

Course guide

300045 - EA-M - Applications Engineering

Last modified: 01/06/2023

Unit in charge: Castelldefels School of Telecommunications and Aerospace Engineering
Teaching unit: 701 - DAC - Department of Computer Architecture.
744 - ENTEL - Department of Network Engineering.

Degree: BACHELOR'S DEGREE IN NETWORK ENGINEERING (Syllabus 2009). (Compulsory subject).

Academic year: 2023 **ECTS Credits:** 12.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Definit a la infoweb de l'assignatura.

Others: Definit a la infoweb de l'assignatura.

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. CE 21 TEL. Capacidad para construir, explotar y gestionar las redes, servicios, procesos y aplicaciones de telecomunicaciones, entendidas éstas como sistemas de captación, transporte, representación, procesado, almacenamiento, gestión y presentación de información multimedia, desde el punto de vista de los sistemas telemáticos.(CIN/352/2009, BOE 20.2.2009.)
2. CE 27 TEL. Capacidad de programación de servicios y aplicaciones telemáticas, en red y distribuidas.(CIN/352/2009, BOE 20.2.2009.)
6. CE 6 TELECOM. Capacidad para aprender de manera autónoma nuevos conocimientos y técnicas adecuados para la concepción, el desarrollo o la explotación de sistemas y servicios de telecomunicación.(CIN/352/2009, BOE 20.2.2009.)

Generical:

5. 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.

Transversal:

3. TEAMWORK. Being able to work as a team player, either as a member or as a leader. Contributing to projects pragmatically and responsibly, by reaching commitments in accordance to the resources that are available.
4. 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.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours small group	84,0	28.00
Self study	168,0	56.00
Guided activities	48,0	16.00

Total learning time: 300 h



CONTENTS

(ENG) (CAT) - PROGRAMACIÓN AVANZADA JAVA

Full-or-part-time: 282h
Laboratory classes: 90h
Guided activities: 42h
Self study : 150h

(ENG) (CAT) - PROGRAMACIÓN CONCURRENTE Y DE RED AVANZADA

(ENG) (CAT) - REPRESENTACIÓN DE DATOS

(ENG) (CAT) - DISEÑO DE APLICACIONES EMPRESARIALES

(ENG) (CAT) - PLATAFORMAS DISTRIBUIDAS

(ENG) (CAT) - DESARROLLO DE SOFTWARE DIRIGIDO POR MODELOS

(ENG) (CAT) - DESARROLLO ÀGIL DEL SOFTWARE

Full-or-part-time: 150h
Theory classes: 37h 30m
Seminars: 37h 30m
Group work (distance learning): 37h 30m
Guided activities: 37h 30m

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Eckel, Bruce. Thinking in Java. 4th ed. Upper saddle River, NJ: Prentice Hall, 2006. ISBN 0131872486.
- Larman, Craig. Applying UML and patterns : an introduction to object-oriented analysis and design and iterative development. 3th ed. Upper Saddle River, N.J.: Prentice Hall PTR, 2005. ISBN 0131489062.
- Liu, M.L. Computación distribuida : fundamentos y aplicaciones [on line]. Madrid, [etc.]: Pearson Educación, 2004 [Consultation: 26/07/2022]. Available on : https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=3879. ISBN 8478290664.
- Andrews, Gregory R. Foundations of multithreaded, parallel and distributed programming. Massachussets: Addison-Wesley, 2000. ISBN 0201357526.

Complementary:



- Harold, Elliotte Rusty. Java networking programming : developing networked applications. 4th edition. Sebastopol: O'Reilly, 2014. ISBN 9781449365950.
- Lea, Douglas. Programación concurrente en Java : principios y patrones de diseño. 2ª ed. Madrid [etc.]: Addison-Wesley, 2001. ISBN 8478290389.
- Oaks, Scott; Wong, Henry. Java threads [on line]. 3rd ed. Cambridge [etc.]: O'Reilly, 2004 [Consultation: 26/07/2022]. Available on : <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pq-origsite=primo&docID=540609>. ISBN 0596007825.