COURSE DETAIL

FOUNDATIONS OF LOGIC

Country
China

Host Institution
Tsinghua University

Program(s)
Tsinghua University

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Philosophy

UCEAP Course Number
152

UCEAP Course Suffix

UCEAP Official Title
FOUNDATIONS OF LOGIC

UCEAP Transcript Title
FOUNDATION OF LOGIC

UCEAP Quarter Units
3.00

UCEAP Semester Units
2.00

Course Description

The aim of this course is to familiarize the student with some of the cornerstones of modern logic: the completeness of first-order logic, Gödel's incompleteness theorems, and Church and Turing's results on undecidability. Proofs of these results are presented in some detail, including quick introduc)ons to basic model theory, primi)ve recursive and recursive func)ons, Peano arithme)c, and the method of 'arithme)za)on' of metalogic, on which the incompleteness and undecidability results rely. The philosophical implica)ons of these results, and the techniques used to prove them, are also discussed, and the intui)ve ideas behind the technical construc)ons are emphasized.

Language(s) of Instruction
English

Host Institution Course Number
30690552

Host Institution Course Title
FOUNDATIONS OF LOGIC

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed
2024-2025

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