

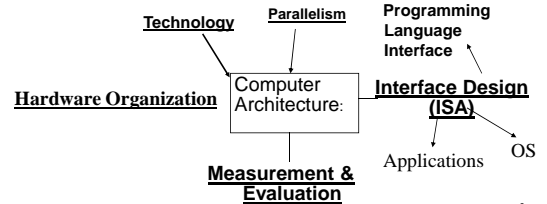
# CSE775: Computer Architecture

Overview

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## What is Computer Architecture?

- Functional operation of the individual HW units within a computer system, and the flow of information and control among them.



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## Let's Compare .....

Building Architect

Computer Architect

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## Computer Architecture

- Why should we study Computer Architecture?
- Architecture Course Sequence in CSE  
CSE 675 -> CSE 775 -> CSE 875
- Architecture/High Performance Computing Integrated Sequence  
CSE 775 -> CSE 721 -> CSE 875  
CSE 621                      Different 788s

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## Course Objectives

- To evaluate the issues involved in choosing and designing instruction set
- To learn concepts behind pipelining and advanced pipelining techniques
- To understand issues related to multithreading, instruction-level parallelism and speculation
- To understand the "hitting the memory wall" problem and the current state-of-art in memory sub-system (including cache) design
- To get an overview of interconnection network, parallel and multiprocessor systems
- To understand the qualitative and quantitative tradeoffs in the design of modern computer systems

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