Degree Applicable X

Glendale Community College
Revised February 2003

COURSE OUTLINE

COMPUTER SCIENCE/INFORMATION SYSTEMS 110
Introduction to Programming

I. Catalog Statement

Computer Science/Information Systems 110 is a course in programming computers, which includes defining the problem; flowcharting; writing, executing, and debugging application programs; and program documentation.

Units: 3.0
Lecture Hours: 3.0
Lab Hours: 2.0

Prerequisite: ECT 100* or BUSOT 110 or eligibility for Math 101, and eligibility for CS/IS 101
*ECT 100 may be taken concurrently

Note: Students with no prior computer experience are advised to take CS/IS 101 before attempting CS/IS 110. This course may be satisfied by Credit-by-Examination.

II. Course Entry Expectations

Skills Level Ranges: Reading 6; Writing 5; Listening/Speaking 6; Math 3

Prior to enrolling in the course, the student should be able to:
1. read and understand textbook information and instructions;
2. comprehend information and instructions presented in class lectures and demonstrations;
3. utilize the Windows operating systems and basic computer application packages.

III. Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:
1. analyze problems and provide logical solutions to them;
2. outline solutions in a systematic fashion (i.e., flowcharting or pseudocode);
3. code and debug programs;
4. demonstrate an understanding of the operation of a computer for programming.

IV. Course Content

A.. Orientation to the computer — 2 hours
   1. History and theory
   2. Hardware
   3. Operation

B. Program Develop Cycle — 6 hours
   1. Problem analysis
   2. Program design (including tools - flowcharts and pseudocode)

3. Program coding
4. Program testing and debugging
5. Program documentation and maintenance

C. Fundamental Concepts — 9 hours
1. Numbers
2. Strings
3. Data Input
4. Expressions
5. Built-in functions
6. Screen Placement and Formatting

D. Procedures — 6 hours
1. Subprograms
2. Functions

E. Control Structures — 12 hours
1. IF Blocks
2. SELECT CASE Block
3. Relational and Logical Operators
4. Do Loops
5. FOR….NEXT Loops

F. Arrays — 9 hours
1. Creating and Accessing Arrays
2. Sorting and Searching
3. Two-Dimensional Arrays

G. Sequential files — 4 hours
1. Creating sequential Files
2. Using sequential files

V. Methods of Presentation

The following instructional methodologies may be used in the course:
1. lecture 1 ½ - 2 hours/week
2. hands-on lab examples 1 – 1 ½ hours/week

VI. Assignments and Methods of Evaluation

Students will be evaluated based upon problem-solving skills as demonstrated in programming assignments and on acquired knowledge measured via quizzes, midterm exam(s) and a final examination.

VII. Textbook

Schneider, QBASIC with an Introduction to Visual Basic 5.0, 4th Edition.
Upper Saddle River; Prentice Hall, 1999.
10th Grade Textbook Reading Level. ISBN # 0-03-021163-8

VIII. Special Features

Extensive hands-on computer lab work.