

1. OVERVIEW

| Subject area | Advanced Audiovisual Technology |
|----------------|---|
| Degree | Bachelor's Degree in Audiovisual Communication |
| School/Faculty | Social Sciences and Communication |
| Year | 3rd |
| ECTS | 6 ECTS |
| Туре | Optional |
| Language(s) | Spanish |
| Delivery Mode | Campus-based |
| Semester | Second |

2. INTRODUCTION

Advanced Audiovisual Technology is a subject area part of module 4: Production, which is taught in the 4th year of the Bachelor's Degree in Audiovisual Communication.

Advanced Audiovisual Technology is a subject area with the general objective to ensure that the student uses the image and sound recording techniques learned in previous disciplines and applies them to an audiovisual project. The professional technical requirements for the delivery of the audiovisual product and the delivery formats established by these technical requirements shall apply.

3. SKILLS AND LEARNING OUTCOMES

Basic skills (CB, by their acronym in Spanish):

- ⇒ CB1: Students have demonstrated knowledge and understanding of a study area originating from general secondary school education, and are usually at the level where, with the support of more advanced textbooks, they may also demonstrate awareness of the latest developments in their field of study.
- □ CB2: Students know how to apply their knowledge to their work or vocation professionally and have the skills that are usually demonstrated by forming and defending opinions and solving problems within their study area.
- ⇒ CB4: Students can convey information, ideas, problems and solutions to both specialist and non-specialist audiences.
- ⇒ CB5: Students have developed the necessary learning skills to undertake further studies with a high degree of independence.

General skills (CG, by their acronym in Spanish):



- ⇒ CG1: Ability to identify, interpret, formulate and solve problems arising in the field of Audiovisual Communication.
- □ CG2: Ability to understand and transmit the different social, cultural and political realities in audiovisual products, and apply the current regulations from an open and tolerant viewpoint.
- ⇒ CG3: Ability to develop audiovisual projects and products.
- ⇒ CG4: Ability to apply new technologies in professional environments in the field of Audiovisual Communication.
- ⇒ LEARNING UNIT 2. Ability to act in accordance the with fundamental rights and the equality between men and women, equal opportunities and universal accessibility for people with disabilities and with the values of a culture of peace and democratic values in an audiovisual communication environment.

Cross-curricular skills (CT, by their acronym in Spanish):

- ⇒ CT1: Independent Learning: Ability to choose the most effective strategies, tools and opportunities for learning and independently put into practice what has been learnt.
- ⇒ CT3: Ability to adapt to new situations: Being able to evaluate and understand different points of view, adapting one's own approaches to suit the situation.
- □ CT13: Problem solving: Ability to resolve an unclear issue or complex situation which has no established solution that keeps them from achieving an objective.
- ⇒ CT17: Group work: Ability to integrate oneself and collaborate actively with other people, departments and/or organisations to achieve shared objectives.
- □ CT18: Use of information and communication technology (ICT): Ability to effectively use information and communication technology such as tools for searching, processing and storing information, as well as for the development of communication skills.

Specific skills (CE, by their acronym in Spanish):

- ⇒ LEARNING UNIT 2. Knowledge of technological tools, how they can be used and applied to audiovisual communication.
- ⇒ LEARNING UNIT 2. Ability to apply creative techniques to audiovisual product design in an innovative way.
- ⇒ LEARNING UNIT 2. Knowledge of the technological tools, from audiovisual equipment to the specific hardware and software required for the creation, project production and exchange and the broadcast of audiovisual products.
- ⇒ LEARNING UNIT 2. Knowledge of the techniques and uses of graphic design applied to the media and new audiovisual environments, following aesthetic, audiovisual, artistic criteria, etc., adding value to each project through the creative process.



- ⇒ LEARNING UNIT 2. Ability to use their own digital tools applied to the generation of multiplatform audiovisual content.
- ⇒ LEARNING UNIT 2. Knowledge of the foundations and techniques of photography and how to apply them for digital image creation.
- ⇒ LEARNING UNIT 2. Knowledge of technical tools in order to select those that are most appropriate for the development of both 2D and 3D animation projects.
- ⇒ LEARNING UNIT 2. Ability to design, shape and develop audiovisual projects, taking into account the social environments in which the project will be developed.
- ⇒ LEARNING UNIT 2. Ability to create special effects in audiovisual productions.
- ⇒ LEARNING UNIT 2. Ability to identify trends in each of the communication disciplines in terms of their application within the audiovisual sector.
- ⇒ LEARNING UNIT 2. Knowledge of the technical tools used in the recording, post-production and reproduction of sound in all its forms in the different types of audiovisual industries.
- ⇒ LEARNING UNIT 2. Ability to know and correctly apply the English language both spoken and written in the professional field as a basic tool of the audiovisual industry.
- ⇒ LEARNING UNIT 2. Knowledge of the correct use of Spanish, both spoken and written, as a means of transmitting information in the audiovisual field and in a professional environment.

Learning outcomes (RA, by their acronym in Spanish):

• RA1: Skilfully handle the systems and specialised technological equipment related to audiovisual recording, editing and *mastering*.

The following table shows how the skills developed in the subject area relate to the intended learning outcomes:

| Skills | Learning outcomes |
|---|-------------------|
| CB1, CB2, CB4, CB5, CG1, CG2, CG3, CG4, CG5, CT1, CT3, | |
| CT13, CT17, CT18, CE1, CE2, CE3, CE6, CE7, CE8, CE9, | |
| CE10, CE14, CE15, CE17, CE18, CE19, CE21, CE22 | |
| CB1, CB2, CB4, CB5, CG1, CG2, CG3, CG4, CT1, CT3, CT13, | |
| CT17, CT18, CE1, CE2, CE3, CE6, CE7, CE9, CE10, CE14, | RA1 |
| CE15, CE17, CE18, CE19, CE21, CE22 | |
| CB1, CB2, CB4, CB5, CG1, CG2, CG3, CG4, CT1, CT3, CT13, | |
| CT17, CT18, CE1, CE2, CE3, CE6, CE7, CE8, CE9, CE10, | |
| CE14, CE15, CE18, CE19, CE22 | |



4. CONTENTS

The subject is organised into five learning units:

LEARNING UNIT 1. UHD DIGITAL IMAGE

LEARNING UNIT 2. CINEMATIC IMAGE CAPTURE AND RECORDING

LEARNING UNIT 2. CODING, CONTAINER FORMATS

LEARNING UNIT 4. 4K AND 8K UHD DIGITAL CINEMA

LEARNING UNIT 5. STREAMING

LEARNING UNIT 6. POST-PRODUCTION AND MASTERING PRODUCTS AND

PROCESSES

5. TEACHING-LEARNING METHODS

The types of teaching-learning methods are as follows:

- 1. Lecture
- 2. Case studies
- 3. Project-based learning
- 4. Collaborative learning

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

| Learning activity | Number of hours | |
|-------------------------------------|-----------------|--|
| Lectures | 21 h | |
| Asynchronous lectures | 9 h | |
| Project development and design | 30 h | |
| Group activities (seminars, forums) | 40 h | |
| Group tutorials | 10 h | |
| Independent working | 20 h | |
| TOTAL | 150 | |

7. ASSESSMENT

The assessment systems, plus their weighting in the final grade for the subject area, are as follows:

| Assessable task | Assessment criteria | Weighting |
|-----------------|---------------------|-----------|
| | | (%) |
| | | |



| Activity 1 | Portfolio DSLR video capture and recording | 10% |
|------------|---|-----|
| Activity 2 | Performance observation Introduction to the TV performance control signal environment | 10% |
| Activity 3 | • Projects Routing, monitoring and quality control of video signal | 15% |
| Activity 4 | Projects Advanced image capture and recording on film cameras | 20% |
| Activity 5 | Portfolio Research Work "Digital Video Broadcast Formats" | 10% |
| Activity 6 | Projects Installation and configuration for live streaming production | 15% |
| Activity 7 | Objective on-campus test of the knowledge acquired on audiovisual technology | 20% |

On the Virtual Campus, when you open the subject area, you can see all the details of your assessable tasks and the deadlines and assessment procedures for each task.

8. BIBLIOGRAPHY

The recommended bibliography is indicated below:

- Sistemas de televisión (clásicos y avanzados) Tomás Bethencourt Instituto RTVE. 2.a Edición: 1990, 1991, 17 24 cm, 400 págs. ISBN: 84-86984-54-8
- CARRASCO, J. (2010): Cine y Televisión Digital. UBe: Barcelona. CASTILLO, J.M. (2007): Televisión y lenguaje audiovisual CD Rom Interactivo. Madrid: IORTV. MARTÍNEZ
- ABADÍA, J. (2004): Manual básico de tecnología audiovisual y técnicas de creación, emisión y difusión de contenidos. Barcelona: Paidós.
- PAREJA CARRASCAL, E. (2004): Tecnología actual de Televisión. Madrid. IORTV.
- MILLERSON, G. (2007): Realización y producción en televisión. Madrid. IORTV.
- ORIHUELA, J. L. Y SANTOS, M. L. (1999): Introducción al diseño digital. Concepción y desarrollo de proyectos de comunicación interactiva. Madrid: Anaya Multimedia
- OWENS, Jim. Television Sports Production. Focal Press. 2006.
- SWEETOW, Stuart. Corporate video production beyond the board room. Focal Press. 2011
- Tecnología actual de Televisión Emilio Pareja Carrascal Instituto RTVE. 1º Edi
- El arte del vídeo digital John Watkinson Instituto RTVE. 1.a Edición: 1993, 17 24 cm, 636 págs. ISBN: 84-86984-81-5
- El arte del audio digital John Watkinson Instituto RTVE. 1ª. Edición: 1993, 2002,2007 17 24 cm, 588 págs. ISBN: 84-86984-87-4



- Códigos de tiempo John Ratcliff Instituto RTVE. 1.a Edición: 1995, 17 24 cm, 228 págs. ISBN: 84-88788-05-3
- Compresión en vídeo y audio John Watkinson Instituto RTVE. 1.a Edición: 1995, 17 24 cm, 222 págs. ISBN: 84-88788-13-4
- Manual del interfaz digital F. Rumsey y J. Watkinson Instituto RTVE. 1.a Edición: 1996, 17 24 cm, 334 págs. ISBN: 84-88788-20-7
- Televisión en virtual Esteban Galán Cubillo (Prólogo de José Mª Castillo) Instituto RTVE.
 1.a Edición.