

COURSE DETAIL

OPTIMIZATION FOR MACHING LEARNING

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

145

UCEAP Course Suffix**UCEAP Official Title**

OPTIMIZATION FOR MACHING LEARNING

UCEAP Transcript Title

OPT MACHING LEARNNG

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

Machine learning is a fast-growing field and plays a central role in the era of AI and big data with many applications in prediction and data analysis. In particular, optimization formulations and algorithms are key to analysis and design of efficient methods in machine learning problems. This course focuses on the optimization models arising from various machine learning problems and introduce efficient algorithms for solving these models. The course covers basic convex analysis, model formulation, and fundamental (stochastic) first-order methods, supplemented with recent developments in the related literature.

Language(s) of Instruction

English

Host Institution Course Number

IE5061

Host Institution Course Title

OPTIMIZATION FOR MACHING LEARNING

Host Institution Course Details

<https://course.ntu.edu.tw/en/courses/114-2/35160>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering

Course Last Reviewed

2025-2026

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