Logic for CS - Video course

COURSE OUTLINE

This course covers lessons on propositional logic syntax and its semantics,tautology checking,analytic tableaux,formal theories,skalemization,resolution in FOL,verification of white,imperative programs and references.

COURSE DETAIL

S.No	Topic
1	Introduction
2	Propositional Logic Syntax
3	Semantics of Propositional Logic
4	Logical and Algebraic Concepts
5	Identities and Normal forms
6	Tautology Checking
7	Propositional Unsatisfiability
8	Analytic Tableaux
9	Consistency and Completeness
10	The Completeness Theorem
11	Maximally Consistent Sets
12	Formal Theories

NP-TEL

NPTEL

http://nptel.ac.in

Computer Science and Engineering

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13	Proof Theory : Hilbert-style
14	Derived Rules
15	The Hilbert System : Soundness
16	The Hilbert System :Completeness
17	Introduction to Predicate Logic
18	The Semantic of Predicate Logic
19	Subsitutions
20	Models
21	Structures and Substructures
22	First - Order Theories
23	Predicate Logic: Proof Theory (Contd..)
24	Existential Quantification
25	Normal Forms
26	Skalemization
27	Substitutions and Instantiations
28	Unification
29	Resolution in FOL
30	More on Resolution in FOL
31	Resolution : Soundness and Completeness