. Class 8: Language, Linguistics and Literature
- 4.3. Class 9: Geography, Biographies and History

#### Topic 5: Alphabetical Knowledge Organization Systems: Digital Subject Headings

- 5.1.1. Types, characteristics and use of subject headings
- 5.1.2. Lists of existing subject headings
- 5.1.3. Forms of headings

#### Topic 6: Alphabetical Knowledge Organization Systems: Digital Subject Headings

- 6.1. Forms of headings
- 6.2. Structure, scope notes and references

### PART II: REPRESENTATION OF KNOWLEDGE

#### TOPIC 7 Folksonomies: digital collaborative classification and labeling

- 7.1. Folksonomy concept
- 7.2. Cooperative classification
- 7.3. Forms of digital collaborative labeling

#### TOPIC 8. Digital thesauri

- 8.1. Thesaurus concept
- 8.2. Thesaurus Composition
- 8.3. Thesaurus Classes
- 8.4. Descriptor presentation rules
- 8.5. Thesaurus Methodology
- 8.6. Maintenance and updating of thesauri
- 8.7. Digital thesauri

#### TOPIC 9: Formal knowledge representation structures: Digital meta information

- 9.1. Library metadata concept
- 9.2. Typology
- 9.3. Elements and practical application of the Dublin Core format
- 9.4. Uses of the Matter Element of Dublin Core

#### TOPIC 10: Formal structures of knowledge representation. Semantic web

- 10.1 Semantic Web
  - 10.1.0. Historical aspects
  - 10.1.1. Structure of the semantic web
  - 10.1.2. Semantic web construction model
  - 10.1.3. Future of the semantic web

#### TOPIC 11 11. Formal structures of knowledge representation: Interoperability between information systems

- 11.1. Interoperability concept
- 11.2. Types of semantic interoperability
- 11.3. Semantic interoperability. Applications
- 11.4. National Semantic Interoperability Scheme

#### TOPICS 12 Introduction to Open Access: Documentary Repositories

- 12.1. Scientific communication systems: commercial edition vs. Open access
- 12. 2. Towards open knowledge
- 12.3. Open Science Repositories. Advantages and benefits of Open Access
- 12.4. Open Access

### LEARNING ACTIVITIES AND METHODOLOGY

#### 1. TEACHING METHODOLOGY

1. 1. THEORETICAL CLASSES. In them will be exposed subjects related to the subject. All of them will be accompanied by clear examples.

1.2. PRACTICAL CLASSES. Practical exercises will be done, corrected in the classroom and also through a global classroom

1.3. FORUM OF DISCUSSIONS. A global classroom discussion forum will be held for each of the six themes

#### ASSESSMENT SYSTEM

##### EVALUATION OF THE SUBJECT

Evaluation continues 40%:

Practical activities: The weekly practices should be carried out, individually, by all the students. Practices and participation in discussion forums. It will have an impact on the final grade of 30%

The theory questionnaires, 10%

Final evaluation 60%:

Final exam, 60%

To pass the subject will be necessary, to pass the final exam

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

#### ADDITIONAL BIBLIOGRAPHY

- Mathes, Adam Folksonomies. Cooperative Classification and Communication Through Shared Metadata, <http://www.adammathes.com/academic/computer-mediated-communication/folksonomies.html>, 2004

#### BASIC ELECTRONIC RESOURCES

- International Society for Knowledge Organization . ISKO: <https://www.isko.org/>