

Course guide

230312 - ADMINUX - Administrating Linux Systems

Last modified: 25/05/2023

Unit in charge: Barcelona School of Telecommunications Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering.

Degree: BACHELOR'S DEGREE IN TELECOMMUNICATIONS TECHNOLOGIES AND SERVICES ENGINEERING (Syllabus 2015). (Optional subject).
BACHELOR'S DEGREE IN ELECTRONIC ENGINEERING AND TELECOMMUNICATION (Syllabus 2018). (Optional subject).

Academic year: 2023 **ECTS Credits:** 2.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: Consultar aquí / See here:
<https://telecos.upc.edu/ca/estudis/curs-actual/professorat-responsables-coordinadors/responsables-assignatura>

Others: Consultar aquí / See here:
<https://telecos.upc.edu/ca/estudis/curs-actual/professorat-responsables-coordinadors/professorat-assignat-idioma>

PRIOR SKILLS

Knowledge of Internet Protocol (IP).

TEACHING METHODOLOGY

Theoretical/practical lessons at the laboratory and practical exercises at home.

LEARNING OBJECTIVES OF THE SUBJECT

Achieve a sufficient level of knowledge to be able to understand/manage a Linux box and a network of Linux boxes.

STUDY LOAD

Type	Hours	Percentage
Hours small group	20,0	40.00
Self study	30,0	60.00

Total learning time: 50 h

CONTENTS

1- Basic Linux Description

Description:

- 1.1. Introduction
- 1.2. Processes
- 1.3. system Files
- 1.4. Descriptors File

Full-or-part-time: 7h

Laboratory classes: 7h

2- Virtualization and network applications

Description:

- 2.1. Virtualization
- 2.2. Network applications
 - 2.2.1. Network layer and basic tools
 - 2.2.2. Basic applications: telnet, ftp, ssh, web and inetd
 - 2.2.3. Linux graphical interface

Full-or-part-time: 5h

Laboratory classes: 5h

3- Shell scripts

Description:

- 3.1. Expansions
- 3.2. Regular Expressions
- 3.3. Conditionals
- 3.4. Variables
- 3.5. Functions

Full-or-part-time: 4h

Laboratory classes: 4h

4- System administration

Description:

- 4.1. Users management
- 4.2. Special file permissions
- 4.3. System clock
- 4.4. Start up applications
- 4.5. System logging
- 4.6. Creating filesystems

Full-or-part-time: 4h

Laboratory classes: 4h

GRADING SYSTEM

Deliverable with practical exercises. The percentage of the final mark of each subject is the following:

- Subject 1 40%
- Subject 2 20%
- Subject 3 20%
- Subject 4 20%

BIBLIOGRAPHY

Basic:

- Cannon, J. Linux para principiantes. CreateSpace Independent Publishing Platform, 2014. ISBN 9781499550023.

RESOURCES

Other resources:

Book and transparency provided by the teacher