

COURSE DETAIL

FORMAL LANGUAGES AND AUTOMATA THEORY

Country

Taiwan

Host Institution

National Taiwan University

Program(s)

National Taiwan University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

109

UCEAP Course Suffix**UCEAP Official Title**

FORMAL LANGUAGES AND AUTOMATA THEORY

UCEAP Transcript Title

AUTOMATA THEORY

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This course examines major concepts in the theory of computation. Topics covered include deterministic and nondeterministic finite state automata, regular expressions, context-free languages, pumping lemma and push-down automata, equivalence of context-free grammars and push-down automata, Turing machines, decidable languages, reducibility, computational complexity, and NP-completeness. Textbooks: INTRODUCTION TO THE THEORY OF COMPUTATION by M. Sipser, INTRODUCTION TO AUTOMATA THEORY, LANGUAGES, AND COMPUTATION by J. Hopcroft, J. Ullman. Assessment: homework, midterm exam, final exam.

Language(s) of Instruction

English

Host Institution Course Number

CSIE3110

Host Institution Course Title

FORMAL LANGUAGES AND AUTOMATA THEORY

Host Institution Course Details

<https://www.csie.ntu.edu.tw/~tonytan/teaching/2018a-aut/2018a-aut.html>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Computer Science & Information Engineering

Course Last Reviewed

2022-2023

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