CS-209 Computer architecture II
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Summary
The course completes the introduction to computer architecture.

Content
• Inputs/Outputs and Interrupts
• Exceptions
• Computer Performance
• Pipelining
• Dynamic Scheduling
• Superscalar and VLIW Processors
• Multiprocessors and Cache Coherence

Keywords
Computer Architecture, Processor, CPU, ILP, Multiprocessors, Coherence

Learning Prerequisites
Required courses
• CS-173 (Digital System Design)
• CS-208 (Computer Architecture I)

Learning Outcomes
By the end of the course, the student must be able to:
• Design a simple exception handler in assembler
• Design pipelined digital circuits at Register Transfer Level
• Optimize the performance of a processor pipeline by reordering instructions
• Explain possible solutions to the cache coherence problem

Teaching methods
Ex-cathedra courses and labs on an FPGA board.

**Assessment methods**

- Lab I (13%)
- Test I (35%)
- Pipeline simulation (4%)
- Lab II (13%)
- Test II (35%)

**Supervision**

- Office hours: No
- Assistants: Yes
- Forum: Yes

**Resources**

- Virtual desktop infrastructure (VDI): No

**Bibliography**


**Ressources en bibliothèque**

- Computer organization and design

**Moodle Link**


**Prerequisite for**

- CS-470 (Advanced Computer Architecture)