

# ECE 552: Introduction to Computer Architecture

Fall 2005

Instructor: Prof. Mikko Lipasti

## Midterm Review Information

The midterm will cover all topics discussed in class through the end of Chapter 6, excluding integer multiplication and division and floating point arithmetic. Use the following table as a reference for readings and topics.

The exam will be open book and open notes. The focus of the exam will not be to test your ability to memorize details. Rather, details will be provided and you will be asked to think and solve problems given those details.

You will be expected to do simple paper-based logic design similar to the homework problems (both combinational and sequential logic). You MUST USE FULLY SYNCHRONOUS DESIGN (FSD) in your solutions on the exam.

You will also be asked to perform simple quantitative comparisons to estimate performance based on CPI terms, as in the homework.

There will also be discussion questions on topics discussed in class and in the text.

Please answer exam questions using a pencil--scribbled-out mistakes in ink are unpleasant to grade, and make assigning partial credit difficult.

Week	Dates	Topics	Readings, 2nd Ed	Readings, 3rd Ed
0	9/2	Introduction	Ch 1	Ch. 1
1	9/7,9/9	Performance and Cost	Ch 2	Ch. 4
2	9/12,9/14,9/16	Instruction Sets	Ch 3	Ch. 2
3	9/19,9/21,9/23	Arithmetic I	Ch 4.1 - 4.5	Ch. 3.1 - 3.3
4	9/26,9/28,9/30	Datapath design	Ch 5.1 - 5.3	Ch 5.1-5.3, App. B
5	10/3,10/5,10/7	Control	Ch 5.4 - 5.9, App C	Ch. 5.4-5.12, App. C
6	10/10,10/12,10/14	Pipelining	Ch 6.1 - 6.7	Ch. 6.1-6.8, 6.11-6.13
7	10/17,10/19,10/21	Intro to Superscalar	Ch 6.8 - 6.9	Ch. 6.9-6.10
8	10/24,10/26,10/28	Review and Midterm 10/28		
9	10/31,11/2,11/4	Memory Technology	Ch 7.1, App B	Ch. 7.1
10	11/7,11/9,11/11	Memory Hierarchies	Ch 7.2 - 7.6	Ch. 7.2-7.9
11	11/14,11/16,11/18	Memory Hierarchies cont'd	Ch 7.2 - 7.6	Ch. 7.2-7.9
12	11/21,11/23	Arithmetic II	Ch 4.6 - 4.10	Ch. 3.4-3.10
13	11/28,11/30,12/2	I/O	Ch 8	Ch. 8
14	12/5,12/7,12/9	Parallel processing	Ch 9	Ch. 9
15	12/12,12/14	Review	--	
16	12/16	Final Exam, 7:25pm Friday	--	