COURSE DATA

DATA SUBJECT

Code: 36484
Name: Audiovisual production and edition
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1407 - Degree in Multimedia Engineering	Escola Tècnica Superior d'Enginyeria	3	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1407 - Degree in Multimedia Engineering	Producción Audiovisual	COMPULSORY

COORDINATION

SANCHEZ CASTILLO SEBASTIAN

SUMMARY

INTRODUCTION TO THE SUBJECT

The subject **Production and Audiovisual Edition**, provides the student with advanced skills in capturing audiovisual files with Broadcast quality, intended for implementation in complex multimedia systems. The production and editing process defines both the visual and video models, photography, graphics, etc., as well as the generated or imported sound contents. For which, the student will receive theoretical knowledge of the technologies applied to audiovisual media, including the ability to use them in the construction and manipulation of the various products that reach the field of audiovisual communication. The course will begin with the most up-to-date audiovisual professional techniques, their manipulation, adjustments and the compatibility of the different existing formats.

GENERAL OBJECTIVES

The objectives of the subject **Production and Audiovisual Edition**, will be established in two blocks:

A) Knowledge of the fundamentals of image capture. Properties of light, lenses, geometry of image formation. Theoretical-practical knowledge of digital tools for lighting treatment and manipulation.

Expressive resources and their function. Introduction to history and photographic genres.

B) Training, use and management of cameras, magnetoscopes, microphones and other devices for capturing audiovisual resources; as well as the knowledge and benefits of the main technological formats and professional dissemination systems.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

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G2 - Have the learning skills needed to undertake further studies or to gain further training with a certain degree of autonomy. (RD1393/2007)

G4 - Be able to integrate into working groups and collaborate in multidisciplinary environments and be able to communicate properly with professionals from all fields.

G5 - Be able to lead working groups properly, respect and appreciate the work of others, take into account the needs of the group and be available and accessible.

MM13 - Know and be able to use the techniques of digital audio and directional audio systems that can be integrated into multimedia applications.

MM16 - Have theoretical and practical knowledge of the technologies applied to audiovisual media (photography, radio, sound, television, video, film and multimedia).

MM18 - Know the basic tools available for creating multimedia contents including high-definition video and audio.

MM21 - Communicate effectively, both in writing and verbally, knowledge, procedures, results and ideas related to ICT and specifically to multimedia, and know their socioeconomic impact.

MM23 - Make proper use of theories, procedures and tools in the professional development of multimedia engineering in a real context (specification, design, implementation, deployment and evaluation of multimedia systems solutions).

MM28 - Be able to solve problems with initiative, decision-making and creativity and to communicate and transmit the knowledge, abilities and skills of a multimedia engineer.

MM2 - Be able to understand and manage the different technologies involved in multimedia systems, both from the point of view of hardware and electronics and of software.

MM8 - Integrate knowledge of different multimedia technologies to create products that offer global solutions that are appropriate to each context.

DESCRIPTION OF CONTENTS

1. Fundamentals of Image Capture

1.1. The electronic camera. Camera blocks

- Types of cameras
- ENG / EFP / studio / outdoor configurations
- Evolution of CCDs. Sensitivity. Errors

1.2. Video signal

- Levels and adjustments
- Camera synchronization (Genlock)

1.3. Digital formats and compatibility

1.4. Lenses and the geometry of image formation

- Types and uses of lenses
- Focal distance, depth of field and focus, f-number, hyperfocal distance

1.5. Direction and expressive resources and their function

2. Fundamentals of Professional Lighting

2.1. General concepts of light and the camera

- Observation and perception: why and what for do we light?

2.2. Sensitivity and latitude

- How the human eye and the camera perceive light
- Colorimetry

2.3. Shots and framing in image composition in relation to lighting

- Classical extremes: Low Key and High Key
- Types of light: artificial, natural, direct, indirect, hard, soft

2.4. Properties of light

- Visible spectrum
- Color temperature
- Chromatic triangle

2.5. Lighting materials and equipment

- Gas halogens
- Fluorescent tubes

- Discharge lamps, etc.

2.6. Artificial light sources

- Types of light they produce
- Filters and accessories: neutral, ND, diffusers

2.7. Measurement systems

- Photometers
- Color thermometers
- Color correction

2.8. Basic lighting setups

- Basic configuration of lighting elements

2.9. Lighting design for different formats

- Interviews, news reports, objects, studio

3. Fundamentals of Sound Capture

3.1. Sound design

- Audible spectrum

- Frequency optimization for broadcast

3.2. Microphones: technology and setup

- Sound adjustment for broadcast
- Types and limitations
- Audio channels. International sound
- XLR (or Cannon) connectors

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	10,00
Laboratory	45,00
Classroom practices	5,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	0,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**0,00**

TEACHING METHODOLOGY

A) The first part of the subject Acquisition Audiovisual Techniques will be developed by classroom and theoretical:

1. Presence activities which correspond to 40% of the time and refers to:
1. 1. Lecture: focusing primarily on the general introduction of matter and methodological dimensions needed to be applied in the development of each of the subjects in order to:

- Provide an overview of the content, competencies and skills that are thinking of buying, and the acquisition of conceptual boundaries more relevant and necessary;
- Provide appropriate guidance regarding treatment of the texts proposed for individual reading, analysis and critique of the same;
- Set the tone for scientific work as it affects the methodology and techniques of study and research.

1. 2. Individual and group tutoring in order to perform queries, provide directions and answer questions of theoretical and methodological with respect to the subject in general and specific aspects of different subjects.

2. Autonomous activities which correspond to 60% of the time and refers to:

2. 1. Consultation and review of the literature by the students.

2. 2. Preparation, individually or in groups, exposure in the classroom following the guidelines that the teacher will check off for the various stages of the process.

2.3. Development of different phases of scientific work.

2.4. Specific preparation of the final test.

B) The second part of the course was developed by classroom instruction with practical.

Within a group dynamic and criteria of collaborative work, case studies will be resolved in the audiovisual lab environment. In the ideation of audiovisual projects developed in the practical sessions will take into account the reuse of files managed and recorded in this module for later use in the course of **Audiovisual Production and Editing Laboratory**

EVALUATION

Being a theoretical-practical, the evaluation will consist of the mandatory few practical cases developed with the tec

1. Objective test consisting of a test in which both consist of theoretical assumptions related to how the contents of the subject: The result of this test represent 40% of the final mark and must obtain a minimum score of 5 on 10.

2. Assessment of practical activities in groups: This score represents 50% of the final grade and will also require a minimum score of 5 out of 10.

3. Continuous assessment of each student, based on participation and involvement of the student in the teaching-learning process, given regular attendance and classroom activities provided for resolution of issues and problems posed: will represent 10% of the final grade.

To be evaluated, we must have made both the examination and practical work done in groups. Overcoming the subject by the student requires two linked academic requirements: (1), the attendance at lectures and participation taught in the classroom, (2), participation in the work in the practical sessions. (3), to obtain a definitive evaluation of the course, both sides, the theory and practice, should be adopted.

Copying or plagiarism of any activity that is part of the evaluation will result in the impossibility of passing the course, and the student will then be subject to the appropriate disciplinary procedures indicated in the ACTION PROTOCOL FOR FRAUDULENT PRACTICES AT THE UNIVERSITY OF VALENCIA (ACGUV 123/2020).

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