



DEPARTMENT OF AUDIO & VISUAL ARTS IONIAN UNIVERSITY

COURSE DESCRIPTION

1. GENERAL			
SCHOOL	MUSIC AND AUDIOVISUAL ARTS		
DEPARTMENT	AUDIO AND VISUAL ARTS		
LEVEL	Undergraduate		
COURSE CODE	AVA544	SEMESTER	5 th
COURSE TITLE	Interactive Multimedia		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	ECTS
Lecture, Lab Lecture		3	5
COURSE CATEGORY	Specific Background		
COURSE TYPE	Elective		
PREREQUISITES	(TEC110)		
LANGUAGE OF TEACHING and EXAMINATIONS	Greek		
THE COURSE IS OFFERED TO ERASMUS STUDENTS	YES (In English)		
URL	https://avarts.ionio.gr/en/studies/undergraduate/courses-descriptions/ava544/		
ECLASS	https://opencourses.ionio.gr/courses/DAVA115/		

2. TEACHING RESULTS

Teaching Results

The main aims of the course is to presentat the theoretical background of multimedia in order for students to acquire practical knowledge and be able to identify characteristics of multimedia, its workflow, understand its complexity during transmission, processing and finally to be able to develop innovative interactive applications using modern techniques and methods. Specifically, students who complete the course successfully should be able to understand the: definitions of multimedia, interaction, feedback, history of multimedia, the application of multimedia today, features and coding of audio, image, video, interaction, modeling, design of modern multimedia systems, interaction complexity, coding of color, text and quality of representation, the online digital information transmission, multicast-unicast networks and their characteristics.

General Skills

- Seek, analyze and synthesize data
- Autonomous work
- Team work
- Project design and management
- Freedom of thought

3. CONTENT

This course introduces state-of-the-art interaction-theories, design methodologies and implementation technologies for the design and development of interactive multimedia systems, commonly used in autonomous modes, handheld devices and networks. Presentation of techniques and standards for the collection, encoding, representation and interaction techniques used for each data-type (sound, image, animation, video) are presented, including specific storage requirements. Moreover, wired and wireless networked interactive multimedia technologies, advanced compression and distribution techniques and protocols, as well as Quality of Service constraints for limited bandwidth networks are analysed. Finally, practical experience is gained in student projects developing networked multimedia systems and standards for interactive networked television and interactive arts. Students have to timely submit a number of compulsory assignments.

Week 1 - Introduction - Examples

- Week 2 Definitions Concepts History and Development of Multimedia
- Week 3 Digital Representation of Information



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- Week 5 Color, Images and Graphics
- Week 6 Audio
- Week 7 Video Week 8 - Computer Multimedia Systems
- Week 9 Developing Multimedia Applications
- Week 10 Networked Multimedia Univast
- Week 11 Networked Multimedia Multicast

- Week 12 Design and development of educational multimedia systems (edutainment)
- Week 13 Project Presentation

In order to complete the course, students are expected to participate in laboratories realizing a total of 4-5 compulsory assignments.

4. TEACHING AND LEARNING METHODS - EVALUATION		
TEACHING METHOD	Lectures	
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	Enhanced by multimedia content. The learning process is supported by the asyncrhonous e- learning platform e-class.	
TEACHING STRUCTURE	ActivitySemester WorkloadLectures26Lab Lectures13Literature Study and56Analysis7Practice and Preparation30Course Total (ECTS: 5)125	
EVALUATION OF STUDENTS	Progress in this course is assessed during the semester by quality implementation and timely submission of the required work and participation in the course activities (presentations, visits, projects, experiments). Submitted work is rated for the quality and scope of the implementation, proper formatting and completeness of the presentation that is often required to be implemented by the students to present the results of their research as part of the lecture. Work sent via other communication channels such as e-mail, social media will not be considered. Students are responsible to seek clarification if they do not understand the assignment and solve their queries during the course laboratory. In order for students to receive their final grade, they must submit a signed statement stating that their work does not contain plagiarism and it was solely created for this particular course. They must also sign the marking form provided by the lecturer during the exam period.	
	Students who do not complete the course and fail for a specific term, can complete and submit the work requested during the most recent semester. As the course progresses from year to year, they should always enquire about the latest exercises which should be present within the e-class system. Those exercises are submitted during the examination date as it is programmed centrally by the department and the students should also sign the form provided during the examination in order for their work to be evaluated and receive the final mark.	

5. BIBLIOGRAPHY



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The books listed are distributed in Greek language. Please contact the professor of the course should you require particular references in your language for easier reading.

Δεληγιάννης Ιωάννης (2010). Διαδραστικά Πολυμέσα και Ψηφιακή Τεχνολογία στις Τέχνες, Fagotto Books, ISBN 978-960-6685-06-4 Εύδοξος: 59359104

Δεληγιάννης Ιωάννης (2010). Η Κοινωνία της Πληροφορίας και ο ρόλος των Διαδραστικών Πολυμέσων (2nd Edition), Fagotto Books.ISBN 960-7075-99-4.

Δημητριάδης Σταύρος Ν.,Πομπόρτσης Ανδρέας Σ.,Τριανταφύλλου Ευάγγελος Γ. Τεχνολογία πολυμέσων Εύδοξος: 18549030

Κωνσταντίνος Χωριανόπουλος, Ο Προγραμματισμός της Διάδρασης Εύδοξος: 59362198