

COURSE DETAIL

INTRODUCTION TO THE THEORY OF COMPUTATION

Country

China

Host Institution

Fudan University

Program(s)

Shanghai Summer

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

125

UCEAP Course Suffix

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UCEAP Official Title

INTRODUCTION TO THE THEORY OF COMPUTATION

UCEAP Transcript Title

THEORY COMPUTATION

UCEAP Quarter Units

4.00

UCEAP Semester Units

2.70

Course Description

This course will give you a beginner-friendly introduction to the Theory of Computation. The Theory of Computation seeks to categorize computational problems based on their inherent difficulty, measured by the resources (primarily time and space) needed to solve them. It also aims to explore the relationships between different problems, such as determining whether problem X is not harder than problem Y. This course will help you gain a rigorous understanding of computation, including its definition, possibilities, and limitations. Topics include finite automaton and regular language, Turing machine and its variants, computability, and complexity theory.

Language(s) of Instruction

English

Host Institution Course Number

GEIS20001

Host Institution Course Title

INTRODUCTION TO THE THEORY OF COMPUTATION

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Course Last Reviewed

2025-2026

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