

# Introduction to Programming (Third Edition)

Course length: 1 day

## Course Description

You may have used various software applications without ever really considering the question of how the applications were built. Understanding the concepts that lie behind the development of a software application allows you to handle the application with ease. This course introduces you to the general programming concepts as well as the various phases that occur in a software development process.

**Course Objective:** You will be introduced to the fundamental concepts of programming such as the programming process and the software development cycle that help you to understand the development process of applications. You will also experiment with a few programming techniques such as branching and looping to create small programs using the Visual Basic .NET 2005 application as the platform.

**Target Student:** 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.

**Prerequisites:** Students enrolling in this class should be familiar with the basics of Windows 2000 or Windows XP.

**Delivery Method:** Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

## Performance-Based Objectives

Upon successful completion of this course, students will be able to:

- Examine the basic programming concepts and processes.
- Examine the fundamental attributes of object-oriented programming and create event-driven programs.
- Perform calculations in your programs and store and retrieve information from the programs.
- Incorporate decision making into your programs that will allow your programs to evaluate conditions and perform tasks based on them.
- Create modular programs and experiment with the scope of variables.

## Course Content

### Lesson 1: Exploring Programming Concepts

Topic 1A: Identify Programs and Languages

Topic 1B: Explore the Programming Process

### Lesson 2: Examining Object-Oriented Programming

Topic 2A: Explore the Attributes of Object-Oriented Programming

Topic 2B: Create an Event-Driven Program

### Lesson 3: Performing Calculations

Topic 3A: Examine Literals, Operators, and Functions

Topic 3B: Store Values Using Variables and Constants



### **Lesson 4: Controlling Program Flow**

Topic 4A: Use Branching in Programs

Topic 4B: Use Loops in Programs

### **Lesson 5: Creating Modular Programs**

Topic 5A: Create Procedures

Topic 5B: Determine the Scope of Variables

