The Hong Kong University of Science and Technology

UG Course Syllabus Template

[Course Title] Design and Analysis of Computer Architectures

[Course Code] COMP4611

[No. of Credits] 3 credits

 [Any pre-/co-requisites] Prerequisite(s): COMP 2611 OR ELEC 2300 OR ELEC 2350

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Course Description

Analysis, synthesis and evaluation of different computer architectures. Emphasis on computer design with respect to price/performance and its relation to architectural choices.

Key concepts covered: ISA, pipelining, hazard handling, branch prediction, out-of-order instruction execution, SIMD processing, memory hierarchy, caches, multiprocessors, memory and cache coherence, etc

Assessments:

 [List specific assessed tasks, exams, quizzes, their weightage]

Assessment Task	Contribution to Overall Course grade (%)
Mid-Term	25%
Assignments	15%
Final examination	60%

Required Texts and Materials

NA

[Optional] Additional Resources

1. Computer Architecture: A Quantitative Approach, Sixth Edition, John L. Hennessy, David A. Patterson

2. Computer Organization and Design: The Hardware/Software Interface, Sixth Edition, David A. Patterson, John L. Hennessy