

29695 - Multimedia Systems

Syllabus Information

Academic Year: 2022/23

Subject: 29695 - Multimedia Systems

Faculty / School: 110 - Escuela de Ingeniería y Arquitectura

Degree: 558 - Bachelor's Degree in Industrial Design and Product Development Engineering

ECTS: 6.0

Year: 4

Semester: Second semester

Subject Type: Optional

Module:

1. General information

2. Learning goals

3. Assessment (1st and 2nd call)

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

This course deals with two important ways of using multimedia as communication technology: websites, and mobile apps based on web technologies. An adequate understanding of the concepts addressed is achieved promoting an active participation of students, so a strict distinction between problem solving and computer lab sessions will not be made.

4.2. Learning tasks

1. **Theory Sessions.** 30 on-site hours

One half of theory sessions are lectures whereby the teacher presents the theoretical foundation

The other half of theory sessions are based on illustrative applied problems with the aim of learning software tools and technologies

3. **Problem solving sessions.** 18 on-site hours

1. The teacher proposes a collection of exercises related to theoretical contents

4. **Computer lab sessions.** 12 on-site hours

The students carry out the proposed activities whose overall goal is creating a website and a mobile app based on web technologies

6. **Individual work.** 24 off-site hours

Work consists in creating a medium-complexity website and a mobile app based on web technologies

4.3. Syllabus

Theory Syllabus

1. Overview of Multimedia
2. Fundamentals of Internet and World Wide Web

3. Web Technologies and Standards
 - HTML and CSS
 - JavaScript and DOM
 - Frameworks
 - Server-side Languages
 - CMS
5. Web Design
 - Planning
 - Usability
 - Architecture
 - Exploration
 - Implementation
 - Optimization
7. Media Criteria
8. Mobile Apps Based on Web Technologies

Practice Syllabus

1. Webpages and Websites Creation
2. Scripts
3. Frameworks
4. Responsive Web Design
5. CMS
6. Mobile App Creation

4.4. Course planning and calendar

The course is estimated to take 150 hours of student effort.

- 60 on-site hours
 - 30 theory hours: 30 one-hour sessions
 - 18 problem solving sessions.** 18 one-hour sessions
 - 12 computer lab hours: 6 two-hour sessions
- 90 off-site hours
 - Study hours, works and exams

Detailed information will be provided on the first day of class.

4.5. Bibliography and recommended resources

<https://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=29695>