

CSE 305 Computer Architecture (Part 2)
Instructor: Rezwana Reaz

Reference Book: Computer Organization and Design (4th & 5th Edition)

Course Outline:

Week 6 - week 8, week 10

Chapter 4 (Sections 4.1 - 4.9) [4th/ 5th Edition]

Topics to be covered: Processor design: datapaths - single cycle and multicycle implementations; Control Unit design - hardwired and microprogrammed; Hazards; Exceptions; Pipeline: pipelined datapath and control.

Week 11 - week 13

Chapter 5 (Sections 5.1 - 5.7) [4th/ 5th Edition]

Topics to be covered: Memory organization, basics of cache, measuring and improving cache performance, virtual memory.

Week 14 [1 class]

Chapter 6 (Overview*) [4th Edition]

Topics to be covered: Concepts of DMA and Interrupts; Buses: overview of computer BUS standards.

Week 14 [2 classes]

Chapter 7 (Overview*) [4th Edition]

Topics to be covered: Multiprocessors: types of multiprocessors, performance, single bus multiprocessors, multiprocessors connected by network, clusters.

*This part of the syllabus is covered in more details in CSE 315.