Multimedia

Academic Year: (2021 / 2022) **Review date: 28-06-2021**

Department assigned to the subject: Computer Science and Engineering Department, Signal and Communications Theory

Coordinating teacher: GONZALEZ CARRASCO, ISRAEL

Type: Compulsory ECTS Credits : 6.0

Year : 4 Semester : 1

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

Linear Algebra (1st course, 1st semester)
Computer Architecture (3th course, 1st semester)

OBJECTIVES

1. Theoretical knowledge on the development of multimedia systems
2. Capacity to define usability and utility requirements, designing multimedia presentations and systems for everyone according to a set of specifications (CECRI1)
3. Capacity to design, implement and evaluate multimedia presentations and systems, respecting standards and laws
4. Capacity to problem-solving and decision-making with initiative, autonomy, and creativity
5. Teamwork, taking different roles and proving its leadership
6. Capacity to communicate knowledge, skills, and capabilities

DESCRIPTION OF CONTENTS: PROGRAMME

1. Introduction to Multimedia
2. Digitalization
3. Codification of multimedia content (audio, voice, image, video)
3.1. Audio codification
3.2. Video codification
5. Text coding (Natural Language Processing)
6. Multimedia Information Recovery Systems. Generic architecture of an RI system
7. Indexing, Storage and Consultation of multimedia contents

LEARNING ACTIVITIES AND METHODOLOGY

- Theoretical lectures: 1,5 ECTS
Lectures in which theoretical concepts on multimedia contents will be presented.
- Practical lectures: 1,5 ECTS
Program different types of encoders in order to understand the technical principles on which multimedia systems are based. Work with automatic multimedia content processing and content retrieval techniques.
- Continuous evaluation exercises: 2,5 ECTS. Two work projects are proposed in order to solve problems and apply knowledge.
- Final Exam: 0,5 ECTS.
- Tutorials: TUTORIALS. Individualized (individual tutorials) or group (group tutorials) assistance to students by the professor.

ASSESSMENT SYSTEM

- Design project: 70% (CEIC1 y CECRI1).
- Exam: 30% (CEIC1 y CECRI1).

The design project is divided into two parts:
Design Project Block 1 (50%).
Design Project Block 2 (50%).

In order to pass the continuous assessment, it is mandatory to obtain a MINIMUM MARK OF 4 in the final exam.

% end-of-term-examination:	30
% of continuous assessment (assigments, laboratory, practicals…):	70

BASIC BIBLIOGRAPHY

- J. Krasner Motion Graphic Design: Applied History and Aesthetics, Focal Press.
- N. Champan; J. Chapman Digital Multimedia, John Willey.
- V. Costello Multimedia Foundations. Core Concepts for Digital Design, Focal Press.