

**1. General information****Course:** INFORMATION SYSTEMS**Type:** CORE COURSE**Degree:** 405 - DEGREE IN COMPUTER SCIENCE ENGINEERING (TA)**Center:** 15 - FACULTY OF SOCIAL SCIENCES AND INFORMATION TECHNOLOGIES**Year:** 1**Main language:** Spanish**Use of additional languages:****Web site:****Code:** 42309**ECTS credits:** 6**Academic year:** 2020-21**Group(s):** 60**Duration:** C2**Second language:****English Friendly:** Y**Bilingual:** N**Lecturer:** RICARDO PÉREZ DEL CASTILLO - Group(s): 60

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**2. Pre-Requisites**

This subject is based on the competences and knowledge acquired in the subjects:

- Fundamentos de Programación I.
- Fundamentos de Gestión Empresarial.

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

This subject is integrated into the subject of "Software Engineering, Information Systems and Intelligent Systems" of the curriculum and provides a transversal and integrating overview of the IT context, relating the business and business aspects with the specific aims of Information Technology (IT). To do this, the basic concepts of IT (engineering, abstraction, model, system, project, process, information) are introduced, next the concept of computer system (hardware + software + data) is presented. And finally, the more global concept of Information System (IS) as a special type of socio-technical system (with technological and human, social and organizational elements) whose objective is to satisfy the information needs of an organization, is introduced.

This subject provides a horizontal vision of the computer activity. As a result, the student will be able to better understand the role that each subject plays in Computer Science.

The subject presents some of the key concepts that will be addressed in the rest of the career.

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

Code	Description
CO05	Knowledge, administration, and maintenance of systems, services and digital systems.
CO13	Knowledge and application of the required tools for the storage, process, and access to informational systems, even web based ones.
INS01	Analysis, synthesis, and assessment skills.
INS03	Ability to manage information and data.
INS04	Problem solving skills by the application of engineering techniques.
INS05	Argumentative skills to logically justify and explain decisions and opinions.
PER01	Team work abilities.
SIS01	Critical thinking.
SIS03	Autonomous learning.
SIS04	Adaptation to new scenarios.
SIS05	Creativity.
SIS09	Care for quality.
UCLM02	Ability to use Information and Communication Technologies.

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

Knowledge of security problems in information systems, as well as the main techniques to solve them.

Knowledge of the role of information systems in companies, as well as the main types and characteristics.

Knowledge and use of the technologies that support the construction and use of information systems.

Identification, modelling, and specifications of software and business requirements for the construction of software systems that implement them.

**6. Units / Contents****Unit 1: Basic Concepts****Unit 2: Information Management****Unit 3: The role of the Information Systems**

Unit 4: A company from the computer science perspective

Unit 5: Business Requirements and Information Systems

Unit 6: Automatized Information Systems

Unit 7: Information Systems for the Internet and Web

Unit 8: Something more than technology

#### ADDITIONAL COMMENTS, REMARKS

#### PRACTICES

P1: Modeling Ideas. Tool: CMapTools (free).

P2: Information Management. Tool: MS Excel spreadsheet or similar.

P3: Developing a Web SI. Tool: Sharepoint.

P4: Capture and Modeling of Business Requirements. Tools: MS Word or similar free word processor. REM tool.

#### 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]	Combination of methods	CO13	0.72	18	N	-	Teaching of the subject matter by lecturer (MAG)
Workshops or seminars [ON-SITE]	Workshops and Seminars	CO13	0.12	3	N	-	Workshops or seminars that are part of the lecturer clases (PRO).
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises	CO13	0.48	12	N	-	Worked example problems and cases resolution by the lecturer and the students (PRO)
Laboratory practice or sessions [ON-SITE]	Lectures	CO13	0.1	2.5	N	-	Teaching of practicals in laboratory /computing room (LAB)
Laboratory practice or sessions [ON-SITE]	Practical or hands-on activities	CO13	0.5	12.5	Y	Y	Realization of practicals in laboratory /computing room (LAB)
Individual tutoring sessions [ON-SITE]		CO13	0.18	4.5	N	-	Individual or small group tutoring in lecturer's office, classroom or laboratory (TUT)
Other on-site activities [ON-SITE]	Assessment tests	CO13	0.14	3.5	Y	Y	Partial 1, that can be retaken (rescheduling). To be carried out at the end of the first half of the teaching period (EVA).
Project or Topic Presentations [ON-SITE]	Lectures	CO13	0.16	4	Y	N	Oral presentation of a paper (EVA)
Study and Exam Preparation [OFF-SITE]	Self-study	CO13	2.1	52.5	N	-	Self-study (EST)
Writing of reports or projects [OFF-SITE]	Guided or supervised work	CO13	0.9	22.5	Y	N	Resolution of problems (RES)
Other off-site activity [OFF-SITE]	Practical or hands-on activities	CO13	0.6	15	N	-	Preparation of practicals of laboratory (PLAB)
Class Attendance (theory) [ON-SITE]	Combination of methods	CO05 CO13 INS01 INS03 INS04 INS05 PER01 SIS01 SIS03 SIS04 SIS05 SIS09 UCLM02	0.72	18	N	-	
<b>Total:</b>			<b>6.72</b>	<b>168</b>			
<b>Total credits of in-class work: 3.12</b>			<b>Total class time hours: 78</b>				
<b>Total credits of out of class work: 3.6</b>			<b>Total hours of out of class work: 90</b>				

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
Test	25.00%	25.00%	Partial Test 1. Compulsory activity that can be retaken (rescheduling). To be carried out at the end of the first half of the teaching period.
Test	25.00%	25.00%	Partial Test 2. Compulsory activity that can be retaken. To be carried out within the planned dates of the final exam call. The Partial Test 1 retake will be performed at this date.
Practicum and practical activities reports assessment	20.00%	20.00%	Compulsory activity that can be retaken. To be carried out during lab sessions.
Assessment of problem solving and/or case studies	15.00%	15.00%	Deliverables of problems and theory cases (topics t1-t7). Non-compulsory activity that can not be retaken. To be done during the teaching period.
Theoretical papers assessment	10.00%	10.00%	Elaboration in group of a theoretical paper. Non-compulsory activity that cannot be retaken. To be carried out before end of teaching period
			Non-compulsory activity that can be retaken. To be carried out during the theory/lab sessions in continuous modality. Non-

Oral presentations assessment	5.00%	5.00%	continuous students will be evaluated for this activity through an alternative system in the ordinary call.
<b>Total:</b>	<b>100.00%</b>	<b>100.00%</b>	

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).

#### Evaluation criteria for the final exam:

##### Continuous assessment:

In compulsory activities, a minimum mark of 40% is required in order to pass that activity and have the possibility to therefore pass the entire subject. The evaluation of the activities will be global and therefore must be quantified by means of a single mark. If the activity consists of several sections, each section may be evaluated separately provided students are informed in writing of this evaluation criterion at the beginning of the academic year. In the case of the activities that may be retaken (i.e., rescheduling), an alternative activity or test will be offered in the resit/retake exam call (convocatoria extraordinaria). The partial tests will be common for all the theory/laboratory groups of the subject and will be evaluated by the lecturers of the subject in a serial way, i.e., each part of the final exam will be evaluated by the same lecturer for all the students.

A student is considered to pass the subject if she/he obtains a minimum of 50 points out of 100, taking into account the points obtained in all the evaluable activities, and also has passed all the compulsory activities.

For students who do not pass the subject in the final exam call (convocatoria ordinaria), the marks of activities already passed will be conserved for the resit/retake exam call (convocatoria extraordinaria). In the case of the passed recoverable activities, the student will have the opportunity to receive an alternative evaluation of those activities in the resit/retake exam call and, in that case, the final grade of the activity will correspond to the latter grade obtained.

The qualification of the passed activities in any call, except for the partial tests, will be conserved for the next academic year at the request of the student, provided that it is equal or superior to 5 and the training activities and the evaluation criteria of the subject are not modified in the next academic year.

The failure of a student to attend the partial 1 and partial 2 tests will automatically result in her/him receiving a "Failure to attend" (no presentado). If the student has not passed any compulsory evaluation activity, the maximum final grade will be 40%.

##### Non-continuous evaluation:

Students who are unable to attend training activities on a regular basis may apply at the beginning of the semester for the non-continuous assessment mode. Similarly, if a student who is undergoing continuous assessment incurs any circumstance that prevents her/him from regularly attending the classroom-based training activities, she/he may renounce the accumulated mark in continuous assessment and apply for the non-continuous assessment mode. In this case, a notification by the student must be given before the date scheduled for the tests in the ordinary call, in accordance with a deadline that will be informed at the beginning of the semester.

Students who take the non-continuous assessment mode will be globally graded, in 2 annual calls per subject, an ordinary and an extraordinary one (evaluating 100% of the competences), through the assessment systems indicated in the column "Non-continuous assessment".

In the "non-continuous assessment" mode, it is not compulsory to keep the mark obtained by the student in the activities or tests (progress test or partial test) taken in the continuous assessment mode.

#### Specifications for the resit/retake exam:

Evaluation tests will be conducted for all recoverable activities.

#### Specifications for the second resit / retake exam:

Same characteristics as the resit/retake exam call.

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Workshops or seminars [PRESENCIAL][Workshops and Seminars]	3
Laboratory practice or sessions [PRESENCIAL][Lectures]	2.5
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	12.5
Individual tutoring sessions [PRESENCIAL][ ]	4.5
Other on-site activities [PRESENCIAL][Assessment tests]	3.5
Project or Topic Presentations [PRESENCIAL][Lectures]	4
Study and Exam Preparation [AUTÓNOMA][Self-study]	52.5
Writing of reports or projects [AUTÓNOMA][Guided or supervised work]	22.5
Other off-site activity [AUTÓNOMA][Practical or hands-on activities]	15
<b>General comments about the planning:</b> The subject is taught in 3 x 1,5 hour sessions per week. The planning can be modified in the event of unforeseen causes.	
Unit 1 (de 8): Basic Concepts	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Unit 2 (de 8): Information Management	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2
Unit 3 (de 8): The role of the Information Systems	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	2
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	1
Unit 4 (de 8): A company from the computer science perspective	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	1
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2.5
Unit 5 (de 8): Business Requirements and Information Systems	

Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	2.5
<b>Unit 6 (de 8): Automatized Information Systems</b>	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	2
<b>Unit 7 (de 8): Information Systems for the Internet and Web</b>	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	1
<b>Unit 8 (de 8): Something more than technology</b>	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Combination of methods]	3
<b>Global activity</b>	
Activities	hours
Study and Exam Preparation [AUTÓNOMA][Self-study]	52.5
Writing of reports or projects [AUTÓNOMA][Guided or supervised work]	22.5
Other off-site activity [AUTÓNOMA][Practical or hands-on activities]	15
Project or Topic Presentations [PRESENCIAL][Lectures]	4
Laboratory practice or sessions [PRESENCIAL][Practical or hands-on activities]	12.5
Individual tutoring sessions [PRESENCIAL][]	4.5
Other on-site activities [PRESENCIAL][Assessment tests]	3.5
Class Attendance (theory) [PRESENCIAL][Combination of methods]	20
Workshops or seminars [PRESENCIAL][Workshops and Seminars]	3
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	11
Laboratory practice or sessions [PRESENCIAL][Lectures]	2.5
<b>Total horas: 151</b>	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Gómez Vieites, Álvaro	Sistemas de información : herramientas prácticas para la ges	Ra-ma		978-84-7897-937-0	2009	
Prieto Espinosa, Alberto	Introducción a la informática	McGraw-Hill, Interamericana de España		84-481-4624-7	2006	
Jane P. Laudon and Kenneth C. Laudon	Management Information Systems	Prentice Hall		978-0132142854	2012	