

## Course guide

### 230312 - ADMINUX - Linux System Administration

**Last modified:** 11/04/2025

**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:** 2025    **ECTS Credits:** 2.0    **Languages:** Catalan, Spanish

#### LECTURER

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**Coordinating lecturer:** JOSE LUIS MUÑOZ TAPIA

**Others:** Primer quadrimestre:  
JORGE MATA DIAZ - 11  
JOSE LUIS MUÑOZ TAPIA - 11

#### PRIOR SKILLS

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Knowledge of Internet Protocol (IP).

#### TEACHING METHODOLOGY

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

#### LEARNING OBJECTIVES OF THE SUBJECT

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

#### STUDY LOAD

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

**Total learning time:** 50 h



## CONTENTS

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### 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

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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

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### Basic:

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

## RESOURCES

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### Other resources:

Book and transparency provided by the teacher