

Course ID

**TK2559**

Course Duration

**5 days**

Course Title

**Introduction to Visual Basic .NET Programming with Microsoft .NET**

**Aimed At**

Both novice and experienced programmers who have a minimum of three months programming experience.

**Group Size**

5-15

**Prerequisites**

You should possess Windows navigation skills, experience (at least three months) with developing applications in a graphical or non-graphical environment, and an understanding of the basics of structured programming, including concepts such as flow control, variables and parameters, and function calls.

**Course**

**In a Nutshell**

Are you a novice or an experienced programmer eager to acquire the knowledge and skills needed to develop applications in Microsoft Visual Basic .NET for the Microsoft .NET platform? Then this is the course for you.

The course focuses on user interfaces, program structure, language syntax, and implementation details including arrays, functions, decision structures, input validation and error handling, menus and toolbars, enhanced user interfaces, web forms and applications, Microsoft ADO.NET, object oriented programming, and application deployment.

**Customize It!**

Customize this course at little-to-no added cost. Let us know how we can tailor this course to your particular requirements.

**Learn How To**

- Create a simple Visual Basic .NET based application based on the Windows Application template
- Use forms and controls to create a user interface
- Create and use variables and arrays
- Create and use Sub and Function procedures including predefined functions
- Implement decision structures and loops by using conditional expressions
- Validate user input for fields, controls and forms
- Apply object-oriented programming techniques to create classes, add methods, and add properties
- Resolve syntax, run-time and logic errors by using the debugger and structured exception handling
- Enhance the user interface by adding menus, status bars and toolbars
- Create a simple Visual Basic .NET based Web Forms application that uses an XML Web Service
- Access and manipulate data in a Microsoft Access or Microsoft SQL Server database by using Microsoft ADO.NET

- Build, package and deploy an application

## Course Outline

- Getting Started
  - Basic .NET concepts
  - Exploring the development environment
  - Creating a Visual Basic .NET project
  - Exercise: Creating your first application
- Working with Forms and Controls
  - Understanding programming concepts
  - Working with Windows Forms
  - Working with controls
  - Styling your code
  - Exercise: Creating the user interface
- Using Variables and Arrays
  - Introduction to data types
  - Using variables
  - Variable scope
  - Converting data types
  - Creating and using Structures
  - Storing data in arrays
  - Exercises: Creating, using, and converting variables; using structures and arrays
- Working with Procedures
  - Creating procedures
  - Using procedures
  - Using predefined functions
  - Exercise: Creating and using procedures
- Decision Structures and Loops
  - Using conditional expressions
  - Using decision structures
  - Using conditional loop structures
  - Exercise: Using decision structures
- Validating User Input
  - Restricting user input
  - Validating field data
  - Validating form data
  - Exercise: User input validation
- Object-Orienting Programming in Visual Basic .NET
  - Understanding classes
  - Working with classes
  - Using shared members
  - Explanation of inheritance, polymorphism and namespaces

- Exercise: Creating a derived class
- Handling Errors and Exceptions
  - Types of errors
  - Using the debugger tool
  - Handling exceptions
  - Exercises: Implementing structured exception handling
- Enhancing the User Interface
  - Creating custom menus
  - Creating status bars
  - Creating toolbars
- Web Forms and XML Web Services
  - Working with web forms
  - Using XML web services
  - Exercise: Creating a web application
- Using ADO.NET
  - Database concepts
  - Overview of ADO.NET
  - Exercises: Displaying and modifying data extracted from a database
- Deploying Applications
  - Introduction to deployment
  - Deploying a Windows based application
  - Creating and customizing a setup program for a Windows-based application

### **How You Will Learn**

- An experienced programmer and instructor will teach this class in workshop format.
- We will make use of hands-on exercises to help you understand each concept and learn how to apply it.
- We will enrich the instruction with real-life examples, applications, and case studies.
- We will show you the dos and don'ts, tricks of the trade, and the hidden pitfalls.
- You will also receive a detailed student guide to help remember the concepts and skills acquired in the class.

*Revised*

*April 5, 2007*