CIS 261: Introduction to Computer Systems

This course is an introduction to major components of computer systems. The course introduces fundamental concepts of computing systems such as binary arithmetic and data representation, the Von Neumann model for processing computer programs, the operation of memory, instruction set, and machine and assembly language programming. It systematically presents the levels of transformations from machine language to assembly language to high-level language. The course studies the role of such systems software components as assemblers, compilers, linkers, loaders, and operating systems. The course has a strong project component. Pre or co-requisite: CIS 158 or permission of the instructor. Co-requisite: MTH 243. Three lecture hours and two lab hours per week. Instructional Support Fee applies. Gen. Ed. Competencies Met: Information Literacy.

Course Student Learning Outcomes

1. Identify and describe different types of computing machines.
2. Describe distinguishing components of Von-Neumann Architecture.
3. Understand principals of machine language and program in assembly.
4. Describe the relation between high level languages and assembly.
5. Explain how bits and bytes are organized to represent data electronically.
6. Describe how digital logic is used to build circuits to process information.

Credits: 4
Program: Computer Information Systems