Introduction to Logic and Computation I

Fall 2008

MATH 570 / LGIC 310 / PHIL 006 / PHIL 506

MW 10:30 - 12

Andre Scedrov

About This Course:

From the Encyclopaedia Britannica: Goedel's proof, which states that within any rigidly logical mathematical system there are propositions (or questions) that cannot be proved or disproved on the basis of the axioms within that system; that is, such a system cannot be proved simultaneously to be complete and consistent. This proof has become a hallmark of 20th-century mathematics, and its repercussions continue to be felt and debated.

Textbook:


Syllabus:

Chapters 0 - 3 from Enderton:

Propositional Logic: Propositions and Connectives, Semantics, Natural Deduction, Completeness.


Undecidability and Incompleteness: Turing Machines, Undecidability of Predicate Logic, Goedel's First and Second Incompleteness Theorems.