

Computer Science II - 2004

Strands	Courses	The Learner will be able to...
Introduction to QuickBasic		
QuickBasic Basics		
The programming process	Computer Science II	list the five steps in the structured programming process.
Arithmetic Operators	Computer Science II	understand and use arithmetic operators (addition, subtraction, multiplication, division, and exponents)
Order of Operations	Computer Science II	understand algebraic order of operations; evaluate expressions using order of operations
Variable names and constants	Computer Science II	understand variables and constants and differentiate between numeric and string.
Assignment statements PRINT statement	Computer Science II Computer Science II	use assignment statements in simple programs. display data on the computer screen using PRINT.
Data Structures		
INPUT statement	Computer Science II	explain how the INPUT statement works and write prompts to receive input from the keyboard.
READ-DATA statements	Computer Science II	show how the READ statement assigns values to variables, prepare a data list in a DATA statement, and explain how the RESTORE statement works.
Methods of data entry	Computer Science II	compare the three methods of data entry - the assignment statement, INPUT, and READ/DATA.
Output		
Using punctuation with PRINT	Computer Science II	use commas to print to predefined zones and semicolons to format printing.
TAB statement Formatted printing with PRINT USING	Computer Science II Computer Science II	use TAB to begin printing in a specific column. write a PRINT USING statement to format a line with dollar signs, decimal places, and columns.
Control Statements and Looping		
IF/THEN statements	Computer Science II	show how the IF/THEN statement is used for conditional transfers.

Strand Analysis

Computer Science II

Computer Science II - 2004

Strands	Courses	The Learner will be able to...
Case Structure	Computer Science II	understand and use SELECT CASE structure to control input data
Loops	Computer Science II	show how trailer values and counters are used to control looping and use DO-WHILE, DO-LOOP, AND FOR-NEXT loops.
Accumulating totals	Computer Science II	explain how a total is accumulated within a loop.
Subroutines	Computer Science II	Explain how a subroutine works.
Functions	Computer Science II	understand and use standard functions of QuickBasic; write user-defined functions ;
Parameters of Subroutines and Functions	Computer Science II	differentiate functions from subroutines understand passing contents of variables by value and reference
Library and User Functions		
Numeric library functions	Computer Science II	describe the purpose of each mathematical function and write expressions that will round numbers to any degree of accuracy.
Random numbers	Computer Science II	write expressions to generate a random number within any range.
User-defined functions	Computer Science II	write a user-defined function.
String functions	Computer Science II	describe the purpose of string functions and write expressions that will find the length of a string, concatenate two strings, and compare two strings.
Graphics and Sound		
Graphic modes and color	Computer Science II	describe the graphic modes available on the computer and change the graphic mode.
Graphics	Computer Science II	use statements to change color, draw points, lines, circles on the screen.
Sound	Computer Science II	use statements to create sounds and use the PLAY statement to create a song.
Animation	Computer Science II	use statements to move objects on the screen to perform simple animation.
Arrays		

Computer Science II - 2004

Strands	Courses	The Learner will be able to...
One-dimensional arrays	Computer Science II	define a one-dimensional array, reference various elements in the array, and use FOR/NEXT loops to read values into and print values from the array.
Two-dimensional arrays	Computer Science II	define a two-dimensional array, reference various elements in the array, and use FOR/NEXT loops to read values into and print values from the array.
Bubble sort	Computer Science II	write a numeric and alphabetic bubble sort.
Sequential search	Computer Science II	understand a sequential search and apply it to search an array structure
File Processing		
File processing	Computer Science II	explain the basic steps in file processing.
Creating a file	Computer Science II	use statements to open a file for reading or writing
Saving data into a file	Computer Science II	use statements to write data to a file and read data from a file; use EOF to detect the end of a file
Updating a file	Computer Science II	write statements to update file data; use the APPEND statement to add records to the end of a file
Closing a file	Computer Science II	use the CLOSE statement to close a file after use