

COURSE OUTLINE

(1) GENERAL

SCHOOL	Social Sciences		
ACADEMIC UNIT	Department of Cultural Technology and Communication		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	PLR 101	SEMESTER	2 nd
COURSE TITLE	Multimedia Technologies		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>	WEEKLY TEACHING HOURS	CREDITS	
Lectures	2	3	
Lab sessions	2	3	
<i>The organisation of teaching and the teaching methods used are described in detail at (d).</i>	4	6	
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Mandatory		
PREREQUISITE COURSES:	N/A		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	https://eclass.aegean.gr/courses/131103/		

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A × Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i></p> <p><i>× Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B × Guidelines for writing Learning Outcomes</i></p>
<ul style="list-style-type: none"> ● At the end of this course, the students will be able to: ● report with accuracy the basic characteristics of digital signals (differences from analog signals, signal digitization and related parameters). ● report with accuracy the signal digitization procedure and the related theory ● Identify the basic kinds of digital signals (1D and 2D). ● Be familiar with color theories, color models, transformations between color models, measurement codes and new technologies such as face detection, pattern recognition with image or video processing. ● Know the latest technologies in digital TV, image and video communication ● Describe the basic theory of signal compression. ● Know the abilities of interactive multimedia ● Composing algorithmic modules using modern freeware software for production, management, storage and retrieval of multimedia applications. ● Communicate efficiently their knowledge, which is acquired from the lectures, to colleagues in order to establish fruitful co-operations for creating cultural informatics applications.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology
 Adapting to new situations
 Decision-making
 Working independently
 Team work
 Working in an international environment
 thinking Working in an interdisciplinary environment
 Production of new research ideas

Project planning and management
 Respect for difference and multiculturalism
 Respect for the natural environment
 Showing social, professional and ethical responsibility and sensitivity to gender issues
 Criticism and self-criticism
 Production of free, creative and inductive

- Collaboration and teamwork
- Search, analysis and synthesis of knowledge
- Promoting creative and inductive thinking
- Knowledge and know-how to other environments

(3) SYLLABUS

This course is an introduction to multimedia and the available technologies applied for multimedia systems development. The course is divided in three sections. The first section introduces the basic multimedia concepts, relevant terminology, as well as issues related to digitization of analogue data, compression, data storage and representation of various media: hypertext, graphics, audio and video. The second section introduces the required hardware and software for the creation, processing and reproduction of multimedia data. In addition, available authoring tools for the development of multimedia data are introduced. While the third section of the course is referred to issues related to the design and development of multimedia data. The course tutorials introduce multimedia authoring tools used in the market. A brief structure of the course is the following:

- Introduction to Multimedia Technologies
- Media and Multimedia
- Interactive Multimedia
- Historical Elements and Use of Multimedia
- Digitization of Analogue Signal
- Compression of Digital Information
- Representation, Manipulation and Types of Text, Color, Image, Graphics, Sound and Video
- Multimedia Information Systems
- Multimedia Application Development

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face supported by Distance learning infrastructure and approaches	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Open-source software for lab sessions	
TEACHING METHODS <i>The manner and methods of teaching are described in detail. Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography,</i>	Activity	Semester workload
	Lectures	13 *2 hours =26 hours
	Lecture material preparation	13*5 hours = 65 hours

<p>tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</p> <p>The student's study hours for each learning activity are given as well as the hours of nondirected study according to the principles of the ECTS</p>	Lab sessions	13*2 = 26 hours
	Lab session preparations	35 hours
	Course total	152 hours
<p>STUDENT PERFORMANCE EVALUATION</p> <p><i>Description of the evaluation procedure</i></p> <p><i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, openended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>The basic student assessment method is the final written exam which includes problem solving and short answer questions.</p> <p>Additionally, during laboratory sessions, exercises are discussed which are evaluated additively to the final score after examination during the end of the academic semester in the laboratory.</p> <p>The evaluation criteria are clearly stated during the first lecture and depicted in the educational material offered in the course's e-class.</p>	

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

- x Σ Ν Δημητριάδης Α Σ Πομπόρτσης Ε Γ Τριαντα λλο Τε νολογία Πολ μέσ ν Α Τζιόλα ιοι Α Ε ISBN: 978-960-418-025-7.
- x Γ Δεληγιάννης Διαδραστικά πολ μέσα και η ιακή τε νολογία στις τέ νες Εκδότης Νίκος Θερμός ISBN: 978-960-6685-06-4.

- Related academic journals:

- x IEEE Transactions on Multimedia x Multimedia Tools and Applications, Springer
- x ACM Transactions on Multimedia Computing, Communications, and Applications
- x Advances in Multimedia An Open Access Journal Hindawi x Multimedia Systems, Springer x IEEE Multimedia