

**COURSE DATA****Data Subject**

Code	36484
Name	Audiovisual production and edition
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1407 - Degree in Multimedia Engineering	School of Engineering	3	First term

Subject-matter

Degree	Subject-matter	Character
1407 - Degree in Multimedia Engineering	17 - Producción Audiovisual	Obligatory

Coordination

Name	Department
SANCHEZ CASTILLO, SEBASTIAN	340 - Language Theory and Communication Sciences

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

Without prerequisites

OUTCOMES

1407 - Degree in Multimedia Engineering

- 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.
- 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.
- 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.

LEARNING OUTCOMES

A) This course allows for the following learning outcomes:

1. Capacity for understanding and managing the various technologies involved in multimedia systems.
2. Integrate knowledge of different media technologies to create products that offer comprehensive solutions tailored to each context.
3. Be able to create multimedia content authoring environments broadcast production and digital publishing.
4. Theoretical and practical knowledge of the technologies applied to the audiovisual media (photography, radio, sound, television, video, film, and multimedia), including the ability to use in the construction and manipulation of the various devices in field audiovisual communication.
5. Ability to solve problems in their field of study, analyzing and critically evaluating problems and providing solutions.
6. Decision-making ability based on objective criteria, logically arguing and justifying the decisions and opinions.
7. Ability to integrate into working groups and work in multidisciplinary settings, being able to communicate well with professionals at all levels.
8. Adequate capacity to lead working groups.
9. Interpersonal skills.
10. Capacity for organization and planning.
11. Ability to adapt to technological and organizational changes.
12. Show initiative, drive for quality and continuous improvement.
13. Communicate effectively both in writing and orally, knowledge, procedures, results and ideas related to systems and multimedia products.
14. Have the learning skills necessary to continue independently with the formation after completion of studies
15. Date knowledge and techniques on productive routines companies Television and Multimedia Production. New ways of understanding the companies and audiovisual services.

B) This course can also acquire the following skills:

1. Ability to create audiovisual products
2. Knowledge of the phases of audiovisual production and postproduction.
3. Plan and implement a process of producing an audiovisual content.
4. Domain of technological tools necessary for the construction of audiovisual projects.



5. Develop strategies to meet unforeseen contingencies in the process of editing and audiovisual postproduction.
6. Being able to critically analyze an audiovisual work from the mount to the post regarding the communication strategy that is articulated.

C) Social skills:

1. Group work, participatory and collaborative dynamics.
2. Creative, dialogical, communicative and expressive.
3. Acceptance and / or replication of critical assessments made publicly by others.

DESCRIPTION OF CONTENTS

1. Basis of theory image acquisition

1. The electronic camera. Camera block.
 - Types of cameras.
 - Configurations ENG / EFP / set / outdoor
 - Evolution of the CCD. Sensitivity. Errors.
2. Video signal.
 - Levels and settings
 - Synchronization of cameras (Genlock)
3. Digital formats / compatibility
4. The lens geometry of the image formation.
 - Types and use of lenses.
 - Focal length, depth of field and focus. No. f. Hyperfocal.
5. Performing and expressive resources and function

2. Basis of theory professional lighting

1. General concepts of light and the camera: observation and perception: Why and what light?
2. Sensitivity and latitude: how to read the human eye and camera.
 - Colorimetry
3. The shots and their frames in the composition of the image related to lighting. Extreme classic, Low Key and High Key.
 - Types of light. Artificial, natural, direct, indirect, hard, etc..
4. Properties of light
 - Visible spectrum
 - Color temperature °K
 - Triangle color.
5. Materials and lighting equipment:
 - Halogens gas
 - Tubes



- In discharge, etc..
- 6. Artificial light sources:
 - What kind of light produced
 - Filters and accessories. Neutral. ND. Diffusers.
- 7. Measuring systems:
 - Photometer
 - temperature meter
 - Color Correction
- 8. Basic lighting schemes:
 - Basic configuration of elements
- 9. Lighting designs for various formats: interviews, news, objects set.

3. Basis of theory sound acquisition

- 1. Sound.
 - Audible spectrum. Optimization of frequencies for Broadcast.
 - Microphones, technology and configuration.
 - Adapting Broadcast Sound
 - Type and limitations
 - Audio channels. International sound.
 - XLR or Cannon

WORKLOAD

ACTIVITY	Hours	% To be attended
Laboratory practices	45,00	100
Theory classes	10,00	100
Classroom practices	5,00	100
Development of group work	2,00	0
Development of individual work	2,00	0
Study and independent work	2,00	0
Readings supplementary material	2,00	0
Preparation of evaluation activities	2,00	0
Preparing lectures	2,00	0
Preparation of practical classes and problem	2,00	0
Resolution of case studies	1,00	0
TOTAL	75,00	



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 technical teams of the TV set and non-linear editing suites, as well as the consolidation of some necessary theoretical content. The evaluation system of the subject **Audiovisual Production and Edition** will be related to:

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.

REFERENCES

Basic

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Additional

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- BARROSO, J. (1994). Técnicas de realización de reportajes y documentales para televisión, Madrid, IORTV.
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