

## COURSE OUTLINE

### (1) GENERAL

<b>SCHOOL</b>	SCHOOL OF SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF MATHEMATICS		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE PROGRAM		
<b>COURSE CODE</b>		<b>SEMESTER</b>	<b>G</b>
<b>COURSE TITLE</b>	NEW TECHNOLOGIES IN EDUCATION		
<b>INSTRUCTORS</b>	Andreas Papasalouros (Lecture), Nikolaos Papaloukas (Lab sessions)		
<b>INDEPENDENT TEACHING ACTIVITIES</b>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
		4	6
<b>COURSE TYPE</b>	Special background		
<b>PREREQUISITE COURSES:</b>	NO		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	GREEK		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	YES		
<b>COURSE WEBSITE (URL)</b>	<a href="http://www.math.aegean.gr/index.php/en/academics/undergraduate-programs">http://www.math.aegean.gr/index.php/en/academics/undergraduate-programs</a>		

### (2) LEARNING OUTCOMES

<b>Learning outcomes</b>
<p>After successfully attending the course, the students are expected to:</p> <p>Know basic learning theories and their implication with educational technologies.</p> <p>Know the categorization of educational software.</p> <p>Understand the concept of a microcosm and know the Logo programming language.</p> <p>Design educational activities with the Logo programming language and the Scratch environment.</p> <p>Design educational activities for mathematics by using mathematical software for algebra and geometry.</p>
<b>General Competences</b>
Working independently. Team work. Working in an interdisciplinary environment.

### (3) SYLLABUS

Introduction of Information and Communication Technologies in Education. Learning Theories. A taxonomy of educational software. Principles of multimedia learning. Educational software evaluation. Microcosms and Logo programming language. The Scratch environment. Collaborative learning. Mathematical educational software.	
<b>TEACHING MATERIAL DISTRIBUTION</b>	The teaching material of the course is uniformly distributed during the semester.

### (4) TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b>	Face-to-face	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b>	<ul style="list-style-type: none"> <li>• Use of ICT in teaching</li> <li>• Communication with students via e-mail</li> <li>• Uploading course material on moodle system.</li> </ul>	
<b>TEACHING METHODS</b>	<i>Activity</i>	<i>Semester workload</i>

	Lectures	26
	Laboratory practice	26
	Independent study	98
	Course total (25 per ECTS)	<b>150</b>
<b>COURSE COMMITMENTS</b>	Attending course is not obligatory.	
<b>STUDENT PERFORMANCE EVALUATION</b>	Student's evaluation is done in Greek through a written examination which includes problem solving and laboratory work. For students with disabilities, evaluation takes place via oral exams.	

#### (5) ATTACHED BIBLIOGRAPHY

1. Christian Depover, Thierry Karsenti, Vassilis Komis, Teaching with the use of technology, Kleidarithmos, 2010 (in Greek).
2. Symeon Retalit (ed.) Advanced learning technologies for learning, Kastaniotis, 2005 (in Greek).
3. Stavros Dimitriadis, Learning Theories and Educational Software, <https://repository.kallipos.gr/handle/11419/3397> (in Greek).