

**1. General information****Course:** DEVELOPMENT AND MANAGEMENT OF INFORMATION SYSTEMS**Type:** ELECTIVE**Degree:** 405 - DEGREE IN COMPUTER SCIENCE ENGINEERING (TA)**Center:** 15 - FACULTY OF SOCIAL SCIENCES AND INFORMATION TECHNOLOGIES**Year:** 3**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 42401**ECTS credits:** 6**Academic year:** 2023-24**Group(s):** 60**Duration:** C2**Second language:****English Friendly:** Y**Bilingual:** N**Lecturer:** FÉLIX ALBERTOS MARCO - Group(s): 60

Building/Office	Department	Phone number	Email	Office hours
2.18	TECNOLOGÍAS Y SISTEMAS DE INFORMACIÓN		Felix.Albertos@uclm.es	

2. Pre-Requisites

It is recommended that the student has previously studied:

Information Systems (1º)

Fundamentals of Business Management (1º)

Data and Information Structures (2nd)

Software Engineering I (2nd)

3. Justification in the curriculum, relation to other subjects and to the profession

In this course, the development and maintenance of the information systems currently used to support the business of companies is studied in depth. In recent years the requirements of business models have evolved and grown enormously, so that a different management is required with significant changes in the life cycles, deployment and maintenance of traditional business information systems. The course presents the latest trends and perspectives in ICT solutions and services for the planning of information systems, mainly business, including aspects such as support for business intelligence or the application of sets of innovative software engineering practices such as Continuous Integration and the methodology of Development and Operations (DevOps).

The engineer who develops this knowledge will approach, with better guarantees, the process of implementation of the current IS, will know in depth its characteristics and which ones are best suited to the needs and peculiarities of each organization.

4. Degree competences achieved in this course**Course competences**

Code	Description
INS02	Organising and planning skills.
INS03	Ability to manage information and data.
INS04	Problem solving skills by the application of engineering techniques.
SI01	Ability to integrate information and communication technology solutions and entrepreneurial process so as to fulfil the needs for information in organisation, allowing them to meet their goals in an effective and efficient manner, providing them with competitive benefits.
SI02	Ability to determine the needs of information and communication systems in an organisation, following security aspects and complying with current laws and regulations.
SI03	Ability to actively take part in the specification, design, implementation, and maintenance of information and communication systems.
SIS01	Critical thinking.
SIS08	Initiative and entrepreneurial abilities.
UCLM03	Accurate speaking and writing skills.

5. Objectives or Learning Outcomes**Course learning outcomes****Description**

Understanding and managing data quality in a business environment.

Understanding the need and importance of IT integration with business goals.

Knowledge of how to manage information systems projects, paying attention to quality and the processes to build them.

Knowledge and application of project planning and monitoring methodologies, with special emphasis on specific techniques for information systems.

Additional outcomes

To know the regulations and legislation related to the operation of current information systems.

To know the latest software engineering practices applicable to the development and maintainability of modern Information Systems.

6. Units / Contents

Unit 1: Information Systems and the new business models in the enterprise

Unit 2: Solutions for business models based on Information Systems (CRM, SCM, ERP)

Unit 3: Development and Operations Methodology (DevOps)

Unit 4: Governance and management of Cloud Information Systems

Unit 5: Regulations and Legislation

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	INS03 SIS01	0.6	15	N	-	
Individual tutoring sessions [ON-SITE]		SIS01 SIS08 UCLM03	0.18	4.5	N	-	
Study and Exam Preparation [OFF-SITE]	Self-study	INS02 INS03 SIS01 SIS08	1.8	45	N	-	
Other off-site activity [OFF-SITE]	Practical or hands-on activities	INS02 INS03 INS04 SI01 SI02 SI03	0.9	22.5	N	-	
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	INS04 SI01 SI02 SI03 SIS08	0.6	15	Y	N	
Writing of reports or projects [OFF-SITE]	Self-study	INS02 INS03 INS04 SIS01 UCLM03	0.9	22.5	Y	N	
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities	INS02 INS04 SI01 SI02 SI03 SIS01 SIS08	0.72	18	Y	Y	
Other on-site activities [ON-SITE]	Assessment tests	INS02 INS04 SI01 SI02 SIS01 UCLM03	0.15	3.75	Y	Y	
Other on-site activities [ON-SITE]	Assessment tests	INS02 INS04 SI01 SI02 SIS01 UCLM03	0.15	3.75	Y	Y	
Total:			6	150			
Total credits of in-class work: 2.4			Total class time hours: 60				
Total credits of out of class work: 3.6			Total hours of out of class work: 90				

As: Assessable training activity

Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Theoretical papers assessment	15.00%	15.00%	
Laboratory sessions	25.00%	25.00%	
Assessment of active participation	10.00%	10.00%	
Test	25.00%	0.00%	
Final test	0.00%	50.00%	
Test	25.00%	0.00%	
Total:	100.00%	100.00%	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences).

9. Assignments, course calendar and important dates

Not related to the syllabus/contents	
Hours	hours

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house Citi	ISBN	Year	Description
Noah Gift, Kennedy Behrman, Alfredo Deza, Grig Gherghiu	Python for DevOps: Learn Ruthlessly Effective Automation	O'Reilly Media, Inc, USA	149205769X	2019	
David Cobham, Graham Curtis	Business Information Systems: Analysis, Design and Practice	Pearson Education Canada	0273713825	2008	
Ethan Thorpe	DevOps: A comprehensive beginners guide to learn DevOps step by step	(Independiente)	1081563672	2019	
Jennifer Davis, Katherine Daniels	Effective DevOps: Building a Culture of Collaboration, Affinity, and Tooling at Scale	O'Reilly Media	1491926309	2016	
Brad Prince, R. Kelly Rainer	Introduction to Information System	John Wiley & Sons	1119607566	2019	