Schedule of lectures

(right to changes reserved)

(9/9) **Introduction** (Chapter 1)
Historical development of computers. The von Neumann model.

(9/16) **Data Representation in Computer Systems** (Chapter 2)
Integer, floating-point and character representation. Error detection and correction.

(9/23) **Boolean Algebra and Digital Logic** (Chapter 3)
Logic gates. Combinatorial and sequential circuits.

(9/30) **MARIE: An Introduction to a Simple Computer I** (Chapter 4.1-12)
CPU basics and organization. Discussion of assemblers.

(10/7) **MARIE: An Introduction to a Simple Computer II** (Chapter 4.13-14)
Discussion of decoding. Real-World Examples of Computer Architectures.

(10/14) **A Closer Look at Instruction Set Architecture** (Chapter 5)
Instruction formats. Instruction types. Addressing. Real-World examples of ISAs.

(10/21) **Memory and Input/Output** (Chapter 6 and 7.1-5)
Cache memory. Virtual memory. I/O architectures. Data transmission modes.

(10/28) **System Software** (Chapter 8)
Operating systems. Assemblers, link editors, compilers and interpreters.

(11/4) **Alternative Architectures** (Chapter 9)
Flynn's taxonomy. Parallel and multiprocessor architectures.

(11/11) **Network Organization and Architecture I** (Chapter 12.1-5)
ISO/OSI protocol unification. TCP/IP network architecture.

(11/18) **Network Organization and Architecture II** (Chapter 12.6)
Network organization.