

DOCTORAL SCHOOL OF INFORMATICS
COMPLEX EXAM SUBJECT

Mathematical logic (recommended subject)

Zero-order and first-order logic, syntax, semantics. Semantic and syntactic definitions of logical consequence. Deduction theorem. Decision problem. Tautology, satisfiable, unsatisfiable formulas.

Calculus based on syntactic definitions of logical consequence (zero-order and first-order). Hilbert-style deduction system. Gentzen's sequent calculus. Normal forms. Resolution calculus. Resolution strategies. Herbrand universe - base - interpretation. Tableau calculus.
