

ELECTRONIC MUSICAL INSTRUMENTS

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	0807.6.007.1	SEMESTER	2nd
COURSE TITLE	Electronic Musical Instruments		

INDEPENDENT TEACHING ACTIVITIES if credits are awarded for separate components of the course	WEEKLY TEACHING HOURS	CREDITS
	0	6
Total	0	6

COURSE TYPE general background, special background, specialised general knowledge, skills development	Επιστημονικής Περιοχής, Ανάπτυξης Δεξιοτήτων
PREREQUISITE COURSES	None
LANGUAGE OF INSTRUCTION and EXAMINATIONS	English
OFFERED TO ERASMUS STUDENTS	Yes (in English)
COURSE WEBSITE (URL)	

2. LEARNING OUTCOMES
Learning outcomes
The aim of the course is to introduce on the issues of the structure, operation, design and practice of electronic musical instruments and interactive musical systems used for music performance. Upon successful completion of the course, the student will be able to: - Analyse the structure and operation of electronic musical instruments. - To design original new musical instruments. - To experiment with the alternative methods of production & control of sound in music practice either in a group or individually.
General Competences
The course aims to acquire the following general abilities: Search, analysis and synthesis of data and information, using the necessary technologies. Adapting to new situations. Autonomous work. Group work. Work in an interdisciplinary environment. Production of new research ideas. Promotion of free, creative and inductive thinking

3. SYLLABUS
This course aims at acquaintance and familiarization of students with topics related to the structure, operation, design and practice of electronic musical instruments. The thematic sections of the course include: 1) Electronic Musical Instruments: Types, Function, Historical References. 2) Early electronic musical instruments - Composers – Computer use 3) Musical instruments as interactive systems – Parts of the musical instrument. 4) Comparison of acoustic and electronic musical instruments. 5) Generalized model of a musical instrument. 6) Audio design of alternative electronic and hybrid musical instruments 7) Live electronics-History and practices 8) The design and evaluation of electronic musical instruments 9) Exercise of designing an electronic musical instrument for more than two musicians. 10) Selected presentations of the current developments of the field - Examples. - Research methodology, institutions, research organizations, relevant international conferences and journals. – Selection of sources. 11) Personal student work.

4. TEACHING and LEARNING METHODS - EVALUATION		
DELIVERY Face-to-face, Distance learning, etc.	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY Use of ICT in teaching, laboratory education, communication with students	e-class	
TEACHING METHODS The manner and methods of teaching are described in detail.	Activity	Semester workload
	Course total	
STUDENT PERFORMANCE EVALUATION Description of the evaluation procedure	Evaluation language: English 1. Oral examination (30%). 2. Participation in the design exercises (30%) 3. Individual (or in a small group -up to 3 people) design project of exemplary new electronic instrument (40%).	

5. ATTACHED BIBLIOGRAPHY
[1] Σημειώσεις Διδάσκοντος [2] P.R. Cook (ed.), Music, Cognition, and Computerized Sound – An Introduction to Psychoacoustics, The MIT Press, 1999. [3] Davis Hugh, Electronic Musical Instruments, New Grove Dictionary of Music, Macmillan Publishers Ltd, 1998-2002. [4] J. Eaton, "This is an Instrument" in Contemporary Music Review, Vol. 18 Part 3, 1999. [5] S. Emmerson, "Live' versus 'real-time", Contemporary Music Review, 10(2), pp. 95-101, 1994. [6] J. Pressing, Jeff, "Cybernetic Issues in Interactive Performance Systems", Computer Music Journal, Vol. 14 – 1, MIT Press, pp. 12-15, 1990. [7] C. Roads, The computer Music Tutorial, Massachusetts Institute of Technology, 1996. [8] L. Theremin, "Recollections", Contemporary Music Review, Vol. 18, Part 3, 1999.

