Universitat de Lleida

GUIA DOCENT

ARQUITECTURA DEL PROGRAMARI EMPRESARIAL

Coordinació: GARCIA GONZALEZ, ROBERTO

Any acadèmic 2013-14

Informació general de l'assignatura

Denominació	ARQUITECTURA DEL PROGRAMARI EMPRESARIAL
Codi	102029
Semestre d'impartició	2n Q Avaluació Continuada
Caràcter	Mandatory
Nombre de crèdits ECTS	9
Crèdits teòrics	4.5
Crèdits pràctics	4.5
Coordinació	GARCIA GONZALEZ, ROBERTO
Departament/s	Informàtica i Enginyeria Industrial
Distribució càrrega docent entre la classe presencial i el treball autònom de l'estudiant	Total load: 225h - Lectures (40%) = 90h - Independent student work (60%) = 135h
Informació important sobre tractament de dades	Consulteu aquest enllaç per a més informació.
Idioma/es d'impartició	English
Distribució de crèdits	GIL IRANZO, ROSA MARIA (4.5) GARCIA GONZALEZ, ROBERTO (4.5)
Horari de tutoria/lloc	To be agreed, contact rgil@diei.udl.cat or rgarcia@diei.udl.cat

GIL IRANZO, ROSA MARIA
GARCIA GONZALEZ, ROBERTO

Objectius acadèmics de l'assignatura

- To present aspects of Software Engineering in the context of organizations through a series of patterns for business applications and their architecture.
- To have a global vision of the existent technologies to implement business applications using the previous patterns and architectures, especially XML, the Web and Web Services.
- To put into practice the previous concepts and technologies through the development of a Web application project including Java, XML and SOAP.

Competències

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.

Continguts fonamentals de l'assignatura

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 and Services
    1. Introduction to Web Applications Implementation
    2. Web Applications using Java
    3. Developing and deploying web applications in Google App Engine
    4. Web Services, WSDL and SOAP
    5. Developing and deploying web services in Google App Engine

Pla de desenvolupament de l'assignatura

Week/s	Activity
1-2	Web applications specification
3-5	Enterprise Applications Patterns
6-8	XML, XML Schema and XQuery
9	1st Midterm Exam
10-12	Java Web Applications
13-14	Web Services
15	Project pre-delivery session
16-17	2nd Midterm Exam
19-20	Second-chance Exam

Sistema d'avaluació

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

- 1st Deliverable: 30% grade
  Develop XML processing part of the project.
- 2nd 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 (written exam): 20% grade
- 2nd Midterm Group Oral Exam (2nd deliverable defense): 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.

Bibliografia i recursos d'informació

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.
- Vlist, E. van der. (2002). XML Schema: The W3C's Object-Oriented Descriptions for XML. Sebastopol, CA: O'Reilly Media.
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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.
- Newcomer, E.; Lomow, G. (2004). Understanding SOA with web services. Addison-Wesley.
  - Electronic Version [1]: http://proquest.safaribooksonline.com/0321180860

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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- Sommerlad, P.; Stal, M. (1996). Pattern-Oriented Software Architecture, Volume 1: A System of Patterns. John Wiley & Sons.
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- Harold, E. R.; Jeans, W. S. (2004). XML in a Nutshell, 3rd Edition. Sebastopol, CA: O'Reilly Media.
- Walmsley, P. (2002). Definitive XML Schema. Upper Saddle River, NJ: Prentice Hall.
- Brundage, M. (2004). XQuery: the XML query language. Boston, MA: Addison-Wesley Professional.
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[1] This book is accessible from the Universitat de Lleida network using this link