GUÍA DOCENTE

SOFTWARE ARCHITECTURE

Año académico 2013-14

ARQUITECTURAS DE SOFTWARE 2013-14

Información general de la asignatura

Denominación	SOFTWARE ARCHITECTURE
Código	102055
Semestre de impartición	1st Semester
Carácter	Compulsory
Número de créditos ECTS	9
Créditos teóricos	4.5
Créditos prácticos	4.5
Departamento/s	Informàtica i Enginyeria Industrial
Distribución carga docente entre la clase presencial y el trabajo autónomo del estudiante	Total load: 225h - Lectures (40%) = 90h - Independent student work (60%) = 135h
Información importante sobre tratamiento de datos	Consulte este enlace para obtener más información.
Idioma/es de impartición	English
Distribución de créditos	GIL IRANZO, ROSA MARIA (5.4) GARCIA GONZALEZ, ROBERTO (3.6)
Horario de tutoría/lugar	To be agreed, contact rgil@diei.udl.cat or rgarcia@diei.udl.cat

ARQUITECTURAS DE SOFTWARE 2013-14

GIL IRANZO, ROSA MARIA
GARCIA GONZALEZ, ROBERTO

Objetivos académicos de la asignatura

1.

Competencias

GII-IS1. Ability to develop, maintain and evaluate services and software systems that meet all the requirements of the user and behave reliably and efficiently, are affordable to develop and maintain and comply with quality standards, applying the theories, principles, methods and practices of Software Engineering.

GII-IS2. Ability to assess the needs of the client and specify the software requirements to satisfy these needs, making up goals in conflict by finding compromises acceptable within the constraints of cost, time, of the existence of systems already developed and in their own organizations.

GII-IS3. Ability to give solution to the problems of integration on the basis of the strategies, standards and available technologies.

GII-IS4. Ability to identify and analyse problems and to design, develop, implement, verify and document software solutions on the basis of an adequate knowledge of the current theories, models and techniques.

Contenidos fundamentales de la asignatura

1. Web Applications Specification
    1. Architecture
    2. Analysis
    3. Design
2. Enterprise Application Patterns
    1. Introduction to patterns
    2. Patterns in the context of enterprise applications
    3. Patterns details
    4. Patterns application examples
    5. Technologies for pattern application
3. XML
    1. Fundamentals
    2. XML Schema
    3. XQuery
4. Java Web Applications
    1. Introduction to Web Applications Implementation
    2. Web Applications using Java
    3. Developing and deploying web applications in Google App Engine

Plan de desarrollo de la asignatura

Week/s	Activity
1-3	Web applications specification
4-6	Enterprise Applications Patterns
7-8	XML Fundamentals and XML Schema
9	1st Midterm Exam (November 15th)

Week/s	Activity
10-11	XML Schema and XQuery
12-14	Java Web Applications
17	Project pre-delivery session
18	2nd Midterm Exam (January 14th)
21	Second-chance Exam

Sistema de evaluación

The evaluation is based on the development of a project with two intermediate deliverables and a final one:

- 1st Deliverable: 10% grade
  Define project architecture and patterns to be used.
- 2nd Deliverable: 20% grade
  Develop XML processing part of the project.
- 3rd Deliverable: 30% grade
  Develop the Web application part of the project, integrating all the previous work.

The evaluation is complemented with two exams, one for the first midterm and another for the second:

- 1st Midterm Exam: 20% grade
- 2nd Midterm Exam: 20% grade

The contents evaluated during the first midterm exam are not re-evaluated in the second midterm exam. In case the student does not pass the evaluation taking into account the deliverables evaluations and the midterms exams, there is a final “second-chance” exam where all contents are re-evaluated and accounts for 40% of the final grade.

Bibliografía y recursos de información

Main References

- Fowler, M.; Rice, D. (2003). Patterns of Enterprise Application Architecture. Addison-Wesley.
- Conallen, J. (1999). Building Web Applications with UML. Addison Wesley.
  - Electronic Version[1]: http://safari.awprofessional.com/0201615770
- Hunter, D., Rafter, J., Fawcett, J., Vlist, E. van der, Ayers, D., Duckett, J., Watt, A., et al. (2007). Beginning XML, 4th Edition. Indianapolis, IN: Wrox.
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- Bryan Basham, B., Sierra, K., Bates, B. (2012). Head First Servlets and JSP: Passing the Sun Certified Web Component Developer Exam. O'Reilly Media.

Additional References

- XML Quick Reference, http://www.mulberrytech.com/quickref/XMLquickref.pdf
- Larman, C. (2002). UML y Patrones. Prentice-Hall (segunda edición).
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- Gutiérrez Gallardo, Juan Diego. (2005). Manual imprescindible de XML. Anaya Multimedia.
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- Brundage, M. (2004). XQuery: the XML query language. Boston, MA: Addison-Wesley Professional.
- Martín Quetglás, Gregorio. (2005). Curso de XML : introducción al lenguaje de la Web. Pearson educación.
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    - Electronic Version [1]: http://proquest.safaribooksonline.com/0321180860

[1] This book is accessible from the Universitat de Lleida network using this link