

## SUBJECT TEACHING GUIDE

### G832 - Multimedia Electronic Systems

#### Degree in Telecommunication Technologies Engineering

Academic year 2019-2020

| 1. IDENTIFYING DATA              |   |                  |                    |                  |                  |
|----------------------------------|---|------------------|--------------------|------------------|------------------|
| Degree                           | Degree in Telecommunication Technologies Engineering  |                  |                    | Type and Year    | Optional. Year 4 |
| Faculty                          | School of Industrial Engineering and Telecommunications   |                  |                    |                  |                  |
| Discipline                       | Subject Area: Applied Electronics   |                  |                    |                  |                  |
| Course unit title and code       | G832 - Multimedia Electronic Systems  |                  |                    |                  |                  |
| Number of ECTS credits allocated | 6   | Term             | Semester based (1) |                  |                  |
| Web                              | <a href="http://moodle.unican.es/course/view.php?id=1171">http://moodle.unican.es/course/view.php?id=1171</a> |                  |                    |                  |                  |
| Language of instruction          | Spanish   | English Friendly | Yes                | Mode of delivery | Face-to-face     |

|                  |   |  |  |  |  |
|------------------|---|--|--|--|--|
| Department       | DPTO. TECNOLOGIA ELECTRONICA E INGENIERIA DE SISTEMAS Y AUTOMATICA                              |  |  |  |  |
| Name of lecturer | PABLO PEDRO SANCHEZ ESPESO  |  |  |  |  |
| E-mail           | pablo.sanchez@unican.es   |  |  |  |  |
| Office           | E.T.S. de Ingenieros Industriales y de Telecomunicación. Planta: - 3. DESPACHO PROFESOR (S3002) |  |  |  |  |
| Other lecturers  | IÑIGO UGARTE OLANO<br>JESUS MIGUEL PEREZ LLANO  |  |  |  |  |

### 3.1 LEARNING OUTCOMES

- Participants acquire the ability to understand the operation of the audio and video capture systems.
- Participants acquire basic knowledge about the development of audio/video compression systems
- To learn implementation techniques of multimedia systems

#### 4. OBJECTIVES

- To study audio/image capture and reproduction systems
- To know basic techniques for multimedia information management
- To understand the functional behavior of electronics systems that process audio and image signals

#### 6. COURSE ORGANIZATION

##### CONTENTS

|   |   |
|---|---|
| 1 | Hardware platforms for multimedia systems           |
| 2 | Sound   |
| 3 | image   |
| 4 | Multimedia systems                                  |
| 5 | Implementation and management of multimedia systems |

#### 7. ASSESSMENT METHODS AND CRITERIA

| Description  | Type         | Final Eval. | Reassessn | %             |
|--|--------------|-------------|-----------|---------------|
| Continuous evaluation  | Others       | No          | Yes       | 20,00         |
| Final exam   | Written exam | Yes         | Yes       | 50,00         |
| Laboratory exercises   | Work         | No          | No        | 30,00         |
| <b>TOTAL</b>   |              |             |           | <b>100,00</b> |
| <b>Observations</b>  |              |             |           |               |
| If a student cannot participate in a continuous evaluation exercise or the exercise grade is less than the final exam grade the continuous evaluation exercise will not be taken into account and its grade percentage will be added to the final exam percentage. |              |             |           |               |
| Observations for part-time students  |              |             |           |               |

#### 8. BIBLIOGRAPHY AND TEACHING MATERIALS

##### BASIC

- Z-N Li, M Drew, J Liu, "Fundamentals of Multimedia". Springer. 2nd Edition. 2014.
- R. Steinmetz, K. Nahrstedt, "Multimedia Fundamentals", Volumen 1. Prentice Hall. 2002.
- Computer vision: Principles and Practice. P. Azad et all. Elektor.