

TEACHING GUIDE

MANAGEMENT INFORMATION SYSTEMS

GRADO EN ADMINISTRACIÓN Y DIRECCIÓN DE EMPRESAS (INGLÉS)

ACADEMIC YEAR 2026-27

Publication date: 30-06-2026



I.-Subject Identification

Type	OBLIGATORIA
Teaching period	3 course, 2Q semester
Nº of credits	4.5
Language in which the subject is taught	English

II.-Presentation

The incorporation and appropriate use of information and communication technologies (ICT) can provide organisations with significant efficiencies. In the so-called information society to which we aspire, ICTs are enabling tools for knowledge management and new business models that even promote alternative forms of business organisation, competitiveness and collaboration.

The main objective of this discipline is to analyse in depth the strategic organisational impact of ICT on business results. To this end, the aim is to provide students with two types of content structured in two blocks. In the first one provides them with the concepts and previous tools related to the management of information systems and information technologies in the company and in the second one they are presented with real cases of organisations that are successfully managing ICT, generating efficient and competitive information systems. Specifically, the subject of ICT and IS decision-making, business change management and the application of strategy tools to analyse the possibilities and impacts of ICT and IS in the company.

It should also be noted that information and communication technologies allow us, among other things, to plan, manage and control products, services and processes, and have become an indispensable requirement for the development of any activity. For this reason, the subject 'Management Information Systems' aims to cover the student's need for training in the knowledge and basic handling of these concepts. Nowadays, companies value especially information management skills, as this is the basis for correct decision making.

In both cases, students will be taught the specific terminology, as well as the basic concepts and processes and fundamental for the management of IS in the company, enabling them to start and develop in the workplace and professionally both in private companies and in the service of Public Administrations.

III.-Learning outcomes

CI05. Knowledge of information systems relating to studies: normal use of information and communications technology in all professional work

CS01. Ability to study independently.

CP12. Understanding the financial operations taking place in business

- Key for degrees not adapted to RD 822/21: **CB** - basic competences, **CG** - generic competences, **CE** - specific competences, **CT** - transversal competences.

- Key for degrees adapted to RD 822/21: **CON** - knowledge, **COM** - competences, **HAB** - skills.



IV.-Contents

IV.A.-Syllabus

Area	Chapter	Contents
I.- "Components of an Information System"	Chapter 1. "The information system and the information"	1. Definitions of Information System, Informatic system and Information Technology. Differences between IS and ICT 2. Components and functions of an IS. 3. Information: Definition, types, characteristics and qualities 4. Management of Information Resources 5. Flows of information at firms 6. The information industry: analysis in the ICT and telecommunication industry 7. The information society. Origin and evolution. Initiatives: the Avanza 2 plan and strategy 2011-2015 8. The management of knowledge: value chain, technologies, advantages, models for the management and measurement. 9. The Green ICTs
	Chapter 2. "Information and communication technologies"	1. The strategic role of ICT 2. Computing systems: hw and sw 3. Telecommunication systems: networks and associated technologies 4. The Internet: origins, technologies, services and applications. 5. The Internet of Things (m2m). Web 2.0 and 3.0 6. Service firms in the network: portals, browsers, social networks 7. Cloud computing 8. Intranets and extranets 9. Electronic Business and commerce,: types, technologies, characteristics, security, e-administration, electronic transactions



	Chapter 3. "The human factor and the types of information systems at firms"	1. Human Resources in the IS: Roles and functions 2. Types of Information Systems: The classic view 3. Systems for processing (Centralized/Distributed) 4. Systems for decision 5. Systems for the office work and document management 6. Current situation of the IS and other related IS. (GIS, SCM, etc.) 7. ERP 8. CRM 9. Expert Systems 10. Business Intelligence
II.- Management, control and organization of IS	Chapter 4. "The development and implementation of IS"	1. The development of Information Systems and its relation with Software engineering. 2. The Participants in the building and development of an IS 3. The development process of an IS 4. Methodologies of development of an IS 5. The modern view: Objects oriented programming and the development of hypermedia systems 6. The standarization of methodologies: ISO/IEC 12207, Metrica y Magerit. 7. The process management: Cost-benefit analysis
	Chapter 5. "ICT and change management"	1. ICT incorporation and the need of organizational change 2. Processes: types and relationships 3. Types of organisational change 4. Business process reengineering 5. Methods for the change due to ICT implementation
	Chapter 6. "Information systems and Organizations"	1. ICT promoters of alternative ways of organisation 2. Outsourcing strategies and ICT 3. Tele-working 4. Virtual organizations 5. Interorganisational systems
	Chapter 7. "The security of IS"	1. Concepts of IS security 2. Components of Security 3. The economic aspects of the security 4. The management of security 5. The protective measures 6. Security in different contexts 7. The business continuity 8. Spanish Acts on IS security



	Chapter 8. "The audit of IS"	1. Definition of audit, causes and objectives 2. The auditor of IS and the audit area in the company 3. Types of IS audit 4. Methodologies for conducting an audit 5. Tools, techniques and rules for the audit 6. The framework: Cobit. 7. Specific audits 8. The future of ISA
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IV.B.-Training activities	
Type	Title
Theoretical sessions	theoretical-practical face to face classes
Other activities	Seminars, courses, and conferences
Other activities	Preparations of contents of subject
Practical sessions	Individual or group projects
Test and/or exams	Face-to-face assessment exam
Other activities	Face-to-face academic tutorials



V.-Student workload	
Theoretical sessions	20
Resolution of exercises, problems, case studies, etc.	20
Practical sessions in experimental, technological and clinical laboratories, fieldwork, etc.	0
Tests and/or exams	5
Academic tutorials	29
Related activities: conferences, seminars, etc.	7
Preparation of theoretical sessions and self-study	14
Preparation of practical tasks, exercises, case studies, projects, etc.	14
Preparation for tests and/or exams	26
Total student workload	135

VI.-Methodology and academic programme		
Type	Period	Content
Theoretical sessions	Week 1 to Week 15	Participatory master classes face-to-face
Practical sessions	Week 1 to Week 15	There will be a minimum of 1 practical activity and a maximum of 8, on the theoretical content of the subject. The definitive distribution and the details of the characteristics of the tests of evaluation will be communicated by the professor in the first weeks of the academic year. The aim is for the student to engage with this activity progressively as they acquire knowledge in the course, so that it represents a challenge and helps them assimilate the course methodology; it may also be presented orally in class. These two objectives are not met in the extraordinary examination period.
Academic tutorials	Week 1 to Week 15	Tutorials prior request of time to professor by virtual campus within the schedule set by the lecturer
Tests and/or exams	Week 16 to Week 20	Exam (official convocatory)



VII.-Assessment methods

The general assessment method is continuous as established in the *Regulation for the Assessment of Learning Outcomes* of Rey Juan Carlos University.

All the assessment systems established in the degree report must be employed, except for those that have a minimum weight of 0%, which can be used by professors in the academic years they consider relevant. Each assessment system may be applied through one or more assessment activities, consistent with the system. No assessment activity can exceed individually 60% of the overall grade for the subject.

The sum of non re-evaluable activities cannot exceed 40% of the overall grade for the subject and, in general, should not have an established minimum grade (except for practical activities in which, strictly speaking, the conditions of the ordinary call cannot be reproduced in the extraordinary call).

Those students who do not manage to pass the subject in the ordinary call, or do not attend this first call, may attend the extraordinary call only for failed re-evaluable assessment activities.

The distribution and characteristics of the assessment activities are described below.

VII.A.-Description and weight of the assessment activities

Management Information Systems (Face-to-face)

Evaluation system	Evaluation activities	Weighting	Re-evaluable (extraordinary call)	Minimum grade	Contents	Deadlines
4-Evaluation of problems and practical cases	Practical activities (individual or in groups) (between 1 and 8)	40%	Not re-evaluable. The aim is for the student to engage with this activity progressively as they acquire knowledge in the course, so that it represents a challenge and helps them assimilate the course methodology; it may also be presented orally in class. These two objectives are not met in the extraordinary examination period.	No	Complete program	Class period (dates indicated by lecturer at class)
3- Face-to face theoretical and practical evaluation activities	Exam text type	60%	Re-evaluable	2,7/6	Complete program	Official date

The subject will be passed with a minimum of 5 points out of 10.

In the **extraordinary call** only the re-evaluable test (60%) will be included and students who have not passed it in the ordinary exam or who have not taken it, may take it. Assignments may not be handed in or submitted outside the class period.

EARLY CALL. The same method as the one established in general call will be used for the early call:

1. PRACTICAL ACTIVITIES (40%). Students who have applied for the early call must contact their lecturer to indicate the practical activities to be carried out, as well as the date of delivery.. The intention is for the student to engage with this activity progressively as they acquire knowledge in the course, so that it represents a challenge and contributes to assimilating the course methodology, as well as allowing it to be presented orally in class. These two objectives are not met in the resit session.
2. CONTINUOUS EVALUATION TEST (60%). A test type exam will be done. The minimum grade in this section is 2.4 out of a total of 6 points. The subject will be passed with a minimum of 5 out of 10 points.

VII.B. Assessment of students with academic exemption from class attendance

Having Academic Exemption from Class Attendance (DAAC) does not imply that students are automatically exempt from participating in the continuous assessment activities or in the training activities of compulsory attendance as established in the teaching guide. Once the exemption has been granted, students must contact the subject's teaching staff, who will propose the adaptations he/she may consider relevant, as long as they guarantee the acquisition and adequate assessment of the learning goals established. Students must maintain adequate communication with the teaching staff so that they may provide information on the dates for training and assessment activities, if these are not established in the programme and available for students at the time of achieving the exemption.

Subject with possibility of academic exemption: Yes.

VII.C. Review of assessment activities

In accordance with the Regulation for the Assessment of Learning Outcomes of Rey Juan Carlos University.

VII.D.-Students with a disability or special educational needs

In order to guarantee equal opportunities, non-discrimination, universal accessibility and academic success, students with disabilities or especial education needs may request curricular adaptations to follow their studies. These adaptations will be provided by the Unit of Attention to People with Disabilities of Rey Juan Carlos University, in accordance with the regulation which regulates the service for the Attention of People with Disabilities at the University. This Unit will issue a report for curricular adaptations, so that students with disabilities or special education needs must contact the service (at e-mail discapacidad.programa@urjc.es) in order to provide relevant information for different educational alternatives.

VII.E.-Academic behaviour, academic integrity and honesty

Rey Juan Carlos University is fully committed to the highest standards of academic integrity and honesty, so studying at the URJC means assuming and subscribing to the values of integrity and academic honesty set out in the University's Ethical Code. To support this process, the University has Rey Juan Carlos University's Academic Conduct Regulation as well as different tools (anti-plagiarism, supervision...) that offer a collective guarantee for the full development of these essential values.



VIII.-Teaching resources and materials

Basic bibliography

De Pablos Heredero, C.; López-Hermoso, J.J.; Martín-Romo, S. Medina, S. (2019). Organización y transformación de los SI en la empresa, 4ª Edición. ESIC, Madrid, 2019.

Laudon, K.C. & Laudon, J.P. (2018). Management Information Systems: managing the digital firm, 15th edition. Pearson. New York.

IAB Spain, (2023). Estudio ecommerce 2023. <https://iabspain.es/estudio/estudio-ecommerce-2023/>

Consultation bibliography

IX.-Professors

