

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF FINE ARTS		
ACADEMIC UNIT	DEPARTMENT OF FINE ARTS AND ART SCIENCES		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	ETEΠ512	SEMESTER	5th, 7th
COURSE TITLE	Computer Science for the Arts II		
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
		3	3
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>	Skills development		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)			

(2) LEARNING OUTCOMES

Learning outcomes <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> <i>Consult Appendix A</i> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes			
Upon successful completion of the course, students are expected to: • Understand the parallel evolution of Informatics and Art. • Grasp the basic principles of Informatics. • Create artistic work using Informatics. • Apply audiovisual artistic creation as a way of perceiving events beyond sensory stimuli. • Develop a critical approach to the use of Artificial Intelligence in their artistic work.			
General Competences <i>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?</i> <table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top; width: 50%;"> <i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> </td><td style="vertical-align: top; width: 50%;"> <i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> </td></tr> </table>		<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i>
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<i>Working in an interdisciplinary environment</i>	
<i>Production of new research ideas</i>	<i>Others...</i>
	
Students are expected to acquire the following general competences: • Search for, analysis and synthesis of data and information, with the use of the necessary technology. • Working independently - Team work. • Project planning and implementation of contemporary Art projects. • Production of new research ideas. • Production of free, creative and inductive thinking. • Working in an interdisciplinary environment.	

(3) SYLLABUS

Informatics, due to its explosive growth in recent decades, has become a significant tool for artists. It is used in a wide range of expressive forms, including: Video Art, Internet Art, 2D and 3D animation, interactive installations, mapping projection, holographic projection, sound environments, audiovisual effects, and many other forms of contemporary artistic creation.

The purpose of the lab-based course cluster "Informatics: Multimedia Art Applications" is to enable students to use technology as a means of expression to create artworks that go beyond simple multimedia presentation and move into more interactive forms such as Interactive Multimedia (interaction with the viewer) and Hypermedia (promoting a high degree of interaction between artwork and user). Part of the syllabus and deliverables (original artistic work) are organically connected to the syllabus and produced work of the workshop "Painting–3D Representations with New Technologies."

The course "Informatics for Art II" focuses on two main areas: the use of the internet as a means of artistic expression and the exploration of sensor capabilities through the Arduino platform. In the first part, students examine the internet both as a technological infrastructure and as a tool for creative practice. They acquire basic knowledge about web technologies, including content management systems and web design principles. They also explore internet art, emphasizing forms like interactive and nonlinear narratives, leveraging digital media capabilities to produce original works. In the second part, the course introduces students to basic sensor use principles for capturing physical parameters (e.g., motion, temperature, sound, or light), which are converted into digital data via the Arduino platform.

This practice initiates exploration of interactive possibilities between the artwork and the viewer in the context of interactive art installations. Simultaneously, it presents opportunities for integrating Artificial Intelligence, along with the importance of developing a critical perspective toward digital tools and emerging technologies.

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face. The teaching methodology is student-centered and constructive, based on active engagement through cooperative group methods (respecting diversity and equal opportunities), building on students' prior knowledge (including alternative conceptions discussed through dialogue), aiming at investigative-discovery learning, interdisciplinary approaches, development of critical and creative thinking, and metacognition.																								
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	ICT is used in teaching, lab work, and student communication. Infrastructure includes video projectors, computers with Arduino software, Arduino platforms with peripherals, internet access, and additional tools that enhance interaction and creative engagement.																								
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<table border="1"> <thead> <tr> <th><i>Activity</i></th><th><i>Semester workload</i></th></tr> </thead> <tbody> <tr> <td>Lectures</td><td>25</td></tr> <tr> <td>Laboratory Practice</td><td>25</td></tr> <tr> <td>Project</td><td>25</td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr> <td>Course total</td><td>75</td></tr> </tbody> </table>	<i>Activity</i>	<i>Semester workload</i>	Lectures	25	Laboratory Practice	25	Project	25															Course total	75
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STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	At the end of the semester, students are required to present an individual or group artistic project, depending on the complexity and scope of the proposal. Throughout the course, emphasis is placed on the progressive development of the project through all stages — from initial concept and artistic inspiration to design, technical implementation, and final presentation. This structure encourages active participation, collaboration, critical thinking, and experimentation.																								

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

NET ART

Bazzichelli, T. *Networking: The Net as Artwork*. Digital Aesthetics Research Center, Aarhus University, 2008.

Bosma, J. *Nettitudes: Let's Talk Net Art*. NAI Publishers (Rotterdam) & Institute of Network Cultures (Amsterdam), 2011.

Colburn, R., Kyrnin, J. & Lemay, L. *HTML5, CSS & JavaScript: Complete Manual (7th Ed.)*. Giourdas Publications, 2016.

Greene, R. *Web Work: A History of Internet Art*. *Artforum*, Vol. 38, No. 9, <https://www.artforum.com>, May 2000.

Karampas, E. & Papastamou, V. *From Video Art to New Media Art, Digital Art, Tactical Media Art and the Post-Media Condition [Chapter]*. In Karampas, E. & Papastamou, V. *Transitions: From Modern to Contemporary Art – Critical Approaches [Undergraduate textbook]*. Kallipos, Open Academic Editions, <https://hdl.handle.net/11419/10049>, 2023.

Kolokythas, K. *Websites and HTML [Chapter]*. In Kolokythas, K. *Digital Media in Audiovisual Arts [Undergraduate textbook]*. Kallipos, Open Academic Editions, <https://hdl.handle.net/11419/3497>, 2015.

Kyrnin, J. & Meloni, J.C. *Learn HTML5, CSS & JavaScript All in One (3rd Ed.)*. Giourdas Publications, 2021.

Meixnerová, M. (Ed.). *#mm Net Art—Internet Art in the Virtual and Physical Space of Its Presentation*. Link Editions, Brescia + PAF, Olomouc, 2019.

Paraskevas, M. *The Internet and its Services [Chapter]*. In Paraskevas, M., Asimakopoulos, G. & Triantafyllou, V. *Information Society [Undergraduate textbook]*. Kallipos, Open Academic Editions, <https://hdl.handle.net/11419/409>, 2015.

Santorinaios, M., Zoi, S., Dimitriadis, N., Diamantopoulos, T. & Bardakos, G. *From Complex Arts to Hypermedia and New Virtual Spaces: A Handbook for the Artist Engaged with Digital Art [Undergraduate textbook]*. Kallipos, Open Academic Editions, <https://dx.doi.org/10.57713/kallipos-4522>, 2015

Rhizome. <https://rhizome.org/>

Net Art Anthology. <https://anthology.rhizome.org/>

Arduino

Banzi, M. & Shiloh, M. *Getting Started with Arduino (3rd Ed.)*. Maker Media, 2014.

Blum, J. *Exploring Arduino*. Wiley, 2013.

Bouras, A. & Kappos, G. *Arduino: Algorithms, Programming, and Applications*. Kleidarithmos Editions, 2021.

Margolis, M. *Arduino Cookbook (2nd Ed.)*. O'Reilly, 2011.

Monk, S. *Programming Arduino: Getting Started with Sketches (2nd Ed.)*. McGraw-Hill, 2013.

Papazoglou, P. & Lionis, S.P. *Developing Applications with Arduino (3rd Ed.)*. Tziolas Editions, 2021.

<https://create.arduino.cc/projecthub>

<https://forum.arduino.cc>

<https://www.arduino.cc>

<https://www.arduino.cc/en/Guide>