

COURSE OUTLINE
CMSY-120
Introduction to Computer Systems
3 Semester Credits

HOWARD COMMUNITY COLLEGE

Description

By the end of this course, the student will be able to describe the historical development of computers, the characteristics, components and use of computer systems as well as the major programming languages. The fundamentals of problem solving and programming in a high-level language such as BASIC will be discussed and demonstrated. Prerequisite: Eligible to enroll in ENGL-121 and MATH-061.

Overall Course Objectives

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

1. Explain what computer systems are and why data needs to be processed.
2. Identify the features of some of the equipment used to process data, both in the past and present.
3. Differentiate between software categories such as applications software, systems software and personal productivity software, recognizing where each might be used.
4. Distinguish among applications such as word processing, graphics, spreadsheets and data bases, having seen them demonstrated, and evaluate when it is appropriate to use each of them.
5. Discuss the steps involved in the analysis and design of a system for use on a computer and identify the importance of each step.
6. Differentiate between various programming languages, describe the steps involved in writing a program and modify and/or prepare programs written in BASIC.
7. Describe at least three common network designs and recognize various telecommunications and networking vocabulary terms.
8. Differentiate between various types of Information Systems as well as recognize some common Expert Systems.
9. Explain current state-of-the-art in computer systems (both hardware and software) and predict what the future might bring to the field.
10. Read at least two articles about computers from outside sources and write short papers evaluating those outside readings.

Major Topics

- I. CPU and Memory
- II. Input/Output
- III. Secondary Storage
- IV. Operating Systems
- V. Word Processing and Graphics
- VI. Spreadsheets
- VII. Data Bases
- VIII. Telecommunications and Networks
- IX. Information Systems and Systems Analysis
- X. Development of Programs
- XI. Various Programming Languages
- XII. Crime, Security, Privacy and Health
- XIII. The Future

Course Requirements

Grading/exams: Grading procedures will be determined by the individual faculty member but will include at least four tests, two written articles and two BASIC programs.

Other Course Information

Meets College definition for Arts and Science elective and a Business elective.