Universidad Rey Juan Carlos

TEACHING GUIDE

THE IMPACT OF INFORMATION TECHNOLOGIES AND SYSTEMS ON BUSINESS ORGANIZATION

MÁSTER U. EN BUSINESS ORGANIZATION (INGLÉS)

ACADEMIC YEAR 2026-27

Q2803011B UNIVERSIDAD REY JUAN CARLOS
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I.-Subject Identification	
Type	OBLIGATORIA
Teaching period	1 course, 2S semester
Nº of credits	6
Language in wich the subject is taught	English

II.-Presentation

The research about the impact of ICT and IS over firm's performance has been of a great interest in the last decades. Firms have srongly invested in technological infrastructures and this has resulted in different ways of processing and organizing their own business models to reach a better competitive position. The main objective of this subject consists of helping students to understand the strategic importance of a proper management of information technologies and informatiion systems at firms to better reach efficiencies and competitive positions. Some research in this area is presented to incentive research in this particular issue.

III.-Learning outcomes

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CG01. Habilidades básicas de gestión de la información en la investigación.
CG02. Capacidad para exponer con argumento los puntos de vista propios y analizar y valorar alternativas en los trabajos de investigación.
CG03. Habilidad para verificar e integrar conocimientos actualizados en el ámbito de la Organización de Empresas.
CG04. Capacidad para aplicar el conocimiento a la práctica de forma creativa.
CT01. Aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios.
CT02. Integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta y limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios.
CT03. Comunicar sus conclusiones a públicos especializados y no especializados de un modo claro y sin ambigüedades
CT04. Adquirir habilidades de aprendizaje que permitan continuar estudiando de un modo que habrá de ser en gran medida auto-dirigido y autónomo.
CT05. Desarrollar el razonamiento crítico y la capacidad para realizar análisis y síntesis de la información disponible
CB6 - Poseer y comprender conocimientos que aporten una base u oportunidad de ser originales en el desarrollo y/o aplicación de ideas, a menudo en un contexto de investigación
CB7 - Que los estudiantes sepan aplicar los conocimientos adquiridos y su capacidad de resolución de problemas en entornos nuevos o poco conocidos dentro de contextos más amplios (o multidisciplinares) relacionados con su área de estudio
CB8 - Que los estudiantes sean capaces de integrar conocimientos y enfrentarse a la complejidad de formular juicios a partir de una información que, siendo incompleta o limitada, incluya reflexiones sobre las responsabilidades sociales y éticas vinculadas a la aplicación de sus conocimientos y juicios
CB9 - Que los estudiantes sepan comunicar sus conclusiones y los conocimientos y razones últimas que las sustentan a públicos especializados y no especializados de un modo claro y sin ambigüedades
CB10 - Que los estudiantes posean las habilidades de aprendizaje que les permitan continuar estudiando de un modo que habrá de ser en gran medida autodirigido o autónomo.
CE01. Saber identificar las necesidades y demandas de los contextos en los que se exige la aplicación de herramientas metodológicas y aprender a proponer soluciones adecuadas para las preguntas de investigación que emanan de las líneas derivadas del ámbito de Organización de Empresas
CE02. Desarrollar el razonamiento y pensamiento crítico para realizar análisis de la realidad empresarial a través de la identificación, descripción y diagnóstico de problemáticas empresariales actuales cercanas al entorno en el que el alumno se encuentra utilizando las herramientas estratégico organizativas que desde el área de Organización de Empresas se ofrecen, y que utilizan las organizaciones para su propio diagnóstico.
CE03. Aplicar herramientas metodológicas para la solución de problemas y/o preguntas de investigación en el ámbito estratégico-organizativo
CE04. Saber utilizar herramientas de estrategia y organización para identificar y resolver los problemas, tales como análisis de las 5 fuerzas de Porter, Análisis PESTLE, de factores económicos, sociales, tecnológicos, legales y de entorno, análisis del diamante de Porter, análisis DAFO, modelos de cuadros de mando integrales¿
CE05. Aprender a proponer soluciones apropiadas basándose en los modelos empresariales estudiados.
CE07. Obtener información de forma efectiva lo que implica ser capaz de buscar, gestionar organizar y analizar la información bibliográfica relevante en el ámbito de Organización de Empresas, y en cada línea de investigación propuesta
CE10. Evaluar la investigación proyectada por otros investigadores y profesionales, a través del desarrollo de competencias de lectura y síntesis crítica de artículos de investigación de cada una de las líneas de Organización de Empresas que se enseñan en la titulación
CE12. Conocer los principales modelos teóricos que subyacen en los diversos ámbitos específicos de la investigación. Los alumnos adquieren conocimientos específicos de las teorías más relevantes que explican los comportamientos empresariales, como la Teoría de los Recursos y Capacidades, la Teoría de los Costes de Transacción, la Teoría de Capacidades Dinámicas, la Teoría de la Agencia, la Teoría de Dependencia de Recursos, la Teoría Ecléctica¿.

- 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.

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IV.-Contents

IV.A.-Syllabus

Chapter 1. **The information system and the information**
1.1. Information system
1.2. The information: definitions and associated concepts
1.3. The management of information resources
1.4. Information flows at firms
1.5. Knowledge management
1.6. The information industry
1.7. The information society

Chapter 2. **Information and communication technologies**
2.1. The strategic role of ICT
2.2. The computing system
2.3. Information and communication technologies
2.4. Internet
2.5. From web 1.0 to……
2.6. Cloud computing
2.7. Intranets and extranets
2.8. Electronic commerce and business

Chapter 3. **The types of information systems at firms and human profiles**
3.1. Introduction
3.2. Types of information systems
3.3. Other related information systems
3.4. Human resources and information systems: profiles and main functions

Chapter 4. **Development and implementation of information systems at firms**
4.1. Development and building of an IS
4.2. The participants
4.3. The process: information system life cycle
4.4. Traditional methodologies
4.5. Modern methodologies
4.6. The standardization of methodologies: ISO/IEC 12207 Métrica and Magerit
4.7. Economic management of the process: cost-benefit analysis and risks evaluation
4.8. Good practices in IT management: ISO/IEC 20000 and ITIL
4.9. Semantic web, open data and quality

Chapter 5. **Digital transformation and change management**
5.1. Digital transformation
5.2. ICT implementation and change management
5.3. Processes: Types and relations
5.4. Types of organizational change
5.5. Business processes reengineering
5.6. Methods for organizational change management when introducing ICT
5.7. The importance in managing relations when change management takes place

Chapter 6. **Information systems and organization**
6.1. ICT and alternative organizations
6.2. Outsourcing and ICT

Chapter 7. Information system's security

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7.1. Concepts of information system's security
7.2. The components of security
7.3. Economic aspects of security in IS
7.4. the management of security
7.5. Security measures
7.6. Security in different environments
7.7. The continuity of business
7.8. Security and legislation

Chapter 8. **Information systems audit**
8.1. Definition of IS Audit and objectives
8.2. The IS auditor and the area of the audit
8.3. Types of IS audit
8.4. Methodology for doing an audit
8.5. Tools, techniques, and norms for the audit
8.6. Main audit standards
8.7. Specific audits
8.8. The future of IS audits

IV.B.-Training activities

Type	**Title**
Theoretical sessions	Clases presenciales teórico-prácticas
Other activities	Preparación de los contenidos de la asignatura
Practical sessions	Trabajos individuales o en grupo
Other activities	Seminarios, cursos, jornadas, conferencias o congresos de carácter presencial
Realización de Pruebas	Prueba de evaluación presencial Vicerrectorado
Other activities	Tutorías académicas presenciales

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V.-Student workload	
Theoretical sessions	25
Resolution of exercises, problems, case studies, etc.	20
Practical sessions in experimental, technological and clinical laboratories, fieldwork, etc.	0
Tests and/or exams	3
Academic tutorials	6
Related activities: conferences, seminars, etc.	6
Preparation of theoretical sessions and self-study	40
Preparation of practical tasks, exercises, case studies, projects, etc.	40
Preparation for tests and/or exams	10
Total student workload	150

VI.-Methodology and academic programme

Type	Period	Content
Theoretical sessions	Week 1 to Week 15	Participative face-to-face master classes
Practical sessions	Week 1 to Week 15	There will be a minimum of 1 practical activity and a maximum of 12, based on the theoretical content of the subject The definitive distribution and the details of the characteristics of the evaluation will be communicated by the professor in the first weeks of the beginning of the subject.
Academic tutorials	Week 1 to Week 15	Tutorials upon request to lecturer via virtual campus or face to face within the timetable established by the lecturer.
Seminars	Week 1 to Week 15	Practical seminars offered by professionals and/or researchers which are complementary and must be attended.

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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

The final grade will be composed by the sum of 40% of the average grade obtained in the assignments handed in during the school period at the times indicated for each of the assignments (not re-evaluable) + 60% of the exam grade (re-evaluable). To pass the subject a 5 out of 10 must be obtained.
The assignments cannot be handed in outside the times indicated for each one of them, and always during the teaching period and in the times indicated by the lecturer in class and in the assessment part of the platform on the virtual campus for each assignment. Never outside the established deadline and outside the teaching period.
The exam will take the form of a compulsory on-site test which includes all the subjects studied, discussed and analysed in class and in the seminars. Only if the situation at the time does not allow it, the exam will be taken online.
Students who have not passed the subject in May, or who did not attend the exam in May, will be able to do the re-evaluable part (the exam) in June.

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.

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VIII.-Teaching resources and materials
Basic bibliography
Laudon, K.C. &Laudon, J.P. (2018). Management Information Systems: managing the digital firm, 15th edition. Pearson. NewYork. 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.
Consultation bibliography

IX.-Professors	
Name and surname	CARMEN DE PABLOS HEREDERO
E-mail address	carmen.depablos@urjc.es
Department	Economía de la Empresa (ADO), Economía Aplicada II y Fundamentos Análisis Económico
Campus	Madrid - Vicálvaro
Category	Catedrático/a de Universidad
Academic degree	Doctor
Person responsible for the subject	Yes
Tutorial timetable	Para consultar las tutorias póngase en contacto con el/la profesor/a a través de correo electrónico
Number of quinquennia	6
Number of sexennia	4
No. of positive evaluations by Docentia	6

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