

Network Laboratory

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Chapter 1

About the course

1.1 Course Data

Code: 21728

Course name: “Laboratori de Xarxes i Serveis”

Teachers: Ruizhi Liao, Alex Bikfalvi and Jaume Barcelo

Credits: 4

Year: 2nd year

Trimester: Spring

1.2 Introduction

The goal of this course is to acquire hands-on experience with networking equipment such as access points, switches, routers and firewalls. The students are assumed to be familiar with the high-level functionality of each of these devices. Nevertheless, the actual configuration of the equipment and the construction of prototype networks will provide further insights on the operation of network devices. After the course, the student

will be ready to plan and configure a small network.

1.3 Syllabus

- Lectures
 1. Introduction to the Networking Laboratory
 2. Traffic analysis and IEEE 802.11 WLANs
 3. Virtual Local Area Networks and Spanning Tree Protocol
 4. Routers
 5. Firewalls
- Lab Assignments
 1. Traffic analysis
 2. IEEE 802.11 Wireless Local Area Networks (WLANs)
 3. Virtual local area networks (VLANs)
 4. Spanning Tree Protocol (STP)
 5. Routing
 6. Firewalls

1.4 Bibliography

TBD

1.5 Evaluation Criteria

The grading is distributed as follows:

- Lab assignments, 70%
- Continuous assessment quiz, 10%
- Final exam, 20%

It is necessary to obtain a decent mark (half of the available points) in all the different evaluation aspects.

1.6 Lab Report

For each lab assignment, it is necessary to prepare a lab report answering all the questions. The students are also expected to include additional information, explanation and comments besides those explicitly asked in the assignment.

1.7 Survival guide

1.7.1 Questions and doubts

We like to receive questions and comments. Normally, the best moment to express a doubt is during the class, as it is likely that many people in the class share the same doubt. If you feel that you have a question that needs to be discussed privately, we can discuss it right after the class.

1.7.2 Continuous feedback

At the end of lectures, we will ask you to provide some feedback on the course. In particular, we always want to know:

- What is the most interesting thing we have seen in class.
- What is the most confusing thing in the class.

- Any other comment you may want to add.

1.7.3 How to make you teachers happy

Avoid speaking while we are talking.