COURSE DETAIL

MATHEMATICAL LOGIC

Country
China

Host Institution
Fudan University

Program(s)
Shanghai Summer

UCEAP Course Level
Upper Division

UCEAP Subject Area(s)
Philosophy Mathematics

UCEAP Course Number
130

UCEAP Course Suffix
S

UCEAP Official Title
MATHEMATICAL LOGIC

UCEAP Transcript Title
MATHEMATICAL LOGIC

UCEAP Quarter Units
4.00

UCEAP Semester Units

2.70

Course Description

This course provides a comprehensive introduction to Mathematical Logic, serving as a toolkit for clear thinking and a foundation for advanced studies in philosophy and sciences. We will begin with the basics of argumentation and traditional syllogistic logic, then move to the core of modern symbolic logic: Propositional Logic and First-Order Predicate Logic. Students will learn how to analyze the syntax and semantics of these systems and construct formal proofs. The course also covers essential mathematical tools such as basic Set Theory and mathematical induction. Furthermore, we will explore the frontiers of logic, including an introduction to Type Theory, the connection between logic and computation, and the relation of logic with computation and modern Artificial Intelligence.

Language(s) of Instruction
English

Host Institution Course Number
PHIL20013

Host Institution Course Title
MATHEMATICAL LOGIC

Host Institution Course Details
https://iss.fudan.edu.cn/PHIL20013MathematicalLogic.pdf

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Fudan International Summer Session

Course Last Reviewed

2026-2027

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