

CENTRO UNIVERSITARIO DE TECNOLOGÍA Y ARTE DIGITAL



ACADEMIC PROGRAM

MUSIC AND SOUND DESIGN

1. BASIC INFORMATION/GENERAL INFORMATION

Degree:	Bachelor in Interactive Product Design
Faculty or Centre:	Centro Universitario de Tecnología y Arte Digital (U-TAD)
Area:	Audiovisual Production and Development
Course:	Music and Sound Design
Year:	Third
Teaching period:	Second
Type:	Compulsory subject
ECTS credits::	6
Teaching modality:	classroom-based course
Language:	English
Lecturer/Teacher:	Cristina Aguilar Hernández
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2. SUBJECT DESCRIPTION

Area description

This subject belongs to the module of Conceptual Design and Ideation and, within this, to the area of Audiovisual Production and Development.

This area refers to the study and practice of the set of fundamental artistic techniques of creation and their application to the digital environment, such as video games. In it, the student obtains diverse skills related to art, and acquires the necessary knowledge of digital tools that will allow them to use them.

Subject description

This subject, by its nature, has an interdisciplinary character with subjects in the fields of technology, communication, fine arts and humanities.

The subject has a general focus: to provide students with basic knowledge of music and sound and, above all, to encourage their intellectual curiosity. It will also seek to provide conceptual and practical tools to carry out basic work on the sound of images. The aim is to provide future professionals in the field of digital product design with fundamental and basic references about the role of music and sound in the audiovisual world.

3. SKILLS AND LEARNING OUTCOMES

3.1 Skills

GC1 Lifelong learning through self-study and lifelong learning.

GC2 Knowing how to adapt to change and new situations with flexibility and versatility.

GC3 To develop creativity and innovation and have the ability to present new resources, ideas and methods in order to subsequently turn them into actions.

GC5 Demonstrate initiative and entrepreneurial spirit.

GC6 To demonstrate motivation for quality.

GC12 Express a critical and self-critical sense and the ability to analyse in order to evaluate different alternatives.

CB4 That students are able to transmit information, ideas, problems and solutions to both specialised and non-specialised audiences.

CB5 That students have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

SC9 To understand the principles of audiovisual narrative in order to develop discourses and stories applicable to interactive products.

GC11 Apply creativity in the digital content environment.

GC18 Apply theoretical and practical knowledge of product design to the development of content.

3.2 Learning outcomes

Transferring knowledge of the psychological and perceptual effects of light, colour, music and sound to game design

4. CONTENTS

- Fundamentals of Music
- Music and Sound narrative
- Sound Edit and Design
- Introduction to the Music composition workflow and methodologies
- Music and Sound in the audiovisual industry

5. SUBJECT SYLLABUS:

Topic 1. Introduction. Fundamentals of music and sound

1.1 Fundamentals of music

1.2.1 How to listen to music: melody, harmony, texture, rhythm.

1.2.2 Music and emotions

1.2 Introduction to acoustics

Theme 2. Narrative of sound and music

2.1 Music, narrative and sound effects: ambience, character design, leitmotifs

2.2 Structural functions of music and sound in film: music and audiovisual editing.

2.3 Music, sound effects and video game design: adaptive and interactive music. Procedural elements in video game music.

2.4 Brief history of music and video games. Music genres and video game genres.

Theme 3. Sound Editing and Sound Design

3.1 Introduction to Sound Design (sound libraries, copyright)

3.1.2 Sound Synthesis and Sound Effects

3.2 Post-production and mixing

3.2.1 Panning, reverb, delay, EQ and compression

3.2.2 Mixing

3.2.3 Introduction to music production

3.3 Recording

3.3.1 Recording techniques

3.3.2 Foley

3.3.3 Voice over, voice dubbing and voice editing

3.4. Interactive sound production: interactive sound generation with FMOD

6. TRAINING ACTIVITIES AND TEACHING METHODS

Teaching methods

The subject will be developed through the following general methods and techniques, which will be applied differently depending on the characteristics of the subject:

- **Expository method/Master lecture:** the lecturer will develop the contents of the syllabus through master classes and dynamic lectures.
- **Case studies:** analysis of real cases related to the subject.
- **Exercise and problem solving:** students will develop the appropriate solutions by applying transformation procedures to the information available and interpreting the results.
- **Problem-based learning:** using problems as a starting point for the acquisition of new knowledge.
- **Cooperative learning:** students work in groups to carry out tasks collectively.

Training activities

LEARNING ACTIVITIES	Total hours	Hours of attendance	% attendance
Theory classes	30	30	100
Seminars and workshops	3	3	100
Practical classes	21	21	100
Tutoring	4	4	100
Evaluation activities	6	6	100
Study and group work	18	1	5
Self-study and individual work	68	0	0

7. TEMPORAL DEVELOPMENT

Subject	Week
Theme 1 Introduction. Fundamentals of music and sound	1,2,3,4,5
Theme 2 Narrative of Sound and Music	6,7,8,9,10,11
Theme 3 Sound editing and design	12,13,14,15

8. EVALUATION SYSTEM

ACTIVIDAD DE EVALUACIÓN	VALORACIÓN MÍNIMA RESPECTO A LA CALIFICACIÓN FINAL (%)	VALORACIÓN MÁXIMA RESPECTO A LA CALIFICACIÓN FINAL (%)
SE1 Assessment of participation in class, practicals or projects of the subject.	10%	30%
SE2 Evaluation of assignments, projects, reports, reports, reports	35%	70%
SE3 Objective assessment	30%	60%

Grading criteria:

EVALUATION ACTIVITY	EVALUATION CRITERIA	EVALUATION CRITERIA ASSESSMENT IN RELATION TO THE FINAL GRADE (%)
SE1 Assessment of participation in class, practicals or projects of the subject.	Students will be assessed on their active participation and the correct submission of the practical exercises in due form and on time.	10%
SE2 Evaluation of assignments, projects, reports, reports, reports	Degree of depth acquired in the analysis of sound elements in audiovisual productions. Capacity for written expression.	60%
SE3 Objective assessment	Cleanliness, level of detail, precision, demonstration of assimilation of concepts. Assimilation of concepts. Originality and level of detail.	30%

General comments on the evaluations/assessments:

- In order to pass the course in ordinary exams, attendance must be equal to or higher than 80%.
- The student must submit and pass the final exercise in order to pass the course. 80% of the class exercises must be handed in and passed.
- In the extraordinary exam, students must submit all pending work. Students must fulfil the same requirements as in the ordinary exam in order to pass the course. The final exercise will count for 40% of the evaluation.

- In order to pass the course, it will be necessary to pass both the theoretical and practical parts.
- Any detection of plagiarism in a paper or exam will result in the failure of that paper with a zero, a report to the faculty and academic coordinator and the application of the current regulations, which can lead to very serious penalties for the student.

9. LIST OF REFERENCES (BOOKS, PUBLICATIONS, WEBSITES):

Key references

COLLINS, K. (2008). *Game sound: An introduction to the history, theory, and practice of video game music and sound design*. Cambridge, MA: MIT Press.

KAMP, M., Summers, T., & Sweeney, M. (2016). *Ludomusicology: Approaches to Video Game Music*. Equinox Publishing.

Recommended references

BALL, Philip. *El instinto musical: escuchar, pensar y vivir la música*. Turner, 2012.

CHION, Michel. *La audiovisión: introducción a un análisis conjunto de la imagen y el sonido*. Grupo Planeta (GBS), 1993.

COLLINS, K. (2013). *Playing with Sound: A Theory of Interacting with Sound and Music in Video Games*. Cambridge, MA: MIT Press.

CUADRADO Méndez, Francisco José, y Juan José Domínguez López. *Teoría y técnica del sonido*- Madrid: Síntesis, 201

DITTMAR, T. (2012). *Audio Engineering 101: A Beginner's Guide to Music Production* (Edición: 1). Focal Press.

HOROWITZ, Steve, Looney, Scott R (2014). *The Essential Guide to Game Audio: The Theory and Practice of Sound for Games*. New York and London: Focal Press

Summers, T. (2016). *Understanding Video Game Music*. Cambridge University Press.

ROSE, Jay. *Producing Great Sound for Film and Video: Expert Tips from Preproduction to Final Mix*. New York, 2014.

WILLIAMS, Duncan, y Newton Lee. *Emotion in Video Game Soundtracking*. Springer, 2018.

Webgrafía

8 bit Music Theory –<https://www.youtube.com/c/8bitMusicTheory>

Jaime Altozano - https://www.youtube.com/channel/UCa3DVIGH2_QhvwuWIPa6MDQ

Pau the Player - <https://www.youtube.com/c/PauThePlayer/null>

Mike Russell – <https://www.youtube.com/user/musicradiocreative/featured>

Sideways – <https://www.youtube.com/channel/UCi7I9chXMIjpUft67vw78qw>

El Sonidista Fantasma –

<https://www.youtube.com/channel/UCqm05UM0AAO8I8I5wuC6ODA>

Hoy Grabo (dudas técnicas, Adobe Audition): <https://www.youtube.com/c/HoyGrabo>

10. Required materials, software and tools

Type of classroom:

Projection equipment and whiteboard Blackboard virtual room

Materials:

Laptop computer

Webcam

Microphone

Software:

Adobe Audition, Adobe Premiere. CakeWalk (de BandLab). FMOD Studio Suite