EE319K Introduction to Embedded Systems

Exam 1 Review

Review all lecture slides 1 through 5. http://users.ece.utexas.edu/~valvano/Volume1/

Practice worksheets http://users.ece.utexas.edu/~valvano/Volume1/ > Lectures

Practice old exams (before looking at solutions).
http://users.ece.utexas.edu/~valvano/Volume1/

Look at your lab code.

Review the following sections of the textbook chapters, and corresponding chapters of the ebook.

Chapter 1:

1.1 Review of Electronics
1.2 Binary Information
1.3 Digital Logic
1.4 Digital Information stored in Memory
1.5 Number Systems
1.7 Computer Architecture
1.8 Flowcharts and Structured Programming
1.9 Concurrent and Parallel Programming

Chapter 2:

2.1 Embedded Systems, Applications
2.3-2.5 Product Life Cycle, Successive Refinement, Quality Design
2.6 Debugging Theory
2.7 Switch and LED interfaces
2.8 Introduction to C

Chapter 3:

3.1 Cortex-M Architecture: Registers, Memory, What happens at Reset
3.3 Assembly Language: Addressing Modes and Operands, Memory access instructions, Logical Instructions, Shift Instructions, Arithmetic Instructions, Stack, Assembler Directives
3.5 Cisc vs. Risc

Chapter 4:

4.1: Launchpad I/O Pins
4.2: Basic Concepts of I/O ports, I/O programming, Direction register, Switch Inputs and LED outputs
4.6 Debugging Monitor using the heartbeat

Chapter 5:

5.2.2: Functions, Subroutines
5.3: Making Decisions: Conditional Branch Instructions
5.6 Writing Quality Software

Chapter 6:

6.1: Indexed Addressing and Pointers
6.2: Arrays
6.3 Strings

Chapter 7:

7.1 Local vs. Global
7.2 Stack Rules