

Learning Objectives

CLO

Upon successful completion of this course, students will be able to:

1. Understand digital logic and how it is used to build a computer system.
2. Explain how CPU functions to run a software program.
3. Develop assembly programs to control the operation of the CPU.
4. Understand the format of instructions and their operations.
5. Understand the role of the other components of a computer system such as buses and memories and how they work together.

Lecture plan:

- Number System (CLO 1)
 - Binary
 - Hex
 - ASCII
- Units (CLO 1)
 - Kibibytes, Kilobytes etc.
- Hardware Architecture (CLO 2)
 - Data bus
 - Address bus
- Microcontrollers
 - On-chip peripherals review
- Compilers and Programming Languages (CLO 3, CLO 4)
 - Compiled vs. Interpreted languages
 - C compiler
 - Hands-on with a compiler

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