Course Outcome Summary

CIS 268
Assembly Language & Computer Architecture

Course Information
Division: Business
Contact Hours: 4
Total Credits: 4

Prerequisites: CIS 150

This course is a required core course for students pursuing an AAS in Computer Science

Course Description:
This course covers computer programming in one of its most basic forms and introduces computer architecture. The understanding and appreciation of assembly language is the foundation for the understanding of the digital computer and its programming. Assembly language is just one step removed from machine language, the language directly understood by the CPU. This course will cover: computer architecture, data representation, instruction sets, addressing modes, assembly language programming techniques, interrupts and exceptions, assemblers, peripheral programming and the relationship between assembly language and high-level languages.

Program Outcomes Addressed by this Course:
Upon successful completion of this course, students should be able to meet the program outcomes listed below:

A. Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
B. Understand the importance of life-long learning, and be prepared to learn and understand new technological developments in their field.
C. Understand the ethical and technical context of their computer science contributions and their obligations therein.

Course Outcomes
In order to evidence success in this course, the students will be able to:
1. Understand how data is represented inside of a computer.
   a. Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
2. Design and implement digital circuits
   a. Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
3. Demonstrate the ability to solve problems using assembly code.
   a. Demonstrate and utilize necessary technical knowledge and skills both in breadth and depth, to pursue the practice or advanced study of computer science.
4. Work with microcontrollers to understand their current and future real-world applications.
   a. Understand the importance of life-long learning, and be prepared to learn and understand new technological developments in their field.
5. Recognize some of the benefits and draw backs with current computer hardware.
   a. Understand the ethical and technical context of their computer science contributions and their obligations therein.
6. Understand the benefits and draw-backs of IOT as it pertains to microcontrollers.
   a. Understand the ethical and technical context of their computer science contributions and their obligations therein.

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