

E. Elective--in the Computer Networking - Homeland Security Emphasis Certificate

F. Elective--in the Management Information Systems Degree Program

V. Outline of Course Content

This course addresses the following topics:

- * Fundamental data types in C
- * Flow control
- * Logic control
- * Arrays
- * Functions
- * Strings
- * Structures
- * Pointers

VI. Educational Goals and Learning Outcomes

A. General Education Goals

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

1. Analyze complex tasks and create specifications that model them. (G.E. 1)
2. Create C programs that meet given specifications. (G.E. 3)
2. Investigate programming interfaces to determine which constructs can best be applied to a problem and how they should be applied. (G.E. 3)

Student learning outcomes for this course:

At the conclusion of the course, students will be able to:

1. Decompose a problem statement into specifications for a program.
2. Create C programs that meet system specifications.
3. Develop and execute test plans to ensure correct program behavior.
4. Identify the fundamental constructs of the C language and apply them to appropriate problem specifications.

VII. Modes of Teaching and Learning

* Lecture/Discussion--New concepts will be introduced during interactive lecture sessions.

* Laboratory--Students will perform exercises in class using concepts introduced during the lecture.

VIII. Papers, Examinations, and other Assessment Instruments

- * Computer Programs – C programs as individual projects
- * Participation in interactive classroom programming.
- * Exams -- Exams will assess both conceptual knowledge and practical knowledge.

IX. Grade Determinants

- * Individual homework and projects
- * Exams
- * Final Exam

X. Text and Materials

Suggested Textbook -- *Programming in ANSI C*, Stephen Kochan, SAMS.

XI. Resources

<http://www.computerhope.com/unix.htm> for UNIX commands

<http://www.textpad.com/download/index.html> for free TextPad download

<http://www.textpad.com/support/tips/borlandtip.html> for free Borland C/C++ compiler

http://www.borland.com/products/downloads/download_cbuilder.html free C Compiler