



Universitat de Lleida

DEGREE CURRICULUM  
**THEORY AND PRACTICE OF  
SOUND AND SPEECH  
PRODUCTION**

Coordination: CANO SOBREVALS, JORDI

Academic year 2022-23

## Subject's general information

<b>Subject name</b>	THEORY AND PRACTICE OF SOUND AND SPEECH PRODUCTION			
<b>Code</b>	101967			
<b>Semester</b>	2nd Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	<b>Degree</b>	<b>Course</b>	<b>Character</b>	<b>Modality</b>
	Bachelor's Degree in Audiovisual Communication and Journalism	2	COMPULSORY	Attendance-based
<b>Course number of credits (ECTS)</b>	6			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRALAB	PRAULA	TEORIA
	<b>Number of credits</b>	1.5	1.5	4.5
	<b>Number of groups</b>	2	2	1
<b>Coordination</b>	CANO SOBREVALS, JORDI			
<b>Department</b>	SPECIAL DIDACTICS			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
CANO SOBREVALS, JORDI	jordi.cano@udl.cat	3	
MANYOSES CARLES, OSCAR	oscar.manyoses@udl.cat	2,25	
TOLMOS TENA, ANTONIO	antoni.tolmos@udl.cat	4,5	
VIÑALS SÁNCHEZ, ÁLEX	alex.vinyals@udl.cat	,75	

## Subject's extra information

For further information about the evaluation, see the related documents in RESOURCES or Sakai

## Learning objectives

- Understand the physical concepts necessary to understand the characteristics of the sound and its perception
- Understand the operation of the electroacoustic instrumental that is used in the process of capture, treatment and recording of sound
- Understand the operation of digital audio for later application in audiovisual productions
- Understand and use the expressive possibilities of sound in audiovisual productions

## Competences

Competencies	Educational objectives
Ability to apply theoretical knowledge in practice	Understand the concepts necessary to understand the physical characteristics of sound and its perception
Ability to record audio signals from any sound source (acoustic or electronic, digital or analog) and mix materials with an intention certain quests, taking into account the levels, effects and final mix mastered plans	Meet the operation of electroacoustic instruments used in the process of collecting, processing and recording of sound
Ability to design and conceive the presentation according to the characteristics of creative and expressive proposed project director audiovisual	Understand the operation of the digital audio application later in audiovisual productions
Knowledge to plan and track acoustic representations of space, design and decoration sound and its relationship with journalistic messages	Know and use the expressive possibilities of sound in audiovisual productions

## Subject contents

### **Unit 1 The sound in the computer environment:**

- 1.-The operation of hardware for audio
- 2.-Specific software for editing and sound processing

### **Unit 2 Digital processing and audio formats:**

- 1.-The sound files, settings, format conversions and codecs
2. Mid-sound transmission and distribution

### **Unit 3 General notions of acoustics:**

- 1.-Nature of Sound
- 2.-The voice-human hearing.
- 3.-Wave theory of sound.
- 4.-Auditoriums and small-Acoustic insulation

### **Unit 4 digital sound processing:**

- 1.-Processors
- 2.-Filters and equalization

## **Unit 5 Electroacoustic**

- 1.-The chain-Audio
- 2.-Treatment electro-signal
- 3.-Sound-spaces and recording equipment
- 4.-Filtering
- 5.-Implementation-control audio visual requirements in different
- 6.-Stereo, quadrifonia: controls 'pan' and uses.
- 7.-The Hi-fi concept.

## **Unit 6 Techniques Recording and production**

- 1.-Sound-capture system
- 2.-Procedures-recording
- 3.-Multitrack-recording
- 4.-Weather-recording and discussion before a

## **Unit 7 Microphone**

- 1.-Characteristics of microphones
- 2.-Choose-and location of the microphone
- 3.-Uses and installation

## **Unit 8 The expressive function of sound**

- 1.-The expressive function
- 2.-The expressive qualities of sound
- 3.-Elements in the audio visual

## **Unit 9 The mixer and ICON**

1. The mixer-analog and digital.
2. The mix-Audio.
3. Treatment-sound from the table: previous pan filters, the reverb, compressor, doors ...
- 4.-Routing, buses and auxiliary

## **Unit 10 Production and postproduction.**

- 1.-The study of sound. Spaces, instruments and Protocols
- 2.-The production-line (the direct)
- 3.-The production-study offline (editing, post-production and arrangements)

4.-Criteria and standards for use in the editing room

5.-General-operation

## **Unit 11 Protocols.**

1.-General Characteristics of Protocols.

2.-Multitrack-the edition.

3.-Production and post-production with Protocols

4.-The technique of mixing and mastering

## **Unit 12 Sound design, music creation and MIDI**

1.-Sound-Design

2.-The soundtrack: voice, music and the visual effect

## **Unit 13 The sound and dubbing**

1.-Dubbing techniques

2.-The sound of audiovisual

3.-Stereotypes and imagery

4.-Speech and interpretation

5.-The Voice

6.-Impostació and projection

## Methodology

activity	Codification / description / type TPD	O*	G*	HP*	HNP*
<b>Lecture (M)</b>	See syllabus and schedule	O1, O2, O3, O4	1	32	50
<b>Seminars(S)</b>					
<b>Practices(P)</b>	Practices in the sound studio. See schedule	O1, O2, O3, O4		32	30
<b>Works (T)</b>	Tres treballs pràctics de producció de so	O1, O2, O3, O4		4	24
<b>Tutorials (Tut)</b>					4
<b>Other (AA)</b>	Tutories opcionals + Taller d'Avaluació	O1, O2, O3, O4		3	10
<b>Evaluation(AV)</b>	Vegeu taula de mecanismes d'avaluació	O1, O2, O3, O4		4	
<b>TOTAL</b>	El total absolut sempre ha de sumar 187.5 h (7.5 ECTS) o 150 h (6 ECTS)			75	118

O: Objective. G: number of groups involved in the activity. HP: student contact hours. HNP: not face sessions.

## Development plan

SCHEDULE COURSE: SEMESTER I (Monday)

	GG and Practice Sessions	Exam dates and delivery work	topics
	<b>Monday</b>		
1	<b>15/09</b>		1
2	<b>22/09</b>		2
3	<b>06/10</b>		3
4	<b>13/10</b>		4
5	<b>20/10</b>	Delivery Practices 1,2,3 20/10	5
6	<b>27/10</b>	Exam 1 27/10	6
7	<b>31/11</b>	Exam 1 31/03	7
8	<b>10/11</b>	Delivery Practices 4,5,6 10/11	8
9	<b>17/11</b>		9
10	<b>24/11</b>		10
11	<b>01/12</b>	Delivery Practices 7-9 01/12	11
12	<b>15/12</b>	Delivery of individual 15/12	12
13	<b>12/01</b>	The practices will be assessed directly to the 10-12 second test	13
14	<b>19/01</b>	Exam 2 19/01	
15	<b>26/01</b>	Delivery of Teamwork 26/01	



## Evaluation

Evaluation mechanisms	Codification / description-criteria / typology TPD	Comments	O*	Activity	%*
Evaluation (TA) (Exam)	Exams	Two written exams required <b>(Important:</b> At least one of the two theoretical examinations must be passed to pass the subject)	O1, O2, O3, O4	Master Classes	17+17
		Two written exams or reports required			16+16
Reports (In) / Projects(T)	Compulsory labor	Production work group Analysis work in small group	O1, O2, O3, O4	Projects	17 17
Others (A)					
<b>TOTAL</b>					100

O: Objective. %: Percentage of the final grade.

## Bibliography

### Basic bibliography

Alten, Stanley R. *El Manual del audio en los medios de comunicación* Andoain (Guipuzkoa) : Escuela de cine y vídeo, cop. 4a ed. 1997

Chion, M.; *La Audiovisión: introducción a un análisis conjunto de la imagen y el sonido*. Barcelona: Paidós 1993

Cuenca, Ignasi. *Tecnología básica del sonido*. Madrid : Paraninfo, 1998

Lyver, Des. *Principios básicos del sonido para vídeo*. Barcelona : Gedisa, 2000 Tít. orig.: *Basics of video sound*. Oxford : Focal Press, 1999

Palomo, Miguel. *El Estudio de grabación personal : de las ideas musicales al disco compacto*. Madrid : AMUSIC, cop. 1995

## Additional bibliography

- Amyes, T. *Técnicas de postproducción de audio en video y film*. Madrid: Instituto Oficial de Radio y Televisión. Tít. orig: The technique of audio post-production in video and film. Oxford [etc.] : Focal, 1993 Reimpressions: 1997
- Baker, Wendy. *El So*. Trad. Maria Pau Roca i Maragall. Barcelona : Cruïlla, cop. 1992
- Ballou, Glen (Ed.). *Handbook for sound engineers : the new audio cyclopedia*. Carmel (Ind.) : SAMS, 1991
- Bartlett, Bruce. *Técnicas de micrófonos en estéreo*. Madrid : Instituto Oficial de Radio Televisión Española, 1995
- Chion, M.; *El Sonido música, cine, literatura...* Trad. Enrique Folch González. Barcelona: Paidós 1999
- *La Voz en el cine*. Trad. de Maribel Villarino Rodríguez. Madrid: Cátedra, 2004
- Crespo, Julio. *Audio y vídeo digital*. Madrid : Anaya Multimedia, cop. 2002
- Holman, Tomlinson. *5.1 surround sound : up and running*. Boston [etc.] : Focal Press, cop. 2000
- *Sound for film and television* . Boston - Mass. : Focal Press, 2nd ed. 2002
- Huber, David Miles. *Modern recording techniques*. Boston [etc.] : Focal Press, cop. 2005
- Jordà Puig, Sergi. *Audio digital y MIDI*. Madrid: Anaya Multimedia, cop. 1997
- Katz, Bob *La Masterización de audio : el arte y la ciencia*. Andoain : Escuela de Cine y Vídeo, 2002
- Kinsler, Lawrence E. et al.. *Fundamentals of acoustics*. New York [etc.] : John Wiley & Sons, cop. 2000
- Mark Kahrs, Karlheinz Brandenburg (Eds.) *Applications of digital signal processing to audio and acoustics*. Boston [etc.] : Kluwer Academic Publishers, cop. 1998
- Pohlmann, Ken C. *Principios de audio digital*; Trad. y rev. técnica, Antonio Mínguez Olivares, Francisco Javier Taberero Gil, Jorge Grudman Isla. Madrid [etc.] : McGraw-Hill Interamericana, cop. 2002
- Recuero, Manuel. *Acústica de estudios para grabación sonora*. Madrid : Instituto Oficial de Radio y Televisión, DL 1990
- Recuero, Manuel et al. *Técnicas de grabación sonora*. Madrid : Instituto Oficial de Radio y Televisión, DL 1992
- Rodríguez, A. *La dimensión sonora del lenguaje audiovisual* Barcelona: Paidos
- Rumsey, Francis. *Sonido estereofónico para televisión*. Trad. Dolores Gutiérrez de Frutos. Madrid : Instituto Oficial de Radio y Televisión. Centro de Formación de RTVE, DL 1991
- *Introducción al sonido y la grabación*. Trad. Javier Ferreras. Madrid : Instituto Oficial de Radio Televisión Española, 1994
- *Sonido y grabación : introducción a las técnicas sonoras*. Madrid : Instituto Oficial de Radio y Televisión (IORTV), DL 2004
- Russ, Martin. *Síntesis y muestreo de sonido*. Madrid : Instituto Oficial de Radio y Televisión, 1999
- Tribaldos, Clemente. *Sonido profesional : [estudios de registro profesional]*. Madrid: Paraninfo, 1999
- Van Leeuwen, Theo. *Speech, music, sound*. Houndmills [etc.] : MacMillan, 1999
- Watkinson, John *El Arte del audio digital*. Madrid: Instituto Oficial de RadioTelevisión Española, DL

2001.

------. *An Introduction to digital audio*. Oxford: Focal Press, 2002