Last update: 12-04-2019

340383 - SODX-I5O01 - Distributed and Network Operating Systems

Coordinating unit: 340 - EPSEVG - Vilanova i la Geltrú School of Engineering

Teaching unit: 701 - AC - Department of Computer Architecture

Academic year: 2019

Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Teaching unit Compulsory)
BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)

ECTS credits: 6 Teaching languages: Catalan, Spanish, English

Teaching staff

Coordinator: García Almiñana, Jordi

Degree competences to which the subject contributes

Specific:

3. CETI2. Ability to select, design, develop, integrate, value, construct, tmanage, exploit and maintain technologies of machines, programming and nets, keeping suitable costs and quality parameters.
5. CETI5. Ability to select, to develop, integrate and manage information systems which satisfy organization necessities with indentified costs and quality criteria.

Transversal:

1. 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.
2. EFFECTIVE USE OF INFORMATION RESOURCES - Level 1. Identifying information needs. Using collections, premises and services that are available for designing and executing simple searches that are suited to the topic.

Learning objectives of the subject

Study load

Total learning time: 150h	Hours large group:	45h	30.00%
	Hours medium group:	0h	0.00%
	Hours small group:	15h	10.00%
	Guided activities:	0h	0.00%
	Self study:	90h	60.00%

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Content

(ENG) -1. Conceptes de Sistemes Distribuïts	Learning time: 16h Theory classes: 2h Practical classes: 4h Self study : 10h
(ENG) -2. Comunicació entre processos	Learning time: 18h Theory classes: 2h Practical classes: 4h Laboratory classes: 2h Self study : 10h
(ENG) -3. Sincronització	Learning time: 14h Theory classes: 1h Practical classes: 2h Laboratory classes: 1h Guided activities: 2h Self study : 8h
(ENG) -4. Consistència i replicació	Learning time: 20h Theory classes: 2h Practical classes: 4h Laboratory classes: 2h Guided activities: 2h Self study : 10h
(ENG) -5. Sistemes tolerants a errors	Learning time: 18h Theory classes: 2h Practical classes: 4h Laboratory classes: 2h Guided activities: 2h Self study : 8h

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(ENG) -6. Sistemes i serveis de noms	Learning time: 14h Theory classes: 1h Practical classes: 2h Laboratory classes: 1h Self study : 10h
(ENG) -7. Sistemes de Fitxers Distribuïts	Learning time: 14h Theory classes: 1h Practical classes: 2h Laboratory classes: 1h Self study : 10h
(ENG) -8. Sistemes Web Distribuïts	Learning time: 12h Theory classes: 1h Practical classes: 2h Laboratory classes: 1h Self study : 8h
(ENG) -9. Sistemes Distribuïts de Gran Escala	Learning time: 18h Theory classes: 2h Practical classes: 4h Laboratory classes: 2h Self study : 10h

Qualification system

20% LAB + max(10% PRO + 30% EXP + 40% EXF, 80% EXF)

LAB: Laboratory
PRO: Problems and class participation
EXP: Mid term exam
EXF: Last term exam

Regulations for carrying out activities

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Bibliography

Basic:

Coulouris, George F. [et al]. Distributed systems : concepts and design. 5th ed. Harlow [etc.]: Addison-Wesley/Pearson Education, 2012. ISBN 9780273760597.

Tanenbaum, Andrew S. Distributed systems : principles and paradigms. 2nd ed. Upper Saddle River, NJ: Pearson Prentice Hall, 2007. ISBN 0132392275.

Complementary:

Cesarini, Francesco. Erlang programming. Farnham: O'Reilly, 2009. ISBN 9780596518189.

Armstrong, Joe. Programming Erlang : software for a concurrent world. 2nd ed. Raleigh, N.C. [etc.]: Pragmatic Bookshelf, 2013. ISBN 9781937785536.