

COURSE OUTLINE

CMSY-220 Assembly Language 3 Semester Hours

HOWARD COMMUNITY COLLEGE

Course Description

By the end of this course, the student will be able to demonstrate an understanding of the capabilities and functions of Assembly Language in general. In addition, the student will understand the specific internal data representation and instruction set available on the particular CPU being used, an IBM-PC. Students will establish data and program areas in storage, and use processor instructions to perform calculations, input-output and data manipulation. Prerequisite: CMSY-121 or CMSY-140 or CMSY-141 or CMSY-180 or CMSY-181. (2 hours lecture, 2 hours lab)

Overall Course Objectives

Upon completion of this course, the student will be able to:

1. Understand the general capabilities of an Assembler.
2. Convert numbers from the decimal system into binary and hexadecimal.
3. Describe the available registers and other aspects of computer architecture of the particular CPU being used.
4. Write an Assembly program illustrating such topics as Math, data transfer, logic and flow of control.
5. Write programs using various memory addressing modes.
6. Write a program which uses more complex data structures such as records.
7. Illustrate interrupt handling in an Assembly program.
8. Demonstrate successful writing of a macro.
9. Thoroughly document programs they have written.

Major Topics

- Number systems
- Computer architecture
- The basic instruction set
- Memory addressing modes
- Simple and complex data structures
- Macros
- Interrupt handling

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include at least six programming assignments and three exams.

Other Course Information

This is a core course for Computer Science majors.

This is an Arts and Science elective and a Business elective.