

Visual Basic.Net Programming*

COURSE DESCRIPTION:

This course presents basic programming and teaches the essential concepts of VisualBasic.net (VB.NET). As an introduction to VB.NET, students will see the basic uses of the programming language, its similarities to the English language (and others), and its flexibility as a programming language. The course helps participants understand the processes involved in software development and object-oriented programming. This is an introductory course that could lead to careers such as software engineer, developer, or game designer. The course participants will also complete a series of hands-on projects covering built in data types, operators, control structures, classes, and objects.

COURSE OBJECTIVES:

After completing this course, students will be able to:

- Grasp the fundamentals of a programming language and know the basic differences between programming languages
- Apply the processes involved in Software Development
- Program logics and different platforms to build effective software
- Choose the architecture based on the problem to be solved
- Apply the power of .Net technologies and reason why it is popular today
- Differentiate between the types of applications supported by .Net
- Build, compile, and execute a VB.NET program
- Apply techniques to develop error-free software

PREREQUISITES: Knowledge of Computer Fundamentals

COURSE LENGTH: One semester

REQUIRED TEXT: Visual Studio 2008 Express Edition

COURSE OUTLINE:

UNIT I: Course Overview

- Course Introduction
- Getting Started
- Best Programming Practice

UNIT II: Software Development and Architecture

- Systems Development Life Cycle (SDLC)
- Alternatives to SDLC
- Program Flow
- Architecture

* = One semester (.5 credit) course

Visual Basic.Net Programming* (continued)

COURSE OUTLINE (continued):

UNIT III: Fundamentals

- Structure of Languages
- Data Type
- Variables and Constants
- Operators
- Statements
- Building and Compiling a VB.NET Program
- Unit Exercise

UNIT IV: Framework and Objects

- Inside the .NET Framework
- Applications
- Object Oriented Programming

UNIT V: Arraylist, Collections, Stacks and Queues

- Collections Classes and Interfaces
- Hash Table
- Queue and Stack
- Unit Exercise

Unit VI: Error Handling in VB.NET

- Exception Classes
- Structured Exception Handling
- Multi-Level Error Handling
- Application Error Logging
- Unit Exercise

UNIT VII: Delegates and Events

- Delegates
- Events
- Threading
- Unit Exercise

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