

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 introductions to basic model theory, primitive recursive and recursive functions, Peano arithmetic, and the method of 'arithmetization' of metalogic, on which the incompleteness and undecidability results rely. The philosophical implications of these results, and the techniques used to prove them, are also discussed, and the intuitive ideas behind the technical constructions are emphasized.

Language(s) of Instruction

English

Host Institution Course Number

30690552

Host Institution Course Title

FOUNDATIONS OF LOGIC

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

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