# UAB Universitat Autònoma de Barcelona

# **Music Informatics**

Code: 100669 ECTS Credits: 6

2024/2025

Degree	Туре	Year
2500240 Musicology	ОТ	3
2500240 Musicology	ОТ	4

# Contact

### **Teaching groups languages**

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You can view this information at the <u>end</u> of this document.

### Prerequisites

Basic knowledge, acquired from completing "Musical language I" and "Musical language II", is required. A good level of English is advisable.

# **Objectives and Contextualisation**

The primary objective of the course is for the student to acquire a panoramic view of the main technological applications used for the creation and production of music. For this reason, several possibilities for the creation and production of music in a recording studio will be presented.

At the end of the course the students must be able to:

1. Have a general vision of the possibilities of applying technologies linked to musical creation.

2. Be fluent in a DAW environment with MIDI and audio capabilities.

3. Know how to deal with the arrangement and production of complex music.

4. Have the practical vocabulary for understanding the analysis and description of any sound phenomenon.

5. Have a solid theoretical basis both in the field of modern music production history and in related procedural and analytical tools.

# Competences

Musicology

- Apply technological and informatic media (internet, data bases, specific editing software and sound processing, etc.) to the discipline of musicology.
- Students must be capable of applying their knowledge to their work or vocation in a professional way and they should have building arguments and problem resolution skills within their area of study.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.
- Students must be capable of communicating information, ideas, problems and solutions to both specialised and non-specialised audiences.

• Students must develop the necessary learning skills to undertake further training with a high degree of autonomy.

# Learning Outcomes

- 1. Apply basic technological concepts linked to music.
- 2. Be familiar with all the computer tools specific to musicollogy and know how to apply them correctly in projects.
- 3. Carrying out a planning for the development of a subject-related work.
- 4. Develop habits for transfer to the ambit of musical dissemination and information the musical training acquired.
- 5. Interpret the rules localized information on the websites of regulatory bodies on the Internet.
- 6. Solve problems of a methodological nature in the area of musicology.
- 7. Solving problems autonomously.
- 8. Use computer applications to edit scores.
- 9. Use sound sequencers and editors at user level.

### Content

#### THEORY:

Recording history: fundamental formats and technologies.

History of music production (1950-2020).

Theoretical fundamentals and basic principles of sound.

Basic aspects about mixing and signal path.

Equalization

Compression

Basic aspects of the MIDI and digital audio protocol.

Introduction to musical production in the DAW environment.

Introduction to sampling and sample bookshops.

Introduction to the synthesis and electronic generation of audio.

Analytical study of several audio production tools with corrective and / or creative capabilities.

#### PRACTICE:

Auditory recognition of the effects and creative processes previously studied.

MIDI recording of a harmonic base line.

Completion of practical activities related to the different methods of sound synthesis.

Remixes of a professional multi-file file.

Mixture of an orchestral arrangement based on a MIDI file.

Composition, production and mixing of a musical background for a video game sequence in a DAW environment.

Composition, production and mixing of music for an advertising spot in the DAW environment.

FINAL PROJECT:

Composition, arrangement, recording, editing and mixing of a self-made song in the recording studio.

# Activities and Methodology

Type: Directed				
Practical sessions	25	1	1, 2, 3, 7, 8, 9	
Teacher lectures	20	0.8	2, 3, 4, 5, 6	
Type: Supervised				
Supervision	7	0.28	3	
Type: Autonomous				
Information search	15	0.6	3	
Practical work and final project	50	2	1, 2, 3, 5, 7, 9	

The course combines theoretical and practical sessions. Historical, theoretical and applied concepts are explained in the theoretical sessions. In the practical sessions, the students will train using the basic functionalities of the software used for the course. For the practical sessions, the student will have a guiding document to go step by step throughout each practice. The final project will be based on a study recording and the delivery of a final report.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

### Assessment

Title	Weighting	Hours	ECTS	Learning Outcomes
Continuous evaluation	30%	3.5	0.14	1, 2, 3, 5, 7, 8, 9
Final project	30%	28	1.12	1, 2, 3, 4, 6, 7, 8, 9
Theory exam	40%	1.5	0.06	1, 6, 7, 8, 9

# **Continous Assessment Activities**

Throughout the course, several continuous assessment activities will be carried out through the Nearpod platform with a weight of 30% on the final grade.

There will be a final synthesis test of theoretical and practical content that will have a weight of 40% on the final grade. The remaining 30% of the grade will be obtained from the final project of the course.

Students who do not pass the course will have take re-evaluation test for the entire course The final project can not be re-evaluated.

If a student does not present the final project, they will be considered "not assessed" for the course.

Students who take the single assessment must deliver three specific exercises: a) synthesis of concepts on the subject articles (30%) b) individual work similar to the final project (40%) and c) questionnaire proposed by the teacher (30%).

### **Bibliography**

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MARTIN, George (1979): All you need is ears. New York: St. Martin's Griffin.

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MILES, Huber David (2007): The MIDI Manual. Abingdon: Focal Press.

LEVITIN, Daniel (2007). How recordings are made I: analog and digital tape-based recording. In Audio Anecdotes III (pp. 3-14). AK Peters/CRC Press.

(2014): Modern Recording Techniques. Abingdon: Focal Press.

RUDOLPH, Thomas E. (1996): Teaching Music With Technology. Chicago: GIA Publications.

RUDOLPH, Tom; RICHMOND, Floyd; MASH, David and WILLIAMS, David (2002): *The Technology Strategies for Music Education*. Londres: Hal Leonard Publishing.

SIMONS, Dave (2004). *Studio Stories: How the Great New York Records Were Made: From Miles to Madonna, Sinatra to the Ramones.* Hal Leonard Corporation.

THEBÉRGE, Paul (1997): Any Sound You Can Imagine: Making Music/Consuming Technology. Middletown: Wesleyan University Press.

TRYNKA, Paul (Ed)(1996): Rock hardware: 40 years of rock instrumentation. London: Balafon Books.

WACHOLTZ, Larry E. (1996): Star tracks. Principles for success in the music and entertainment business. Nashville: Thumbs up Publishing.

WARNER, Timothy (2003): Pop music, tecgnology and creativity. London: Asgate.

#### Software

AUDACITY https://www.audacityteam.org

REAPER Digital Audio Workstation. https://www.reaper.fm

### Language list

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	1	Catalan	first semester	morning-mixed
(TE) Theory	1	Catalan	first semester	morning-mixed