

COURSE OUTLINE

1. OVERVIEW

FACULTY	FACULTY OF HUMANITIES AND SOCIAL SCIENCES		
SECTION	DEPARTMENT OF PRIMARY EDUCATION		
LEVEL OF STUDY	UNDERGRADUATE		
COURSE TITLE			
Mathematics I			
COURSE CODE	MA0101	SEMESTER	1
HOURS per WEEK	6	ECTS	6
COURSE CATEGORY	Compulsory	COURSE TYPE	Scientific subject
LANGUAGE OF INSTRUCTION AND EXAMINATIONS	Modern Greek	PREREQUISITES	none
OFFERED TO ERASMUS	YES	ECLASS PAGE	https://eclass.uth.gr/courses/PRE_U_204/

2. LEARNING OUTCOMES

Learning Outcomes
Upon successful completion of the course, students are expected to know in depth the arithmetical systems that are taught in Primary School.
General Competencies
Ability to study independently Analytic and Synthetic thinking Justification - Argumentation

3. CONTENT

<p>The natural numbers and their representations.</p> <p>The order of natural numbers. The basic four operations between natural numbers and the usual algorithms for the four operations between natural numbers.</p> <p>Mathematical induction as a structural property of the system of natural numbers. Arithmetic patterns. The mathematical induction as a method of proof. The principle of the least natural number.</p> <p>Divisibility: Primes and composite numbers. The Fundamental Theorem of Arithmetic. Greatest Common Divisor and Least Common Multiplier.</p> <p>Divisibility criteria.</p> <p>Fractional numbers: The order of fractional numbers. The basic operations between fractional numbers and the algorithms for performing them.</p> <p>Decimal numbers: operations with decimal numbers.</p> <p>Permutations, combinations, enumerations,</p> <p>Percentages and probabilities.</p> <p>Ratios and proportions.</p> <p>Word problems.</p>
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4. TEACHING AND LEARNING METHODS - ASSESSMENT

TEACHING MODE	In person		
USE OF ICT	Power point if needed Communication: Webmail / eClass / MSteams /		
COMPULSORY ATTENDANCE	NO	MAXIMUM NUMBER OF ABSENCES:	
TEACHING ORGANIZATION	Activity		Semester Workload (hours)
	Lectures		78

	Study	68
	Examination	4
	Course total	150
EVALUATION		
	Type	Format
	Final written exam	Open-Ended Questions
	Intermediate written examination (mid-term A)	Open-Ended Questions
	Intermediate written examination (mid-term A)	Open-Ended Questions
		100%
Description of other evaluation method / Evaluation criteria:		

5. RECOMMENDED BIBLIOGRAPHY

Core textbooks (available through the <i>Eudoxus</i> service)
Χατζηκυριάκου, Κ. 2017. Αριθμοί, Σύνολα, Σχήματα: Μαθηματικά για τη δασκάλα και τον δάσκαλο, Θεσσαλονίκη: Εκδόσεις Σοφία (B έκδοση, ανατύπωση με διορθώσεις)
Other books / Notes
Κολέζα, Ε. 2020, Ψηφίδες Σκέψης στα Στοιχειώδη Μαθηματικά. Αριθμητική, Άλγεβρα & Γεωμετρία., Αθήνα: Εκδόσεις Gutenberg
Λεμονίδης, Χ. 2000. Στοιχεία Αριθμητικής και Θεωρίας Αριθμών για το δάσκαλο. Αθήνα: Πατάκης.
Τριανταφυλλίδης, Τρ. & Σδρόλιας, Κ. 2005. Βασικές μαθηματικές έννοιες για τον εκπαιδευτικό της πρωτοβάθμιας εκπαίδευσης. Αθήνα: Τυπωθήτω-Γ. Δαρδανός