Centre	**University College of Engineering of Vitoria-Gasteiz**
Name of subject	**26034 – Web Information Systems Development**
Qualification	**Degree in Computer Management and Information Systems Engineering**
Type	**Elective**
Credits	**6 ECTS**
Year	**4**
Term(s)	**2nd**
Department	**Computer Languages and Systems**
Language	**Spanish**

Outcomes / Objectives

Methodologies and activities involved in the development process aimed at Web Information Systems (WebIS). Development of components for WebIS.

Syllabus

1. Web programming paradigm: Model-View-Controller. This unit explains the Model-View-Controller (MVC) paradigm as a software architecture pattern for Web development that separates application data, user interface and control logic into three different components.
2. Web-based dataflow programming. This unit introduces the characteristics of data handling on the web and explains the pipeline paradigm for the extraction, handling and exchange of data between the different Web components, using mainly XML as a web-based data communication tool.
3. Development of data directed software. This unit deals with database access and programming of Web components such as servlets, JSPs, etc., using J2EE API, as well as any Web framework.
4. Development of Web service-oriented software. This unit deals with the architecture, standards and frameworks for Web service development.
5. Mobile application development. This unit studies J2ME API, the development of MIDlets and their integration in a Web application.
6. Development of solutions for solving Web information systems. This unit explores how the concepts acquired in the subject would be applied in a real domain for group solving of a Web information system.
7. Introduction to Web information systems. This unit introduces Web Engineering related terms and defines the characteristics of a Web information system and the elements that interact with it. A taxonomy of the different Web information systems is established on the basis of that information.

Methodology

Teaching Method

Face-to-Face Teaching Hours								
Lectures	**Seminars**	**Classroom practice**	**Lab. practice**	**Computer sessions**	**Clinical practice**	**Workshops**	**Industrial workshops**	**Field practice**
30				30				
Student Hours of Non Face-To-Face Activities								
Lectures	**Seminars**	**Classroom practice**	**Lab. practice**	**Computer sessions**	**Clinical practice**	**Workshops**	**Industrial workshops**	**Field practice**
30				60				

Bibliography

Basic Bibliography

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- FALKNER, J. y JONES, K.: “SE Servlets and JavaServer Pages: The J2EE Technology Web Tier”. http://www.theserverside.com/tt/books/addisonwesley/ServletsJSP/index.tss
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- MOLLER, A. y SCHWARTZBACH, M.I.: “An Introduction to XML and Web Technologies”. Addison-Wesley, 2006.
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In-depth Bibliography

- Deitel, Harvey M. y Deitel, Paul J.: “Ajax, Rich Internet Applications y desarrollo Web para programadores”, Anaya Multimedia, 2008.
- Leon Shklar, Richard Rosen. “Web Application Architecture: Principles, Protocols and Practices·”. John Wiley & Sons, 2003.

Magazines

- Tony Shan and Winnie Hua (2006). Taxonomy of Java Web Application Frameworks. Proceedings of the 2006 IEEE International Conference on e-Business Engineering (ICEBE 2006), October 2006, p378-385.

Websites

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- http://www.librosweb.es/referencia/css/index.html
- http://www.librosweb.es/javascript/index.html
- http://www.librosweb.es/ajax/index.html