UNIVERSIDADE DA CORUÑA

Teaching Guide				
Identifying Data				**2024/25**
Subject (*)	Information Systems Design		**Code**	611G02041
Study programme	Grao en Administración e Dirección de Empresas			
Descriptors				
Cycle	**Period**	**Year**	**Type**	**Credits**
Graduate	2nd four-month period	Fourth	Optional	6
Language	SpanishGalician			
Teaching method	Face-to-face			
Prerequisites				
Department	Empresa			
Coordinador	Martínez Fernández, Paulino	**E-mail**	paulino.martinez@udc.es	
Lecturers	Martínez Fernández, Paulino	**E-mail**	paulino.martinez@udc.es	
Web	https://campusvirtual.udc.gal/			
General description	From the perspective of a graduate in Business Administration and Management, and in relation to Business Information Systems, the objectives of the subject are as follows: 1. To understand the life cycle of a Business Information System (BIS). 2. To understand, through practical cases, how to develop the requirements of a BIS and verify its feasibility. 3. To understand the tools for designing BISs. 4. To become familiar with software that supports the design of BISs.			

Study programme competences / results	
Code	**Study programme competences / results**
A5	Write projects about specific functional areas (e.g. management, marketing, financial) of the company
A6	Identify the relevant sources of economic information and to interpret the content.
B1	CB1-The students must demonstrate knowledge and understanding in a field of study that part of the basis of general secondary education, although it is supported by advanced textbooks, and also includes some aspects that imply knowledge of the forefront of their field of study
B2	CB2 - The students can apply their knowledge to their work or vocation in a professional way and have competences typically demostrated by means of the elaboration and defense of arguments and solving problems within their area of work
B3	CB3- The students have the ability to gather and interpret relevant data (usually within their field of study) to issue evaluations that include reflection on relevant social, scientific or ethical
B4	CB4-Communicate information, ideas, problems and solutions to an audience both skilled and unskilled
B5	CB5-Develop skills needed to undertake further studies learning with a high degree of autonomy
B6	CG1-Perform duties of management, advice and evaluation in business organizations
B7	CG2-Know how to use the concepts and techniques used in the various functional areas of the company and understand the relationships between them and with the overall objectives of the organization
B8	CG3- Know how to make decisions, and, in general, assume leadership roles.
B9	CG4-Learn to identify and anticipate opportunities, allocate resources, organize information, select and motivate people, make decisions under conditions of - uncertainty, achieve the proposed objectives and evaluate results
B10	CG5-Respect the fundamental and equal rights for men and women, promoting respect of human rights and the principles of equal opportunities, non-discrimination and universal accessibility for people with disabilities.
C1	Express correctly, both orally and in writing, in the official languages of the autonomous region
C3	Use basic tools of information and communications technology (ICT) necessary for the exercise of their profession and for learning throughout their lives.
C4	To be trained for the exercise of citizenship open, educated, critical, committed, democratic, capable of analyzing reality and diagnose problems, formulate and implement knowledge-based solutions oriented to the common good
C5	Understand the importance of entrepreneurial culture and know the means and resources available to entrepreneurs
C6	Assess critically the knowledge, technology and information available to solve the problems and take valuable decisions

C7	Assume as professionals and citizens the importance of learning throughout life.
C8	Assess the importance of research, innovation and technological development in the economic and cultural progress of society.

Learning outcomes		
Learning outcomes		**Study programme competences / results**
To know the lifecycle of an Information System		A5	B1 B2 B8 B9	C1 C4 C5 C6 C7
To know the tools to design an Information System		A5 A6	B3 B4 B5 B7	C1 C3 C4 C6 C7
To apply the hereinabove knowledge to design an Information System or analyse an existing one.		A5	B6 B10	C1 C4 C6 C7 C8

Contents	
Topic	**Sub-topic**
1. The lifecycle of an Information System	1.1 Introduction to the lifecycle of an Information System. 1.2 The design phase. 1.3. The maintenance phase. 1.4. The software requirements.
2. Software design tools.	2.1 Software design tools. 2.2 Introduction to UML. 2.3. Software for the management of the design phase.
3. BPMN.	3.1 BPM. 3.2 BPMN: process flows. 3.3 BPMN: gateways. 3.4 BPMN: events. 3.5 BPMN: collaboration diagrams.

Planning				
Methodologies / tests	**Competencies / Results**	**Teaching hours (in-person & virtual)**	**Student?s personal work hours**	**Total hours**
Guest lecture / keynote speech	B1 B2 B3 B4 C4 C7 C8	17	34	51
Problem solving	A5 A6 B7 B8 C1 C3 C5 C6	19	57	76
Objective test	A5 A6 B1 B2 B3 B4 B5 B7 C1	2	0	2
Seminar	B5 B6 B9 B10	4	15	19
Personalized attention		2	0	2
(*)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	1. Presentation of theoretical and practical course content in face-to-face classes with the aim of guiding the student in their preparation.
	
	2. The time dedicated to each of the chapters into which the subject is divided will be proportional to the level of difficulty in their preparation and their length. Therefore, the same amount of time will not be devoted to each chapter, but rather some will be explored more extensively than others. This will be at the discretion of the professor teaching the subject.
	
	3. For the chapters that are less difficult to understand, students will be referred to the bibliography for preparation. However, in face-to-face classes, students will be guided on:
	  a) Specific recommended sources to use.
	  b) The most relevant and interesting aspects in order to achieve the established learning outcomes for the subject.
	
	4. Joint discussion for all working groups regarding the assigned tasks for each group. Students may participate:
	  a) On their own initiative, after requesting permission to speak.
	  b) At the initiative of the professor, who will explicitly request student participation.

Problem solving	1. Development, presentation, and solution of practical examples that the student, either individually or as part of a working group, must complete throughout the course.
	
	2. Exercises and/or readings will be assigned for the student to complete during non-face-to-face hours or autonomous study time. In subsequent face-to-face sessions:
	  a) A review of the exercises will take place, during which students can participate as described in point 3.
	  b) Regarding the readings, a dedicated question and answer session will be conducted to clarify any aspects that students raise about the content.
	
	3. Students may participate in the following ways:
	  a) On their own initiative, after requesting permission to speak.
	  b) At the initiative of the professor, who will explicitly request student participation.

Objective test	Testing will include multiple-choice questions, short-answer questions, essay questions, problem-solving exercises, or any combination of the above, focusing on the subject matter and the exercises solved in class.
Seminar	Discussion in small groups about the course content, particularly focusing on the tasks referred to as "Problem-solving." Students may participate in the following ways: a) On their own initiative, after requesting permission to speak. b) At the initiative of the professor, who will explicitly request student participation.

Personalized attention	
Methodologies	**Description**

| Guest lecture / keynote speech Problem solving Seminar | 1. In the lecture session, the student can participate by requesting permission to speak in order to ask questions, clarify doubts, or present their point of view on the topic being discussed at that moment.

2. In problem-solving activities, students can participate as explained in the methodology section.

3. During scheduled tutoring hours, students will be assisted in clarifying any doubts they may have regarding the course material. While it is not mandatory, if the student expresses their doubts and specifies a date and time (within the tutoring hours) they are interested in being attended to via the professor's email, it will facilitate the management and effectiveness of the tutoring session.

4. Without mentioning the person who posed the question, it may be published on Moodle along with its response, with the purpose of benefiting other students. This will be done if the professor deems it appropriate and of general interest.

5. For students with part-time dedication recognition or academic dispensation from attendance, a specific tutoring schedule compatible with their commitment will be agreed upon at the beginning of the course. Therefore, these students need to contact the professor within the first ten days of the semester in which the subject is being taught. |
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Assessment			
Methodologies	**Competencies / Results**	**Description**	**Qualification**
Problem solving	A5 A6 B7 B8 C1 C3 C5 C6	Part of the continuous assessment includes the development of one or more practical cases proposed by the teaching team, which will cover various aspects related to the content of the subject, with the following specifications:

1. The resolution of these cases may require the use of information and communication technologies (ICT), and if deliverables are required, they should be in electronic format.

2. The work will be carried out individually or in groups of 4 to 6 students. Exceptionally, and with prior approval from the teaching team of the subject, a different number of students per group may be allowed.

3. Essential to the continuous assessment is the discussion during class of the development of the assignments with the teaching team, which requires attendance in class.

4. Any doubts regarding this section should be resolved by considering the concept of "continuous assessment" as the basis for the solution. | 70 |
| Objective test | A5 A6 B1 B2 B3 B4 B5 B7 C1 | Test with multiple-choice questions, short-answer questions, essay questions, problem-solving exercises, or any combination of the above, focusing on the subject matter and the exercises solved in class.

A missed test will be scored as zero. | 30 |

Assessment comments

A) EVALUATION REGULATIONS: current UdC regulation applies here.

B) TYPES OF RATING:

1. Qualification of not presented: Corresponds to the student, when he only participates in evaluation activities that have a weighting of less than 20% on the final qualification, regardless of the qualification achieved.

2. Students with recognition of part-time dedication and academic waiver of attendance exemption: Except for the dates approved in the Faculty Board for the final objective test, for the remaining tests a specific calendar of dates compatible with their dedication. For this reason, the student must contact the teacher of the subject in the first ten days of the semester in which the subject is taught, in order to set the aforementioned calendar. The tests will have the same format as for full-time students.

C) ASSESSMENT OPPORTUNITIES:

1. First opportunity: The evaluation criteria previously indicated in this section will be applied.

2. Second opportunity: The evaluation criteria are the same as in the first opportunity.

3. Early opportunity: It will be evaluated through a mixed test that will account for 100% of the final grade.

D) OTHER EVALUATION OBSERVATIONS:

1. In general, without prejudice to what is indicated for students with recognition of part-time dedication and academic exemption from attendance exemption, class attendance is required to qualify for the part of the grade corresponding to continuous evaluation, both first chance and second chance. At the end of the evaluation period corresponding to the first opportunity, students who have yet to pass the subject may be proposed activities that allow them to recover the part of the grade corresponding to the continuous evaluation for the second opportunity, which they must request. to the teaching staff of the subject at least ten days before the date of the second chance exam.

2. The scoring criteria for each of the tests will be announced at the time of the test and will be supplied with the statement of the test.

Sources of information	
Basic	- Aguiar Maragoto, F.J.; Paulino Martínez Fernández (2012). Apuntes y transparencias suministradas en la página web (Moodle). - Aguiar Maragoto, F.J.; Paulino Martínez Fernández (2012). Links suministrados en Moodle. - Piattini Velthuis, M.G. y otros (2007). Análisis y diseño detallado de aplicaciones informáticas de gestión. Madrid: RAMA - Fernández Alarcón, V. (2006). Desarrollo de sistemas de información. Una metodología basada en el modelado. Barcelona: UPC - Ramón Cardona, J. y otros (2011). Sistemas de Información Empresarial. Casos y supuestos prácticos. GEU - Grau Fernández, L.; Ignacio López Rodríguez (2001). Problemas de bases de datos. Madrid: Sanz y Torres - Silberschatz, A. y otros (2002). Fundamentos de bases de datos. Madrid: McGraw-Hill - Piattini Velthuis, M.G. y otros (2006). Tecnología y diseño de bases de datos. Madrid: RAMA - Arlow, J.; Ila Neustadt (2006). UML 2. Madrid: Anaya - Podeswa, H. (2010). UML. Madrid: Anaya - Debrauwer, L.; Fien Van der Heyde (2009). UML 2. Iniciación, ejemplos y ejercicios corregidos. Barcelona: ENI - Debrauwer, L.; Naouel Karam (2010). UML 2. Practique la modelización. Barcelona: ENI - Schmuller, J. (2000). Aprendiendo UML en 24 horas. México: Pearson - Kimmel, Paul (). Manual de UML. Máxico: McGraw-Hill
Complementary	

Recommendations		
Subjects that it is recommended to have taken before		
Information Systems for Business Financial Management/611G02028		
Organisational Design/611G02029		
Subjects that are recommended to be taken simultaneously		
Subjects that continue the syllabus		

Other comments
1. The submission of documentary assignments in this subject: - It will be requested in virtual format and/or electronic support.   - It will be done through Moodle, in digital format without the need for printing.2. The importance of ethical principles related to sustainability values in personal and professional behaviors should be taken into account.3. As stated in the various regulations applicable to university teaching, a gender perspective must be incorporated into this subject. Efforts will be made to identify and modify sexist prejudices and attitudes, and influence the environment to change them and promote values of respect and equality. Situations of gender discrimination should be identified, and actions and measures proposed to correct them.4. Full integration will be facilitated for students who may experience difficulties in accessing university life adequately, equitably, and effectively due to physical, sensory, psychological, or sociocultural reasons.