

COURSE DETAIL

PRINCIPLES OF OPERATING SYSTEMS

Country

Hong Kong

Host Institution

University of Hong Kong

Program(s)

University of Hong Kong

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

131

UCEAP Course Suffix**UCEAP Official Title**

PRINCIPLES OF OPERATING SYSTEMS

UCEAP Transcript Title

OPERATING SYSTEMS

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

This course introduces the characteristics of different structures of the Operating Systems (OS), such as microkernel, layered, virtualization, etc., and identifies the core functions. Topics: principles behind the core functions and comparison of the algorithms on which the core functions of the OS are built; how OS manages processes/threads and the mechanisms and policies in efficiently sharing of CPU resources; principles and techniques used by OS in effectively virtualizing memory and resources; the underlying causes of concurrency and deadlock issues; principles and techniques used by OS to support concurrency and synchronization control as well as the principles and techniques used by OS to support persistent data storage. During this course, students demonstrate knowledge in applying system software and tools available in modern operating system (such as threads, system calls, semaphores, etc.) for software development. Prerequisites: COMP2113 or COMP2123 or ENGG1340; and COMP2120 or ELEC2441.

Language(s) of Instruction

English

Host Institution Course Number

COMP3230

Host Institution Course Title

PRINCIPLES OF OPERATING SYSTEMS

Host Institution Course Details

<https://csai.cds.hku.hk/>

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department

Computer Science

Course Last Reviewed

2025-2026

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