

300212 - I2 - Informatics II

Coordinating unit:	300 - EETAC - Castelldefels School of Telecommunications and Aerospace Engineering		
Teaching unit:	701 - AC - Department of Computer Architecture		
Academic year:	2018		
Degree:	BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING (Syllabus 2015). (Teaching unit Compulsory) BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERINGS/BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING - NETWORK ENGINEERING (AGRUPACIÓ DE SIMULTANEÏTAT) (Syllabus 2015). (Teaching unit Compulsory) BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN TELECOMMUNICATIONS SYSTEMS ENGINEERING (Syllabus 2015). (Teaching unit Compulsory) BACHELOR'S DEGREE IN AEROSPACE SYSTEMS ENGINEERING/BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2015). (Teaching unit Compulsory)		
ECTS credits:	4,5	Teaching languages:	Catalan, Spanish

Teaching staff

Coordinator:	Definit a la infoweb de l'assignatura.
Others:	Definit a la infoweb de l'assignatura.

Prior skills

x

Requirements

x

Degree competences to which the subject contributes

Generical:

3. PROJECT MANAGEMENT - Level 2: Define the objectives of a well-defined, narrow scope, and plan development, identifying resources, tasks, shared responsibilities and integration. Use appropriate tools to support project management.
7. EFFICIENT USE OF EQUIPMENT AND INSTRUMENTS - Level 2: Use the correct instruments, equipment and laboratory software for specific or specialized knowledge of their benefits. A critical analysis of the experiments and results. Correctly interpret manuals and catalogs. Working independently, individually or in groups, in the laboratory.

Transversal:

1. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
4. SUSTAINABILITY AND SOCIAL COMMITMENT - Level 2. Applying sustainability criteria and professional codes of conduct in the design and assessment of technological solutions.
5. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.
6. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.
8. EFFECTIVE USE OF INFORMATION RESOURCES - Level 2. Designing and executing a good strategy for advanced searches using specialized information resources, once the various parts of an academic document have been

300212 - I2 - Informatics II

identified and bibliographical references provided. Choosing suitable information based on its relevance and quality.

Teaching methodology

x

Learning objectives of the subject

x

Study load

Total learning time: 112h 30m	Hours large group:	0h	0.00%
	Hours medium group:	0h	0.00%
	Hours small group:	26h 30m	23.56%
	Guided activities:	23h	20.44%
	Self study:	63h	56.00%

300212 - I2 - Informatics II

Content

<p>(ENG) Títol contingut 1: L'arquitectura de computadors actuals</p>	<p>Learning time: 10h Laboratory classes: 3h Guided activities: 2h Self study : 5h</p>
<p>Description: (ENG) 1.1 Els ordinadors portàtils. 1.2 Ordinadors paral·lels. 1.3 Supercomputadors.</p> <p>Related activities: (ENG) Activitat 1.</p>	
<p>(ENG) Títol contingut 2: Programació orientada a objectes i programació visual</p>	<p>Learning time: 45h Laboratory classes: 13h Guided activities: 6h 15m Self study : 25h 45m</p>
<p>Description: (ENG) 2.1 El concepte d'objecte i classe: atributs i mètodes. 2.2 Criteris per a la descomposició en mòduls i objectes. 2.3 Constructors i destructors. 2.4 Pas de paràmetres i objectes. 2.5 Objectes que són membres d'altres objectes. 2.6 Formularis i events. 2.7 Controls i events més habituals.</p> <p>Related activities: (ENG) Activitat 2.</p>	
<p>(ENG) Títol contingut 3: Estructures de dades i algorismes avançats</p>	<p>Learning time: 33h Laboratory classes: 8h Guided activities: 4h Self study : 21h</p>
<p>Description: (ENG) 3.1 Algorismes d'ordinació. 3.2 Algorismes de cerca. 3.3 Cues circulars. 3.4 Piles.</p> <p>Related activities: (ENG) Activitat 2.</p>	

300212 - I2 - Informatics II

(ENG) Títol contingut 4: Bases de dades	Learning time: 6h Laboratory classes: 2h Guided activities: 2h Self study : 2h
Description: (ENG) 4.1 Introducció als sistemes gestors de bases de dades. 4.2 Modelatge de dades. 4.3 Disseny de l'estructura d'una base de dades. 4.4 Consultes i manipulació de les dades. Related activities: (ENG) Activitat 2.	
(ENG) L'entorn de programació	Learning time: 18h 30m Laboratory classes: 6h 15m Guided activities: 3h Self study : 9h 15m

Planning of activities

(ENG) TÍTOL ACTIVITAT 1: COM SÓN ELS COMPUTADORS ACTUALS?	Hours: 10h Laboratory classes: 3h Guided activities: 2h Self study: 5h
(ENG) TÍTOL ACTIVITAT 2: PROJECTE DE PROGRAMACIÓ AVANÇAT	Hours: 102h 30m Laboratory classes: 29h 15m Guided activities: 15h 15m Self study: 58h

Qualification system

x

Regulations for carrying out activities

x

300212 - I2 - Informatics II

Bibliography

Basic:

Archer, Tom; Whitechapel, Andrew. Inside C#. 2nd ed. Redmond, Washington: Microsoft Press, 2002. ISBN 0735616485.

Sharp, John; Jagger, Jon. Microsoft Visual C#. NET : step by step. Redmond: Microsoft Press, 2003. ISBN 0735619093.

Platt, David S. Introducing Microsoft .NET. 3rd ed. Redmond: Microsoft Press, 2003. ISBN 0735619182.

Complementary:

Ceballos Sierra, Francisco Javier. El Lenguaje de programación C#. Madrid: RA-MA, 2002. ISBN 8478975004.