

COMPUTER PROGRAMMING II

Visual Basic

This course is an extension of Computer Programming I. Students will use generic programming structures including decision structures, looping techniques, and the embedded functions to create more complex applications. The OBJECT LINKING and EMBEDDING (OLE) feature of Visual Basic allow the student programmer to incorporate MicrosoftOffice applications (e.g., Excel, Access) into projects. This is a powerful application of Visual Basic. Reasoning, problem solving, and communication are an integral part of the course. Specific connections to the other Pennsylvania Mathematics Standards will vary as contextual problems are studied.

	PA Standards
1.0 Use variable arrays as arguments, and create arrays with meaningful Indexes.	2.2.11.F; 2.4.11.B; 2.5.11.A; 2.8.11.D
2.0 Search an array, use dynamic control arrays, and create a matrix using a two-dimensional array.	
3.0 Enhance an application's interface using color, lines, and shapes. Include picture boxes in an application, move shapes and picture boxes, and use the Line, Circle, Pset, PaintPicture, and Cls graphic methods.	
4.0 Use timer objects in an application, move lines, simulate simple animation, and add sound to an application.	
5.0 Open a sequential access file, read data from the file, write text to the file, and close the file.	
6.0 Write records, append data, and read records from sequential access files	
7.0 Update and delete records, delete and rename files, and use the file system controls in an application.	
8.0 Create and use user-defined types. The student will also be able to open a random access file, read data from the file, write records to the file, and close the file.	
9.0 Update and delete records from a random access file.	
10.0 Understand sorting and the bubble sort, selection sort, and insertion sort algorithms. Understand the binary search algorithm.	

PA Standards

- 11.0 Add menus to a form, use the Print, Save, and Open dialogue boxes, use multiple forms in a project, and add an about dialogue and splash screen to a project.
- 12.0 Describe OLE and use Microsoft Excel spreadsheets, Word documents, and Access relational databases in Visual Basic applications.

Notes to the teacher ;~)

This course is open to all students who meet the prerequisites.

The skills acquired in VB 1 should be reviewed at the time when they are needed in current code development.

The course should not get bogged down with the incorporation of sound and pictures in an application. The complex development of forms with multiple forms, menus and dialogue boxes should be covered. The arrays, files and sorting files are very important. The power of Visual Basic is demonstrated by the OBJECT LINKING AND EMBEDDING (OLE) capacity of Visual Basic. The OLE allows the programmer to use Microsoft Office applications in the execution of a V.B. program.

