BELLEVUE COLLEGE

COMPUTER & TECHNOLOGY PROGRAMS

Basic Programming Essentials

This class introduces students to computer programming by presenting the fundamental concepts and terminology of programming. Skills in designing and writing simple computer programs are developed. Learn programming concepts and terminology; read, trace, and understand simple code; write, test, and debug code to solve problems, and use IF statements and loops. Identify and write basic programs using constructs, such as variables and constants.

Who should take this course?

This course is designed for students interested in learning general programming concepts. This course also provides a foundation for students desiring to learn one or more programming languages. This course is intended to be an exposure to programming for students who have never seen or worked with programming languages.

Course Objectives

Enter and execute code:

- Using assignment statements in a simple application in the Visual Studio .NET environment.
- That declares and uses variables and constants of different data types.
- Using decision making statements.
- Using arrays and loop statements.

Course Details

- Length: 12 hours
- Format: Classroom
- Prerequisites: Windows and basic computer proficiency

  The above prerequisites are considered to be the basic skills and knowledge needed prior to taking this class. Instructors will assume your readiness for the class materials and will NOT use class time to discuss prerequisite materials.

Course Contents

Introducing Basic Concepts

- Overview of program execution path
- Overview of high level programs
- Overview of programming styles: procedural, structured, event-driven
- Overview of basic terminology: functions, procedures, classes, objects

Introducing Microsoft C# .NET

- Explain the development environment
- Explain the assignment statement syntax
- Explain the syntax used for comments
- Code first program
- Explain basics of a C# program

Using Elementary Statements

- Describe data types and literals
- Explain variables and constants
- Explain arrays
- Explain IF statement
- Explain loop statements

Using Operators and Expressions

- Explain expressions
- Describe operators: arithmetic, assignment, comparison, logical
- Describe value data type versus reference data type
- Describe use of reference type variables
- Describe data type conversion
- Describe comparisons of number and string data types