

COURSE OUTLINE

(1) GENERAL

SCHOOL	School of Education		
ACADEMIC UNIT	Department of Primary Education		
LEVEL OF STUDIES	Bachelor		
COURSE CODE	ΔEY018	SEMESTER	6
COURSE TITLE	Didactics of Mathematics – Teaching practice		
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	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		
PREREQUISITE COURSES:			
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=201		

(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>By the end of the course the students are expected to be able to:</p> <ul style="list-style-type: none"> • Solve mathematical problems by applying specific heuristics. • Evaluate a given mathematical problem or one section of a textbook with respect to its realistic nature. • Detect and alter if necessary the context of a mathematical problem. • Plan and teach a module of mathematics based on a particular theoretical approach. 								
<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>
<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>							

<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 • Adapting to new situations • Decision-making • Working independently • Team work • Production of free, creative and inductive thinking 	

(3) SYLLABUS

<ul style="list-style-type: none"> • Didactics of mathematics and complexity • learning theories • the concept of numeracy • problem solving: Introduction and examples, using heuristic, closed and open problems • Realistic mathematics education • Realistic mathematics and modeling • Didactical analysis of mathematical concepts: addition – subtraction, linearity, geometric concepts • Misconceptions and troubleshooting of errors
--

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY	Face-to-face	
<i>Face-to-face, Distance learning, etc.</i>		
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY	Use of the ecourse learning platform	
<i>Use of ICT in teaching, laboratory education, communication with students</i>		
TEACHING METHODS	<i>Activity</i>	<i>Semester workload</i>
<i>The manner and methods of teaching are described in detail.</i>	Lectures	39
<i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational</i>	Literature study	58
	Assignments	9
	Teaching practice	16

<i>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>	Examination	3
	Course total	125
<p align="center">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, open-ended 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>Language of evaluation: Greek Written examination at the end of semester. Problem solving. Written assignment for the teaching practice</p>	

(5) ATTACHED BIBLIOGRAPHY

<p>- Suggested bibliography in Greek:</p> <ul style="list-style-type: none"> • Θεωρία και Πράξη στη Διδασκαλία των Μαθηματικών - Κολέζα Ευγενία • Ρεαλιστικά Μαθηματικά στην Πρωτοβάθμια Εκπαίδευση - Streefland Leen (επιμ. Ε. Κολέζα) • Διδάσκοντας Μαθηματικά για Δημοτικό και Γυμνάσιο. Μια αναπτυξιακή διαδικασία - Van de Walle John • Διδακτική βασικών μαθηματικών εννοιών - Χασάπης Δημήτρης • Γνωσιολογική και Διδακτική προσέγγιση των Στοιχειωδών Μαθηματικών Εννοιών - Κολέζα Ευγενία. <p>- Related academic journals:</p> <ul style="list-style-type: none"> • Educational Studies in Mathematics • Journal for Research in Mathematics Education • Journal of Mathematical Behavior
--