



Universitat de Lleida

# DEGREE CURRICULUM

# **SYSTEMS AND APPLICATIONS**

# **ADMINISTRATION AND**

# **MANAGEMENT**

Coordination: SOLSONA TEHÀS, FRANCESC XAVIER

Academic year 2017-18

## Subject's general information

<b>Subject name</b>	SYSTEMS AND APPLICATIONS ADMINISTRATION AND MANAGEMENT			
<b>Code</b>	102013			
<b>Semester</b>	1st Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	<b>Degree</b>	<b>Course</b>	<b>Typology</b>	<b>Modality</b>
	Double bachelor's degree: Degree in Computer Engineering and Degree in Business Administration and Management	4	COMPULSORY	Attendance-based
	Bachelor's Degree in Computer Engineering	3	COMPULSORY	Attendance-based
<b>ECTS credits</b>	6			
<b>Groups</b>	1GG,2GM			
<b>Theoretical credits</b>	3			
<b>Practical credits</b>	3			
<b>Coordination</b>	SOLSONA TEHÀS, FRANCESC XAVIER			
<b>Department</b>	INFORMATICA I ENGINYERIA INDUSTRIAL			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			
<b>Language</b>	Catalan/Spanish			
<b>Distribution of credits</b>	Francesc Solsona 6			
<b>Office and hour of attention</b>	Monday 12:00-13:00			

Professor/a (s/es)	Adreça electrònica professor/a (s/es)	Crèdits	Horari de tutoria/lloc
SOLSONA TEHAS, FRANCISCO J.	francesc@diei.udl.cat	9	

## Learning objectives

Acquiring knowledge about computer system's management.

The practical knowledge will be acquired based on the Linux operating system.

Theoretical knowledge will be closely linked to the concepts needed to carry out the practice.

## Competences

### Cross-disciplinary competences:

- **EPS1.** Capacity to solve problems and prepare and defence arguments inside the area of studies.
- **EPS6.** Capacity of analysis and synthesis.
- **EPS9.** Capacity for unidisciplinary and multidisciplinary teamwork.

### Specific competences:

- **GII-CRI2.** Capacity to plan, conceive, deploy and direct projects, services and computer systems in all the fields, leading his set up and his continuous improvement and evaluation his economic and social impact.
- **GII-CRI5.** Knowledge, manage and maintain systems, services and computer applications.
- **GII-CRI10.** Knowledge of the characteristics, functionalities and structures of the operating systems and design and implement applications based in their services.

## Subject contents

### THEORY

Theme 1: Fylesystem

Theme 2: Security and Protection

### PRACTICES

1. /PROC filesystem
2. Sed. Awk
3. Debian-Ubuntu
4. PC Architecture. The Linux kernel
5. Swap. Disk RAM
6. RAID -Redundant Array of Inexpensive Discs-

7. Quota. Cron
8. Priority and Nohup
9. Managing/Installation of Mysql and Postgres
10. LVM -Logical Volume Manager-
11. Firewalls
12. Servers

## Methodology

The development of the course consists of:

1. Theory and problems in large-group classes, and
2. Practices of Linux operating system administration in medium-group classes in the laboratory.

Theory and problems evaluation will be done according to two partial examens. Practices evaluation will be carried out by delivering 12 practices in groups of two students. In addition, each partial exam will contain a question of practices equivalent to 20% of the exam.

## Development plan

Week	Activity Attended GG	Activity Attended (GM)
1	Introducing course	Free
2	Filesystem	Practice 1. Proc
3	Filesystem	Practice 2. Sed-Awk
4	Filesystem	Practice 3. Debian-Ubuntu
5	Filesystem	Practice 4. PC architecture. Linux kernel
6	Filesystem	Practice 5. Swap-Dram
7	Filesystem	Practice 6. Quota-Cron
8	Filesystem	Practices Retrieval
9	1 <sup>st</sup> Exam	1 <sup>st</sup> Exam
10	Security and Protection	Practice 7. RAID
11	Security and Protection	Practice 8. Priority-Nohup
12	Security and Protection	Practice 9. MySQL, Postgres
13	Security and Protection	Practice 10. LVM
14	Security and Protection	Practice 11. Firewalls
15	Security and Protection	Practice 12. Servers
16	Security and Protection	Practices Retrieval
17	2 <sup>nd</sup> Exam	2 <sup>nd</sup> Exam

## Evaluation

20%	Requested practices (12 practices in total)
40%	Partial exam. 20% will correspond to the practices done.
40%	Partial exam. 20% will correspond to the practices done.

## Bibliography

- Lectures.
- Book:
  - Francesc Solsona. "Sistemes Operatius. Teoria aplicada". Edicions de la Universitat de Lleida (Col·lecció eines 78). ISBN: 978-84-8409-747-1. 2015.
- Internet:
  - O'reilly: [safari.oreilly.com](http://safari.oreilly.com)