COURSE DETAIL

MULTICORE PROGRAMMING FUNDAMENTALS
Country Korea, South
Host Institution Yonsei University
Program(s) Yonsei University
UCEAP Course Level Graduate
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 206
UCEAP Course Suffix
UCEAP Official Title MULTICORE PROGRAMMING FUNDAMENTALS
UCEAP Transcript Title MULTICORE PROGRAM
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course looks at the challenges and techniques involved in programming multicore systems. The course starts out with a brief history of computing to motivate the shift to multicore architectures. Parallelism, execution indeterminism, thread-and-lock-based programming, non-blocking synchronization, and HW acceleration with GPGPUs are introduced in a step-by-step approach that is accompanied by individual programming assignments. The impact of hardware architectures on programmability and performance is highlighted. Emerging trends such as Stream-parallel programming and hardware transactional memory are introduced.

Language(s) of Instruction
English

Host Institution Course Number
CSI6505

Host Institution Course Title
MULTICORE PROGRAMMING FUNDAMENTALS

Host Institution Course Details

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Computer Science

Course Last Reviewed
2023-2024

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