COURSE DETAIL

HARDWARE
Country United Kingdom - England
Host Institution Imperial College London
Program(s) Imperial College London
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Computer Science
UCEAP Course Number 113
UCEAP Course Suffix
UCEAP Official Title HARDWARE
UCEAP Transcript Title HARDWARE
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description
This course explores the fundamental principles and devices used in the design of digital computers, including how primitive control logic can be organized to construct a programmable machine. The course covers Boolean algebra, combinatorial logic functions, principles of semiconductor devices and logic gates, adders subtractors and multipliers, bistable storage devices, S-R flip-flop, D-type flip-flop, latch versus edge triggering, J-K flip-flops, registers, shift registers, multiplexers and decoders, counters, finite state machine design, static and dynamic RAM, register transfer descriptions, ALU design and CPU design. Practical laboratory work consists of the design of combinatorial and sequential circuits using modern VLSI design tools.

Language(s) of Instruction
English

Host Institution Course Number
C112

Host Institution Course Title
HARDWARE

Host Institution Course Details

Host Institution Campus
Imperial College London

Host Institution Faculty

Host Institution Degree

Host Institution Department
Computing

Course Last Reviewed

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