ELECTROACOUSTICS LABORATORY

COURSE OUTLINE

1. GENERAL			
SCHOOL	School of Music and Optoacoustic Technologies		
ACADEMIC UNIT	Department of Music Technology and Acoustics		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	0807.4.005.2	**SEMESTER**	2nd
COURSE TITLE	Electroacoustics Laboratory		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course	**WEEKLY TEACHING HOURS**	**CREDITS**
	2	4
Total	**2**	**4**

COURSE TYPE general background, special background, specialised general knowledge, skills development	Scientific area
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS	Greek
OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	https://eclass.hmu.gr/courses/SMOT178/

2. LEARNING OUTCOMES

Learning outcomes

The course is delivered through a series of independent laboratory exercises, providing students with hands-on experience in the operation of audio systems as well as in performing fundamental electroacoustic measurements.
Upon successful completion of the course, students will be able to:
• use a signal generator and an oscilloscope to perform laboratory measurements;
• understand the nature and characteristics of different types of audio signals and ensure their safe, reliable, and high-quality interconnection and transmission;
• understand the methods used for conducting fundamental electroacoustic measurements and perform these measurements in a laboratory environment;
• evaluate the quality and suitability of audio devices and systems based on their technical specifications.

General Competences

The course aims to develop the following general competencies:
• the ability to search for, analyze, and synthesize data and information using appropriate technologies;
• the ability to adapt to new situations;
• the ability to work independently;
• the ability to work effectively as part of a team.

3. SYLLABUS

- Frequency response of audio devices and systems
- Microphone polar patterns
- Passive frequency filters
- Room equalization using a graphic equalizer
- Loudspeaker directivity pattern
- Measurement of crosstalk in multichannel audio devices
- Study of balanced audio signals and direct injection (DI)
- Sound reinforcement systems
- Measurement of acoustic source separation

4. TEACHING and LEARNING METHODS - EVALUATION	
DELIVERY Face-to-face, Distance learning, etc.	in person
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	eclass excel word
TEACHING METHODS The manner and methods of teaching are described in detail.	**Activity** / **Semester workload** Laboratory excercizes / 26 **Course total** / **26**
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	Assessment of laboratory reports - 40% Written exam - 60%

5. ATTACHED BIBLIOGRAPHY

Davis, Gary, and Gary D. Davis. *The sound reinforcement handbook*. Hal Leonard Corporation, 1989.