

DTC-GITT-422 Network Integration

SEMESTER: Spring
CREDITS: 4.5 ECTS
LANGUAGE: Spanish
DEGREES: 4º GITT

Course overview

This course aims to develop expertise in the area of multimedia communications over IP networks. The technologies studied in the course have enormous relevance and applicability in multiple scenarios of current and future services, both in the world of telecom operators, as well as in the business communications environment and in the vibrant world of communications services on the Internet.

Prerequisites

- Generic notions on communication networks (LAN).
- Generic notions on the TCP/IP architecture.
- Generic notions on media coding/decoding techniques.

Course contents

Theory:

1. Introduction (signalling and media concepts, QoS, media codecs review)
2. Transport of Multimedia Information
3. Multimedia Session Description Protocol
4. Signalling protocols and architectures for Multimedia Communications (SIP)

Laboratory:

Units 2-5 described previously have at least two associated lab practices in 2 hours sessions.

Textbook

- RTP, audio and video for the Internet. Collin Perkins. Addison-Wesley

- Internet Multimedia Communications Using SIP. Rogelio Martinez. Morgan-Kauffman
- The IMS. IP Multimedia concepts and services. Wiley. Poikselka and Mayer
- Voice over LTE. Poikselka. Holma and others
- High Performance Browser Networking. Grigorik.

Grading

The following conditions must be accomplished to pass the course:

- A minimum overall grade of at least 5 over 10.
- A minimum grade in the final exam of 4 over 10.

The overall grade is obtained as follows:

- Final exam accounts for 50% of the final grade.
- Continuous evaluation and mid-term exam account for 20% of the grade
- Lab reports account for 30% of the grade.