

COURSE DETAIL

NUMERICAL OPTIMIZATION

Country

Hong Kong

Host Institution

Chinese University of Hong Kong

Program(s)

Chinese University of Hong Kong

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

106

UCEAP Course Suffix**UCEAP Official Title**

NUMERICAL OPTIMIZATION

UCEAP Transcript Title

NUMER OPTIMIZATION

UCEAP Quarter Units

4.50

UCEAP Semester Units

3.00

Course Description

This course cover the analytical and programming skills required for applying standard optimization algorithms to engineering and AI problems. It covers basic topics on optimization including the theory of unconstrained and constrained optimization, dual optimization tasks, linear programming, convex optimization, line search methods, trust-region methods, gradient descent, and Newton's method. Pre-requisite: ENGG1120 or ENGG1130 or ESTR1005 or ESTR1006 or MATH1510. Not for students who have taken AIST3010 or ESTR3112 or ESTR3114.

Language(s) of Instruction

English

Host Institution Course Number

AIST3030

Host Institution Course Title

NUMERICAL OPTIMIZATION

Host Institution Course Details

https://rgsntl.rgs.cuhk.edu.hk/ags_prd_applx/Public/tt_dsp_crse_catalog.aspx

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Computer Science and Engineering

Course Last Reviewed

2025-2026

[Print](#)