

COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF EDUCATION		
ACADEMIC UNIT	DEPARTMENT OF PRIMARY EDUCATION		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	ΔΕΕ601	SEMESTER	H (SPRING)
COURSE TITLE	Educational Programming Environments		
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, laboratory exercises		3	5
<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>	special background, specialised general knowledge, skills development		
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes		
COURSE WEBSITE (URL)	http://ecourse.uoi.gr/course/view.php?id=114		

(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</i></p> <ul style="list-style-type: none"> • <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> • <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> • <i>Guidelines for writing Learning Outcomes</i> 								
<p>Students are expected to demonstrate knowledge and understanding in the field of Computer Science. The course is about computer programming. Emphasis is given on optical programming environments with blocks.</p> <p>Students will be able to apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences in teaching computer programming in schools. They are expected to have the ability to gather and interpret relevant data, communicate information, ideas, problems and solutions on programming environments, algorithms, programming structures and integrated programs. They will develop those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy on the design of computer programs for students.</p>								
<p>General Competences</p> <p><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></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i></td> <td style="width: 50%; border: none;"><i>Project planning and management</i></td> </tr> <tr> <td style="border: none;"><i>Adapting to new situations</i></td> <td style="border: none;"><i>Respect for difference and multiculturalism</i></td> </tr> <tr> <td style="border: none;"><i>Decision-making</i></td> <td style="border: none;"><i>Respect for the natural environment</i></td> </tr> <tr> <td style="border: none;"><i>Working independently</i></td> <td style="border: none;"><i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i></td> </tr> </table>	<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i>	<i>Project planning and management</i>	<i>Adapting to new situations</i>	<i>Respect for difference and multiculturalism</i>	<i>Decision-making</i>	<i>Respect for the natural environment</i>	<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>
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<i>Working independently</i>	<i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i>							

<i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>Others...</i>
<ul style="list-style-type: none"> • Search for, analysis and synthesis of data and information, with the use of the necessary technology • Decision-making • Working independently • Team work • Working in an interdisciplinary environment • Project planning and management • Respect for the natural environment • Criticism and self-criticism • Production of free, creative and inductive thinking 	

(3) SYLLABUS

<p>The course “Educational Programming Environments” deals with the design of learning activities based on programming environments, suitable for primary education. Emphasis is given on free optical programming environments with blocks like Scratch.</p> <p>Students’ participation in the course is obligatory. The student cannot omit more than two sessions. The course involves a theoretical, a laboratory part as well as homework submission.</p>
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(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	Use of ICT in teaching, laboratory education, communication with students.	
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>	Activity	Semester workload
	Teaching hours	9
	Laboratory hours	30
	Examination hours	3
	Homework hours	25
	Study hours	40
	Other (software management)	18
	Course total	125
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>	Summative and conclusive evaluation. Problem solving, written work, laboratory work.	

(5) ATTACHED BIBLIOGRAPHY

- Suggested bibliography:

Μικρόπουλος, Τ. Α. (2000). Εκπαιδευτικό λογισμικό: Θέματα σχεδίασης και αξιολόγησης λογισμικού υπερμέσων. Αθήνα: Κλειδάριθμος.

Prensky, M. (2009). Μάθηση βασισμένη στο ψηφιακό παιχνίδι. Αθήνα: Μεταίχμιο.

- Related academic journals:

- Θέματα Επιστημών και Τεχνολογίας στην Εκπαίδευση
- British Journal of Educational Technology
- Computer Science Education
- Computers & Education
- Education and Information Technologies
- Educational Technology Research & Development
- Interactive Learning Environments
- International Journal of Artificial Intelligence in Education
- Journal of Computing in Childhood Education
- Journal of Educational Technology & Society
- Journal of Interactive Media in Education
- Journal of Research on Technology in Education
- Themes in science and technology education