



Course guide

320176 - COM - Multimedia Communications

Last modified: 11/04/2025

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 744 - ENTEL - Department of Network Engineering.

Degree: BACHELOR'S DEGREE IN AUDIOVISUAL SYSTEMS ENGINEERING (Syllabus 2009). (Optional subject).

Academic year: 2025 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer: JUANJO ALINS DELGADO

Others: JOSE LUIS MUÑOZ TAPIA

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

STUDY LOAD

Type	Hours	Percentage
Hours large group	30,0	50.00
Hours small group	30,0	50.00

Total learning time: 60 h

CONTENTS

Unit 1. Introduction to multimedia communications

Description:

- Applications and multimedia services.
- Requirements for multimedia communications.
- Quality of service multimedia networks.

Full-or-part-time: 30h

Theory classes: 6h

Laboratory classes: 6h

Self study : 18h

Unit 2. Transport of multimedia information in IP networks

Description:

- Characteristics of multimedia traffic.
- Transport protocol and encapsulation of multimedia information.
- Control protocols for multimedia communications.

Related activities:

Theoretical explanation with problems.
Laboratories.

Full-or-part-time: 32h

Theory classes: 6h
Laboratory classes: 8h
Self study : 18h

Unit 3. Diffusion of multimedia content in IP networks

Description:

- Multi-destination routing IP.
- Management of multi-target groups.
- Interconnection of multi-destination networks.

Related activities:

Classes with theoretical explanation and problems.
Laboratories.

Full-or-part-time: 20h

Theory classes: 4h
Laboratory classes: 4h
Self study : 12h

Unit 4. Establishment and control of multimedia sessions

Description:

- Definition of multimedia session.
- Description of multimedia session.
- Announcement of multimedia sessions.
- Protocols for establishing multimedia sessions.

Related activities:

Classes with theoretical explanation and problems.
Laboratories.

Full-or-part-time: 50h

Theory classes: 10h
Laboratory classes: 10h
Self study : 30h

Item 5. Multimedia services in IP networks

Description:

- Description of multiservice architectures: Triple Play.
- Video distribution services.
- Voice over IP services.
- Videoconferencing.

Related activities:

Classes with theoretical explanation and problems.
Laboratories.

Full-or-part-time: 18h

Theory classes: 4h

Laboratory classes: 2h

Self study : 12h

GRADING SYSTEM

BIBLIOGRAPHY

Basic:

- Braun, Kelly [et al.]. Usabilidad. Madrid: Anaya Multimedia, 2003. ISBN 8441514763.
- Alarcón, José Manuel. Programación en JavaScript. Madrid: Anaya Multimedia, 2000. ISBN 8441510040.
- Álvarez García, A.; Morales Grela, J. A. HTML 4. Madrid: Anaya Multimedia, 2000. ISBN 844151030X.