

Course guide

340383 - SODX-I5001 - Distributed and Network Operating Systems

Last modified: 14/06/2024

Unit in charge: Vilanova i la Geltrú School of Engineering
Teaching unit: 701 - DAC - Department of Computer Architecture.

Degree: BACHELOR'S DEGREE IN INFORMATICS ENGINEERING (Syllabus 2018). (Compulsory subject).

Academic year: 2024 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish, English

LECTURER

Coordinating lecturer: García Almiñana, Jordi

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

- 3. CETI2. Ability to select, design, develop, integrate, value, construct, manage, 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 identified 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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours small group	15,0	10.00
Self study	90,0	60.00
Hours large group	45,0	30.00

Total learning time: 150 h

CONTENTS

(ENG) -1. Conceptes de Sistemes Distribuïts

Full-or-part-time: 16h

Theory classes: 2h

Practical classes: 4h

Self study : 10h

(ENG) -2. Comunicació entre processos

Full-or-part-time: 18h

Theory classes: 2h

Practical classes: 4h

Laboratory classes: 2h

Self study : 10h

(ENG) -3. Sincronització

Full-or-part-time: 14h

Theory classes: 1h

Practical classes: 2h

Laboratory classes: 1h

Guided activities: 2h

Self study : 8h

(ENG) -4. Consistència i replicació

Full-or-part-time: 20h

Theory classes: 2h

Practical classes: 4h

Laboratory classes: 2h

Guided activities: 2h

Self study : 10h

(ENG) -5. Sistemes tolerants a errors

Full-or-part-time: 18h

Theory classes: 2h

Practical classes: 4h

Laboratory classes: 2h

Guided activities: 2h

Self study : 8h



(ENG) -6. Sistemes i serveis de noms

Full-or-part-time: 14h

Theory classes: 1h

Practical classes: 2h

Laboratory classes: 1h

Self study : 10h

(ENG) -7. Sistemes de Fitxers Distribuïts

Full-or-part-time: 14h

Theory classes: 1h

Practical classes: 2h

Laboratory classes: 1h

Self study : 10h

(ENG) -8. Sistemes Web Distribuïts

Full-or-part-time: 12h

Theory classes: 1h

Practical classes: 2h

Laboratory classes: 1h

Self study : 8h

(ENG) -9. Sistemes Distribuïts de Gran Escala

Full-or-part-time: 18h

Theory classes: 2h

Practical classes: 4h

Laboratory classes: 2h

Self study : 10h

GRADING SYSTEM

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 [on line]. Farnham: O'Reilly, 2009 [Consultation: 13/02/2024]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=443218>. ISBN 9780596518189.
- Armstrong, Joe. Programming Erlang : software for a concurrent world [on line]. 2nd ed. Raleigh, N.C. [etc.]: Pragmatic Bookshelf, 2013 [Consultation: 12/02/2024]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=5307>

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