

COURSE DETAIL

COMPUTER ARCHITECTURE AND DESIGN

Country

United Kingdom - Scotland

Host Institution

University of Edinburgh

Program(s)

University of Edinburgh

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Computer Science

UCEAP Course Number

156

UCEAP Course Suffix**UCEAP Official Title**

COMPUTER ARCHITECTURE AND DESIGN

UCEAP Transcript Title

COMP ARCH & DESIGN

UCEAP Quarter Units

8.00

UCEAP Semester Units

5.30

Course Description

In this course, students learn how to design a computer and understand the performance characteristics of computers. Students first acquire a working knowledge of digital design, through the Verilog Hardware Description Language, along with a good theoretical grounding in the design of the key components of a microprocessor. Students learn, both theoretically and practically, how the quantitative approach to computer architecture enables computer architects to analyze and optimize microprocessors to maximize performance. Students spend time in the lab, designing real hardware, and later in the course applying recently-acquired knowledge of quantitative computer architecture to analyze a simulated system and optimize its performance.

Language(s) of Instruction

English

Host Institution Course Number

INFR10076

Host Institution Course Title

COMPUTER ARCHITECTURE AND DESIGN

Host Institution Course Details

<http://www.drps.ed.ac.uk/24-25/dpt/cxinfr10076.htm>

Host Institution Campus

Edinburgh

Host Institution Faculty

Host Institution Degree

Host Institution Department

Informatics

Course Last Reviewed

2024-2025

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