Universidad Rey Juan Carlos

TEACHING GUIDE

INFORMATION TECHNOLOGY AND SYSTEMS

MÁSTER U. EN INTERNATIONAL TOURISM MANAGEMENT (INGLÉS) (Plan antiguo)

ACADEMIC YEAR 2026-27

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I.-Subject Identification	
Type	OBLIGATORIA
Teaching period	1 course, 1S semester
Nº of credits	3
Language in wich the subject is taught	English

II.-Presentation

The subject "Information Systems and Technologies" pursues the general objective of providing students with the knowledge and skills that relate to the Touristic System and Information and Communication Technologies, in order to apply them in the international touristic management within the current context of the Information and Knowledge Society. It is situated in the first semester of the Master's program due to the structural nature of its contents. In the context of Industry 5.0, it is expected that the subject will address the intersection between technology and the tourism industry in a broader and deeper way. Industry 5.0 aims to promote greater collaboration between humans and machines, and in the tourism sector, this implies leveraging emerging technologies such as artificial intelligence, big data, virtual and augmented reality, and automation to enhance the tourist experience and optimize the management and operation of tourism services. The subject "Information Systems and Technologies" in the context of Industry 5.0 aims to prepare students to face the challenges and seize the opportunities that arise from the convergence between tourism and information and communication technologies in the current environment of the Information and Knowledge Society.

III.-Learning outcomes

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CB10 Have the necessary skills to continue studying in a self-directed and autonomous manner.
CB6 Have and understand knowledge that provides a basis or opportunity to be original in the development and/or implementation of ideas, often in a research context.
CB7 Know how to apply the acquired knowledge and problem-solving abilities in new or unfamiliar environments, within broader or multidisciplinary contexts related to the area of study.
CB8 Ability to integrate knowledge and face the complexity of making judgements based on information, whether incomplete or limited, that include considerations on social and ethical responsibilities.
CB9 Know how to communicate conclusions, and provide the knowledge and reasons to support them, to specialised and non-specialised audiences in a clear manner and without ambiguities.
CG02 Ability to work, as part of a team and autonomously, in a multicultural and multidisciplinary context.
CG04 Ability to apply acquired knowledge and problem-solving abilities to new, broader and multidisciplinary environments.
CG07 Ability to present and argue results, to both specialised audiences and the general public.
CG09 Ability to use ICTs as a communication tool, access sources of information, data files and documents.
CG10 Be able to define priorities in order to achieve objectives, organising deadlines and necessary resources and controlling the processes established.
CG11 Ability to organise information and acquire knowledge from different documentary sources.
CG12 Ability to analyse the social reality and make decisions in changing environments such as tourism.
CG13 Promote the academic training of professionals within the field of tourism.
CT01 Ability to adapt to new situations.
CT02 Autonomous learning.
CT03 Capacity for analysis and synthesis.
CT04 Information management skills.
CT05 Planning and organisation skills.
CT10 IT knowledge relevant to the area of study.
CT11 Creativity.
CT13 Initiative and entrepreneurship.
CT14 Leadership.
CT15 Motivation for quality.
CT18 Problem solving skills.
CT20 Decision making abilities.
CT21 Team work.
CE01 Analysis of the interrelationships between the agents of a tourist destination through social network analysis (SNA).
CE02 Interpretation of the internal information of a business for effective strategic planning.
CE05 Application of the fundamentals of innovation management, efficiency and competitiveness to the management of tourism organisations (public and private).
CE07 Apply the specialised techniques of economic and financial management to tourism organisations.
CE08 Implementation of management and control systems in tourism organisations.
CE09 Critical analysis of tourism activities and their international context for the identification of threats and development of opportunities.
CE14 Knowledge and implementation of quality systems and environmental, economic and social management applied to tourism within the strategic framework of sustainable tourism development.
CE15 Analysis of new trends, prospectives and the dynamics of international tourism markets.
CE16 Ability to create new tourism products, as well as the strategies to develop and promote them, based on a set of resources and predefined demand sector.
CE17 Design the start-up process of tourism products and envisage new projects for businesses or services.
CE18 Adapt the commercial strategy to the specificities of each tourism-business environment.
CE19 Knowledge of the different costing systems and implementation in management control and decision making strategies.
CE26 Optimum use of the new information and communication technologies for tourism marketing.

- 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

I. Information and Communication Technologies applied to tourism
Topic 1. Application of ICT in the tourism sector
Topic 2. ICT, tourism, and sustainability

II. Big Data, Smart Tourism, and decision-making in destinations and tourism companies
Topic 3. Big Data to improve decision-making in destinations and tourism companies
Topic 4. Smart Tourism

III. Promotion and sale of tourism services through the Internet
Topic 5. E-commerce in the tourism sector. Design, creation, and editing of websites.
Topic 6. Management and creation of strategies for Social Networks.

IV.B.-Training activities

Type	Title
Group work	Big Data analysis for tourism
Group work	Design, creation, and editing of tourist e-commerce. Developing a website for the promotion and/or sale of tourism services. Practical case.
Group work	Digital content management plan design

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V.-Student workload	
Theoretical sessions	5
Resolution of exercises, problems, case studies, etc.	5
Practical sessions in experimental, technological and clinical laboratories, fieldwork, etc.	12
Tests and/or exams	2
Academic tutorials	4
Related activities: conferences, seminars, etc.	2
Preparation of theoretical sessions and self-study	10
Preparation of practical tasks, exercises, case studies, projects, etc.	30
Preparation for tests and/or exams	5
Total student workload	75

VI.-Methodology and academic programme

Type	Period	Content
Academic tutorials	Week 1 to Week 15	Individual/group tutoring upon students' request.
Practical sessions	Week 4 to Week 15	Digital content management plan design.
Practical sessions	Week 3 to Week 15	Design, creation, and editing of tourist e-commerce. Developing a website for the promotion and/or sale of tourism services. Practical case.
Practical sessions	Week 2 to Week 4	Big Data analysis for tourism

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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

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Evaluation System	Re-evaluable in extraordinary period	Weighting	Evaluation activity	Minimum grade	Contents	Dates
E02- Tests, exercises, and process problems	Yes. It will follow the same format as in the ordinary evaluation period.	20%	Submission of a Big Data analysis based on information provided on practical exercises	5	Topics 3 and 4	Deadline to be determined, within the class period.
E04- Final evaluation of reports, works, projects, etc.	Yes. It will follow the same format as in the ordinary evaluation period.	50%	Submission of a report containing the design of a digital content management plan, the conceptualization of a tourism service that can be sold online (e-commerce); ant the design, creation, and editing of the e-commerce site.	5	Topics 1, 2, 5, and 6	Deadline to be determined, within the class period.
E05- Written final tests	Yes. It will follow the same format as in the ordinary evaluation period.	10%	Test with open and/or multiple-choice questions.	4	Complete syllabus	Last session of the class period.
E08-Presentation of group work	No	15%	Group presentation of the digital content management plan and the e-commerce site.	0	Topics 1, 2, 5, and 6	Deadline to be determined, within the class period.
E09- Classroom participation	No	5%	Oral responses to questions posed by the teacher in the classroom.	0	Complete syllabus	Throughout the class period.

Calculation of the final grade

- The **final grade** is calculated as the **weighted average** of the grades from the evaluable tests according to the indicated percentages, provided that the minimum grade indicated for each test has been passed.
- If any of the evaluable tests have not been passed with the minimum grade required, the final grade for the subject will be the highest grade of the evaluable tests not passed.
- If the student has not taken any of the evaluable activities in the call, the final grade for these activities will be 0.
- If the student has not taken any evaluable test, the final grade will be **"Not Presented".**

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Convocatoria extraordinaria

In the extraordinary evaluation period, students will only be required to re-evaluate the activities they failed. Therefore, the grades for the activities passed in the ordinary evaluation period and the grades obtained on the re-evaluated activities will be used to calculate the final grade for this extraordinary period. The final grade is calculated as indicated in the previous section.

The re-evaluation of the written tests will take place on the date indicated for the extraordinary evaluation period.

For the re-evaluation of exercises and reports, deadlines will be determined within the evaluation dates of the extraordinary period.

Academic conduct

In the event of **academic fraud** in any evaluation activity, a grade of zero points will be awarded for that activity. If these activities have a minimum grade greater than zero, this will result in failure of the subject in the corresponding evaluation period.

Please also remember that, pursuant to Article 8.g) of the Coexistence Regulations of Universidad Rey Juan Carlos (https://www.urjc.es/images/Universidad/Presentacion/normativa/normativa%20convivencia%20universitaria.pdf), **academic fraud**in any evaluation activity is considered a **very serious fault**. The corresponding sanctions for very serious faults, according to Article 11 of the aforementioned regulations, are temporary expulsion from the University and, where applicable, the loss of tuition fees.

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

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Consultation bibliography

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IX.-Professors

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