

Academic Year: ( 2019 / 2020 )

Review date: 15-05-2020

Department assigned to the subject: Telematic Engineering Department

Coordinating teacher: MARIN LOPEZ, ANDRES

Type: Electives ECTS Credits : 3.0

Year : Semester :

**REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)**

Systems programming  
Systems architecture

**OBJECTIVES**

- Understand how a networked Linux operating system works.
- Use the different administration tools offered by it.
- Design and implement bash scripts to automate system administration tasks.
- Configure and securely manage the network and network services on a Linux system.

**DESCRIPTION OF CONTENTS: PROGRAMME**

- Introduction to the Linux operating system, user and developer views
- Scheduling tasks with shell script
- Administration tools on a Linux system
- Network configuration on Linux systems
- Network services administration in Linux
- Network security on Linux systems

**LEARNING ACTIVITIES AND METHODOLOGY**

The activities will be the following:

- Lectures: study and explanation of the main concepts of the subject through the use of oral presentations by the lecturer and discussions of the main problems and the solutions proposed in the literature
- Exercise classes: sessions where real problems will be presented to the students. The students will analyse these problems and they will propose suitable solutions.
- Labs: concrete small scale problems will be presented to the students. They have to propose solutions based on the concepts explained in the lectures and exercise classes and, with the supervision of the lab teacher, they have to implement their solutions.

**ASSESSMENT SYSTEM**

Different activities will be carried out to assess the students maturity level on the subject:

- Lab submissions.
- Intermediate exam on lab assignments.
- Final exam including theory concepts and problems/exercises to be solved by students.

**% end-of-term-examination:** 50

**% of continuous assessment (assignments, laboratory, practicals...):** 50

**BASIC BIBLIOGRAPHY**

- Ken O. Burtch Linux Shell Scripting with Bash, Sams, 2004
- Christine Bresnahan, Christopher Negus Linux Bible, Wiley, 2012

**ADDITIONAL BIBLIOGRAPHY**

- Wale Soyinka Linux Administration: A Beginner's Guide, McGraw-Hill, 2015

