COURSE OUTLINE

1. OVERVIEW

FACULTY	FACULTY OF HUMANITIES AND SOCIAL SCIENCES
SECTION	DEPARTMENT OF PRIMARY EDUCATION
LEVEL OF STUDY	UNDERGRADUATE

COURSE TITLE			
Introduction to Logic and Critical Thinking			
COURSE CODE	MA1202	**SEMESTER**	6, 8
HOURS per WEEK	3	**ECTS**	4
COURSE CATEGORY	Elective	**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_154/

2. LEARNING OUTCOMES

Learning Outcomes
Upon successful completion of the course, students are expected to be able to examine an argument in propositional logic or an argument in the first order logic of relations and decide whether it is valid or not.
General Competencies
Argumentation
Logical and Critical Thinking

3. CONTENT

The concept of an argument. Arguments in deductive and inductive logic.
Valid and non valid arguments. Consistent and non consistent sets of propositions.
Propositional logic. Conjunction, disjunction, entailment, equivalence, negation.
Valid arguments in the context propositional logic. Completeness theorem for propositional logic (informal treatment).
First order logic of relations. The existential and universal quantifiers.
Valid arguments in the context of the first order logic of relations. Completeness theorem for the first order logic of relations (informal treatment).
Aristotelian syllogisms. Venn diagrams.
Elements of inductive logic and probability theory (if there is time).

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:	

	Activity	Semester Workload (hours)
TEACHING ORGANIZATION	Lectures	39
	Study	59
	Examination	2
	Course total	*100*

	Type	Format	Weighting
EVALUATION	Final written exam	Open-Ended Questions	100%
	Intermediate written examination (mid-term)	Open-Ended Questions	*

			100%
	Description of other evaluation method / Evaluation criteria: *The mid-term exam is obligatory but the final grade is the maximum of the grade on the final written exam and the average of the grade on the final exam and the grade on the mid-term exam.		

5. RECOMMENDED BIBLIOGRAPHY

Core textbooks (available through the *Eudoxus* service)
Πορτίδης, Δ. & Ψύλλος, Σ. & Αναπολιτάνος, Δ., Λογική: η δομή του επιχειρήματος. Νεφέλη.
Other books / Notes
W. Hodges, Logic, Penguin Books, 2nd edition, 2001.
J. Nolt, D. Rohatyn, A. Varzi, Logic, 2nd edition, Schaum's Outlines, 1998.
Κ. Χατζηκυριάκου, Σημειώσεις, eclass.