

LOGO DELLA STRUTTURA PRIMARIA

COURSE: Logica			
ACADEMIC YEAR:2017/2018			
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:		mobile (optional):	
Language: italian			
ECTS: (lessons e tutorials/practice) 6	n. of hours: (lessons e tutorials/practice) 48	Campus:Potenza/Matera 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
Logic as Algebras, Givant Halmos
Online notes available from the teacher's website

INTERACTION WITH STUDENTS

Office hours: Friday, from 13:30 to 15:30
Emails from/to the teacher,
Updates on the teacher's webpage

EXAMINATION SESSIONS (FORECAST)¹

January 26, 2018 - February 16, 2018
May 28, 2018 - June 15, 2018 - July 13, 2018
September 11, 2018 - December 12, 2018

SEMINARS BY EXTERNAL EXPERTS YES NO

FURTHER INFORMATION

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