

Course ID

**TK2373B**

Course Duration

**5 days**

Course Title

**Programming with Microsoft Visual Basic .NET**

**Related Courses**

- Introduction to Visual Basic .NET programming with Microsoft .NET (TK2559, 5 days)
- Programming with the Microsoft .NET Framework (Microsoft Visual Basic .NET) ( TK2415, 5 days)
- Developing Microsoft ASP.NET Web Applications using Visual Studio .NET (TK2310, 5 days)

**Aimed At**

Developers who use Visual Basic 4.0 or later as their primary language, employ technologies such as Microsoft ActiveX Data Objects (ADO) and Active Server Pages (ASP), and wish to use Visual Basic .NET for future application development.

**Group Size**

5-15

**Prerequisites**

You should be experienced with Visual Basic 4.0 or later. You should also be familiar with the basics of object-oriented programming, Extensible Markup Language (XML), Microsoft's .NET strategy, and the .NET Framework.

**Course**

**In a Nutshell**

This comprehensive five-day workshop will equip you with the knowledge and skills needed to develop Microsoft .NET-based applications by leveraging the many enhancements that have been incorporated into Visual Basic .NET. This will allow you to create enterprise applications for the .NET platform as well as to create more traditional Visual Basic applications that can take advantage of the enhancements to the language.

**Customize It!**

Did you know that this course can be customized to your backgrounds and needs at little to no extra charge? Ask us for details.

**Learn How To**

- List the major elements of the .NET Framework and describe some of the major enhancements to the new version of Visual Basic
- Describe the basic structure of a Visual Basic .NET project and use the main features of the Integrated Development Environment (IDE)
- Use the new language features and syntax in Visual Basic .NET
- Explain the basic concepts and terminology of object-oriented design specifically for Visual Basic .NET
- Explain and use the basic concepts and terminology of object-oriented programming in Visual Basic .NET
- Create applications by using Microsoft Windows forms
- Create Internet applications that use web forms and web services
- Create applications that use ADO.NET

- Create components in Visual Basic .NET
- Set up and deploy various types of Visual Basic .NET-based applications
- Prepare existing Visual Basic-based applications for upgrade to Visual Basic .NET

## Course Outline

- Overview of the Microsoft .NET Platform
  - What is the Microsoft .NET platform?
  - What is the .NET Framework?
  - What are the .NET Framework components?
  - What are the Visual Basic .NET enhancements?
- Development Environment Features
  - Integrated Development Environment (IDE) overview
  - Creating Visual Basic .NET projects
  - Using development environment features
  - Debugging applications
  - Compiling in Visual Basic .NET
- Language and Syntax Enhancements
  - Introduction to data types
  - Declaring and initializing variables and arrays
  - Implementing functions and subroutines
  - Calling the default properties of an object
  - Handling exceptions
- Object-Oriented Design for Visual Basic .NET
  - Basics of object-oriented design
  - Concepts of object-oriented programming
  - Designing classes
  - Advanced object-oriented programming techniques
  - Using Microsoft Visio
- Object-Oriented Programming in Visual Basic .NET
  - Defining classes
  - Creating and destroying objects
  - Creating classes that use inheritance
  - Defining interfaces
  - Creating shared members
  - Working with classes
- Using Windows Forms
  - Benefits of Windows forms
  - Structure of Windows forms
  - Using Windows forms
  - Using controls and control enhancement
  - Concept of Windows forms inheritance
- Building Web Applications

- Introduction to ASP.NET
- Creating web forms applications
- Using HTML server controls and web server controls
- Creating and using web services
- Using ADO.NET
  - Overview of ADO.NET
  - Providers of .NET data
  - Dataset object
  - Using Visual Studio .NET data designers and data binding
  - XML integration
- Developing Components in Visual Basic .NET
  - Overview of components
  - Creating serviced components
  - Creating component classes
  - Creating Windows forms control
  - Creating web forms user control
  - Using threading to create multithreaded applications
- Deploying Applications
  - Describing assemblies
  - Types of application deployment
  - Deploying a component assembly
  - Deploying web-based application
- Upgrading to Visual Basic .NET
  - Making decision whether to upgrade
  - Options for upgrading
  - Recommendations
  - Performing the upgrade
- Wrap-up: Course Recap, Q/A, and Evaluations

## **How You Will Learn**

- You will learn from an experienced IT professional and instructor.
- Hands-on exercises are interspersed throughout the course to help you understand and apply the ideas taught in class.
- The workshop will employ real-life examples, applications, and case studies to enrich the class and drive home the essential points.
- Also taught are the dos and don'ts and both the tricks of the trade as well as the hidden pitfalls.
- The course book provides a structure to which you can add information and insight provided in real-time, turning it into a valuable reference resource you can take back to your job.

*Revised*

*April 8, 2007*