Teaching Guide				
Identifying Data				2018/19
Subject (*)	Information Systems Architecture		Code	614G01075
Study programme	Grao en Enxeñaría Informática			
Descriptors				
Cycle	Period	Year	Type	Credits
Graduate	1st four-month period	Fourth	Obligatory	6
Language	SpanishGalician			
Teaching method	Face-to-face			
Prerequisites				
Department	Computación			
Coordinador	Cortiñas Álvarez, Alejandro	E-mail	alejandro.cortinas@udc.es	
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Web				
General description	The objectives of this subject are: - To know the basic concepts of the architecture of information systems, the conceptual models to define these architectures, and the languages to represent them - To know how to model the architecture of an information system using design patterns - To know how to integrate information systems by means of different software techniques - To know modern technological solutions to develop information systems			

Study programme competences	
Code	Study programme competences
A47	Capacidade para determinar os requisitos dos sistemas de información e comunicación dunha organización de acordo cos aspectos de seguridade e cumprimento da normativa e a lexislación vixente.
A48	Capacidade para participar activamente na especificación, deseño, implementación e mantemento dos sistemas de información e comunicación.
A49	Capacidade para comprender e aplicar os principios e as prácticas das organizacións, de forma que poidan exercer como enlace entre as comunidades técnica e de xestión dunha organización, e participar activamente na formación dos usuarios.
B1	Capacidade de resolución de problemas
B2	Traballo en equipo
B3	Capacidade de análise e síntese
B4	Capacidade para organizar e planificar
C3	Utilizar as ferramentas básicas das tecnoloxías da información e as comunicacións (TIC) necesarias para o exercicio da súa profesión e para a aprendizaxe ao longo da súa vida.
C6	Valorar criticamente o coñecemento, a tecnoloxía e a información dispoñible para resolver os problemas cos que deben enfrontarse.

Learning outcomes			
Learning outcomes	Study programme competences		
To know the basic concepts of the architecture of information systems	A47 A48 A49	B1 B2 B3 B4	C3 C6

To know the conceptual models to define the architecture of information systems	A47 A48 A49	B1 B2 B3 B4	C3 C6
To know the languages to represent the architecture of information systems	A47 A48 A49	B1 B2 B3 B4	C3 C6
To know how to model the architecture of an information system using design patterns	A47 A48 A49	B1 B2 B3 B4	C3 C6
To know how to integrate information systems by means of different software techniques	A47 A48 A49	B1 B2 B3 B4	C3 C6
To know how to create an information system using a service-oriented architecture	A47 A48 A49	B1 B2 B3 B4	C3 C6
To know modern technological solutions to develop information systems	A47 A48 A49	B1 B2 B3 B4	C3 C6

Contents	
Topic	**Sub-topic**
Conceptos básicos	Definición de arquitectura de sistemas de información Modelos conceptuais para arquitecturas de sistemas de información Linguaxes para arquitecturas de sistemas de información
Modelado de arquitecturas de sistemas de información	Patróns de deseño Integración de sistemas Arquitecturas orientadas a servizos
Solucións tecnolóxicas	Xestión da infraestrutura Librerías de desenvolvemento

Planning				
Methodologies / tests	**Competencies**	**Ordinary class hours**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	B1	14	0	14
Collaborative learning	A47 A48 A49 B1 B3 C3 C6	14	0	14
Case study	A47 A48 A49 B1 B3 C3 C6	14	0	14
Supervised projects	A47 A48 A49 B1 B2 B3 B4 C3 C6	0	90	90
Mixed objective/subjective test	A47 A48 A49 B3 C6	0	14	14
Personalized attention		4	0	4
(*)The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.				

Methodologies	
Methodologies	Description
Guest lecture / keynote speech	Lectures that will present theoretical contents in combination with practical exercises.
Collaborative learning	Resolution by teams of students of problems of reduced size related to the contents of the subject.
Case study	Presentation to the students of real cases that have to be resolved using the knowledge acquired in the subject.
Supervised projects	Development by each student of projects in which they put in practice what was learnt in the subject.
Mixed objective/subjective test	Development of one individual written test where there will be both open questions and questions with brief answers

Personalized attention	
Methodologies	Description
Supervised projects Collaborative learning Case study	After proposing a problem, the professor will debate with the students the possible solutions and typical errors until a satisfactory solution is reached. In the laboratory practices, there will be a personalized attention to each student because there will be less than 20 people working in small groups, directly on a concrete application, in each computer and the professor will be able to attend punctual doubts to each student or group.

Assessment			
Methodologies	Competencies	Description	**Qualification**
Mixed objective/subjective test	A47 A48 A49 B3 C6	Individual written test on theoretical and practical contents	50
Supervised projects	A47 A48 A49 B1 B2 B3 B4 C3 C6	The quality of the supervised projects will be assesed	40
Case study	A47 A48 A49 B1 B3 C3 C6	Seguimiento continuado dos traballos realizados nas aulas	10

Assessment comments
To pass you must obtain the following minimum qualifications: Mixed test: 3 points out of 6 Supervised projects: 2 points out of 4 To be qualified as "did not attend" is to not submit the mixed test. The criteria for the second opportunity are the same as for the first opportunity.

Sources of information	
Basic	- Fowler, M (2002). Patterns of enterprise application architecture. Addison-Wesley Longman Publishing Co., Inc - Hohpe, G., & Woolf, B (2004). Enterprise integration patterns: Designing, building, and deploying messaging solutions. Addison-Wesley Professional - Microsoft Patterns & Practices Team (2009). Microsoft Application Architecture Guide (Patterns & Practices). http://msdn.microsoft.com/en-us/library/ff650706.aspx
Complementary	

Recommendations
Subjects that it is recommended to have taken before

Information Systems Analysis and Development/614G01041 Business Process Management/614G01042
Subjects that are recommended to be taken simultaneously
Data Integration/614G01072
Subjects that continue the syllabus
Other comments

(*)The teaching guide is the document in which the URV publishes the information about all its courses. It is a public document and cannot be modified. Only in exceptional cases can it be revised by the competent agent or duly revised so that it is in line with current legislation.