

LOGO DELLA STRUTTURA PRIMARIA

COURSE: Logica			
ACADEMIC YEAR:2018/2019			
TYPE OF EDUCATIONAL ACTIVITY: (Basic, Characterizing, Affine, Free choice, Other) Free choice			
TEACHER: Serafina Lapenta			
e-mail: slapenta@unisa.it		website: serafinalapenta.weebly.com	
phone: 089-963358		mobile (optional):	
Language: italian			
ECTS: (lessons e tutorials/practice) 6	n. of hours: (lessons e tutorials/practice) 48	Campus: Potenza Dept./School: DiMIE Program: Mathematics Degree	Semester: First
EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES			
Being able to formalize in a formal language the basic sentences of a natural language			
Being able to deal with syntax and semantics of propositional calculus, write proofs and compute truth tables			
Learn the basic properties of Boolean algebras and being able to use them in a logical setting			
Learn the basic notions and tools of a first order logic			
PRE-REQUIREMENTS			
Basic set theory and algebra			
SYLLABUS			
Formal languages			
Truth values, tautologies and truth tables			
Hilbert-style introduction to propositional logic			
Theorems, proof, deductions in a formal language			
Completeness of propositional logic			
Partial orders, lattice orders, Boolean algebras			
Basic theorems on B.A.			
The Lindenbaum-Tarski algebra			
First order languages, First order logic, basic results			
Completeness and incompleteness (brief mention)			
TEACHING METHODS			
Theoretical lessons, Project works (integrative seminars), homework			
EVALUATION METHODS			
Intermediate verifications and discussion of a project work			
TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL			
Introduzione alla logica matematica, Elliott Mendelson			
Set Theory and Logic, Robert Stoll			
Online notes available from the teacher's website			
INTERACTION WITH STUDENTS			
Office hours: 1 hour after each class			
Emails from/to the teacher,			
Updates on the teacher's webpage			
EXAMINATION SESSIONS (FORECAST)¹			
January 26, 2019 - February 16, 2019			
May 28, 2019 - June 15, 2019 - July 13, 2019			
September 11, 2019 - December 12, 2019			
SEMINARS BY EXTERNAL EXPERTS YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>			
FURTHER INFORMATION			

¹Subject to possible changes: check the web site of the Teacher or the Department/School for updates.