COURSE DETAIL

MATHEMATICAL LOGIC
Country Korea, South
Host Institution Yonsei University
Program(s) Yonsei University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 102
UCEAP Course Suffix
UCEAP Official Title MATHEMATICAL LOGIC
UCEAP Transcript Title MATHEMATICAL LOGIC
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course covers basic mathematical logic such as propositional logic and first order (predicate) logic by studying the notions of truth, satisfaction, model, proof and Turing machine. Goedel's completeness theorem is presented and his incompleteness theorems are introduced. The course studies the completeness theorem for the first-order logic using Henkin's construction method. As a consequence compactness theorem is presented and Lowenheim-Skolem theorem as an application is studied. Turing machine, the theoretical background of the contemporary digital computer design, is introduced and compared with Goedel’s incompleteness theorems.

Language(s) of Instruction
English

Host Institution Course Number
MAT3117

Host Institution Course Title
MATHEMATICAL LOGIC

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Mathematics

Course Last Reviewed
2023-2024

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