Markup Language

Academic Year: (2021 / 2022) **Review date: 04-06-2021**

Department assigned to the subject: Library and Information Sciences Department

Coordinating teacher: HERNANDEZ PEREZ, ANTONIO

Type: Compulsory ECTS Credits : 6.0

Year : 1 Semester : 1

OBJECTIVES

The general purpose of the course is to provide students a general set of knowledge, skills and abilities in relation to the markup languages used for the communication, search, dissemination and exchange of information on the Internet and especially on the Web. This will serve to address the acquisition of knowledge and skills in other tools and services that rely on this basic technology.

Specific competences of the Degree, especially applicable to the course:
E10 - To know the basic principles and the programming and markup languages of Web documents

Learning outcomes (RA) of the Degree, applicable to the course:
- RA1. Have acquired advanced knowledge, and demonstrated understanding of the theoretical and practical aspects and methodology of work in the area of information management and digital content with a depth that reaches the forefront of knowledge.
- RA2. Apply the acquired knowledge, its understanding and their capacities to solve complex and/or specialized problems in the professional field.

RA of the subject, applicable to the course, extended. Specifically, the students should be able to:
1. Recognize and represent schematically the logical structure of different document types. To identify any node in the structure by means of a path.
2. Apply style sheets to represent a document.
3. Correctly interpret the markup of SGML, HTML or XML documents.
4. Describe and represent the generic abstract structure of a given document type according to the DTD syntax; to convert a DTD into an XML schema, adding the needed constraints..
5. Transform XML documents into another format, such as HTML, using XSLT and XPath.
6. Handle specific software to work with XML documents and its related specifications.
7. Know and manage at the basic level the markup (HTML) and stylesheet (CSS) languages used in the Web, emphasizing the importance of respect for standards and accessibility.
8. Compose from scratch a functional, correct and accessible web page from a structural and semantic point of view, using HTML with a simple text editor.
9. Add representation and style specifications for a web page, using CSS with a simple text editor.
10. To know some common markup languages in the field of information services.

DESCRIPTION OF CONTENTS: PROGRAMME

Markup languages, particularly XML and the set of its related specifications, are the lingua franca of the Web who provides interoperability among applications that handle the very diverse collections of both structured data and text documents. This course treats these topics, especially in its application to text documents, and aims to provide also basic knowledge that allows to approach, in other courses, the study of various XML-based standards. The course treat HTML as a specific markup language, and CSS as a style sheet language.
The basic contents are:
LESSON 1. Markup basics
Semantics and presentation: markup languages and style sheet languages.
LESSON 2. Markup Metalanguages: SGML and XML
LESSON 3. Markup syntax of SGML and XML.
LESSON 4. HTML and CSS
HTML and its relationship with SGML and XML. HTML 4 and XHTML 1. HTML 5. General structure and basic block and online elements.
HTML: Links, images and other digital objects. Lists and tables. New structures in HTML 5. Publication on the Web.
Introduction to style sheet languages. CSS Syntax. Selectors Style properties Integration with

HTML and XML.
LESSON 5. Creation of specific languages for specific types of documents: the DTD and XSD schema models and their respective syntaxes
LESSON 6. Identification and selection of components of a document treated with XML: XPath.
LESSON 7. Transforming XML documents: XSLT.
LESSON 8. Overview of other accompanying XML standards.
LESSON 9. Markup languages of special interest in the field of library and information science.
LESSON 10. XML Software

LEARNING ACTIVITIES AND METHODOLOGY

- Acquisition of theoretical knowledge (total 3 ECTS) through class attendance, study of learning materials prepared by the professor, tutorials, specialized readings and discussions, participation in forums and onsite or online tutorships. It relates to the competencies 1 to 3, 7 and 10.
- Acquisition of practical skills and abilities (total 3 ECTS) through several practical works about HTML markup and addition of style properties with CSS, about XML markup, modeling document into a DTD o XML Schema, and transforming XML documents with XSLT+XPath; and a final group work that includes all subjects treated in the course. All this work during the classroom time and out of it, with subsequent control of the teacher. They relate to the competencies 4 to 6, 8 and 9.
-The student can look up the schedule of tutorship sessions in the Aula Global space for the course. In addition to the tutorship at the times and places officially set for the course, students can apply for other outside these hours and to be held in person or online.

ASSESSMENT SYSTEM

The following factors and their corresponding weights will determine the final course grade:
- Continuous assessment [= 60%]
- Final exam [= 40%]

The final grade is summative.
According to University policy, in the regular exam session the student who did not follow the continuous assessment is entitled to take an exam for the 60% of the final grade.
In the extra exam session, if the student did not follow the continuous assessment, is entitled to take an exam for the 100% of the final grade. If she did follow the continuous assessment, her grade will be the most beneficial: considering an exam weight of 40% plus the continuous assessment score, or an exam weight of 100%, discarding the score obtained in continuous assessment.

NOTE: Plagiarism in whatever assgnment means loosing the grade of that assignment and a reduction of 25% of the final grade of the whole course.

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

BASIC BIBLIOGRAPHY

- Castro, Elizabeth HTML, XHTML & CSS [Recurso electrónico: http://proquest.safaribooksonline.com/0321430840] , Peachpit Press, 2007
- Eito Brun, Ricardo Lenguajes de marcas para la gestión de recursos digitales : aproximación técnica, especificaciones y referencia, Gijón (Asturias): Trea, 2008
- Larsen, Rob Beginning HTML & CSS [Recurso electrónico: http://proquest.safaribooksonline.com/9781118416518], J. Wiley & Sons, 2013

ADDITIONAL BIBLIOGRAPHY

- Fung, Khun Yee XSLT : working with XML and HTML, Boston [etc.] : Addison-Wesley, 2000
- Geroimenko, Vladimir; Chen, Chaomei (eds.) Visualizing the semantic web : XML-based internet and information visualization, London : Springer, 2003
- Gilmour, Ronald W XML : A Guide for Librarians, Chicago ; London : Lita, 2003
- Goldfarb, Charles F.; Prescod, Paul Manual de XML, Madrid [etc.]: Prentice Hall, 1999
- Harold, Elliotte R XML : [imprescindible], Madrid : Anaya Multimedia, 2005
- Marchal, Benoît XML by Example, Indianapolis : QUE, 1999
- Miller, Dick R.; Clarke, Kevin S Putting XML to Work in the Library, Chicago: American Library Association, 2004
- Ng, Kwong B Using XML : a how-to-do-it Manual and CD-ROM for Librarians, Nueva York : Neal-Shuman, 2007
- Tennant, Roy (ed.) XML in libraries, New York : Neal-Schuman Pub., 2002