CMPS 2084: Introduction to Computer Architecture

Tentative agenda:
Jan 15 - Introduction – number systems
Jan 16 - LAB 1 - CPU registers, DOS operating system
Jan 17 - Number systems
Jan 22 - Data representation
Jan 23 - LAB 2 - Binary numbers
Jan 24 - Introduction to computer architecture
Jan 29 - Computer evolution
Jan 30 - LAB 3 - Binary numbers, ASCII code
Jan 31 - Computer performance
Assignment # 1
Feb 5 - Computer performance
Feb 6 - LAB 4 - Addressing memory, simple arithmetic
Feb 7 - Computer components
Assignment # 2
Feb 12 - Interrupts
Feb 13 - LAB 5 - Arithmetic operations, conditional jump, flags
Feb 14 - Bus systems
Assignment # 3
Feb 19 - Bus systems – Serial connections
Feb 20 - LAB 6 - Conditional jumps, loops
Feb 21 - Introduction to memory
Feb 26 - Cache memory - basics
Feb 27 - LAB 6a - review
Feb 28 - Test # 1
Mar 5 - Cache memory mapping
Mar 6 - LAB 7 - Procedures
Mar 7 - Cache memory replacement algorithms
Assignment # 4
Mar 12-14 Spring Break
Mar 19 - Cache memory replacement algorithms/write policies
Mar 20 - LAB 8 - Boolean operations
Mar 21 - Introduction to semiconductor memory
Assignment # 5
Project assignment
Mar 26 - Error correction
Mar 27 - LAB 9 - Bit manipulation
Mar 28 - Easter Break
Apr 2 - Error correction
Apr 3 - LAB 10 - Arrays and strings
Apr 4 - Memory technology
Assignment # 6
Apr 9 - External memory - disks – RAID
Apr 10 - LAB 11 - Procedures and stacks
Apr 11 - RAID – SSD - Optical memory
Apr 16 - Input/output - DMA
Apr 17 - LAB 12- Programming practice
Apr 18 - Test # 2
Apr 23 - Paging
Apr 24 - LAB 12- Programming practice
Apr 25 - Virtual memory
Apr 30 - Segmentation
May 1 - LAB 12a - Review
May 2 - Segmentation
May 9 - Finals (Thursday, 1:00 pm)