

Course ID  
**TK2555**

Course Duration  
**5 days**

Course Title

## **Developing Microsoft .NET Applications for Windows (Visual C# .NET)**

### **Aimed At**

Intermediate level programmers who are responsible for developing user interfaces, creating and testing prototypes, and writing Windows Forms applications with the Microsoft .NET Framework.

### **Group Size**

5-15

### **Prerequisites**

You should be experienced with a .NET language such as Visual C# .NET or C++. NET as well developing basic applications with MFC and/or Microsoft Visual Basic 6.0.

### **Course In a Nutshell**

Are you a Visual C# .NET or Visual C++ .NET programmer looking to upgrade your job skills? This five-day course will help you learn the skills required to create Windows Forms applications using the Microsoft .NET framework

The course covers all of the major topics for Windows client application programming on the .NET Framework. These topics include: Windows Forms, GDI+, simple data access, interoperating with unmanaged code, threading and asynchronous programming issues, simple remoting, web access, web services consumption, debugging, security, and deployment issues for desktop applications.

### **Customize It!**

This course can be customized to your particular background and job requirements at little-to-no additional cost.

### **Learn How To**

- Create and populate Windows Forms
- Organize controls on Windows Forms
- Create menus in a Windows Forms application
- Add code to form and control event procedures in a windows form application
- Create Multiple Document Interface(MDI) applications
- Use dialog boxes in Windows Forms applications
- Validate user input in a Windows Forms application
- Create and use user controls in a Windows Forms application
- Create licenses for controls
- Bind windows form applications to various data sources by using Microsoft ADO.NET
- Consume XML web services from Windows Forms applications
- Use .NET and COM components in a Windows Forms application
- Call Microsoft Win32 APIs from a Windows Forms applications
- Print documents in a Windows Forms applications
- Make asynchronous calls to methods from a Windows Forms application
- Debug a Windows Forms application

- Incorporate accessibility features in a Windows Forms application
- Localize a Windows Forms application
- Add support for help to localize a Windows Forms application
- Create help files in a Windows Forms application
- Deploy a Windows Forms application
- Implement code access and role-based security in a Windows Forms application
- Add deployment flexibility to application by using shared assemblies

## Course Outline

- Introducing Windows Forms
  - Creating a form
  - Adding controls to a form
  - Creating an inherited form
  - Organizing controls on a form
  - Creating MDI applications
  - Exercise: Creating Windows Forms
- Working with Controls
  - Creating an even handler for a control
  - Using Windows Forms control
  - Using dialog boxes in a Window Forms application
  - Adding controls at run time
  - Creating menus
  - Validating user input
  - Exercise: Working with controls
- Building Controls
  - Extending and creating controls
  - Adding design-time support for controls
  - Licensing a control
  - Exercise: Building controls
- Using Data in Windows Forms Application
  - Adding ADO.NET objects to and configuring ADO.NET objects in a Windows Forms application
  - Accessing and modifying data by using DataSets
  - Binding data to controls
  - Overview of XML web services
  - Creating a simple XML web services client
  - Persisting data
  - Exercises: Accessing data with ADO.NET, calling an XML web service
- Interoperating with Managed Objects
  - Using .NET and COM components in a Windows Forms application
  - Calling Win32 APIs from Windows Forms applications
  - Exercise: Interoperating with COM and calling Win32 APIs
- Printing and Reporting in Windows Forms Applications

- Printing from a Windows Forms application
- Using the print preview, page setup and print dialogs
- Constructing print document content by using GDI+
- Creating reports by using crystal reports
- Exercise: Printing formatted documents
- Asynchronous Programming
  - .NET asynchronous programming model
  - Asynchronous programming model design pattern
  - How to make asynchronous calls to any method
  - Helping protect state and data in a multithreaded environment
  - Exercise: Making asynchronous calls to an XML web service
- Enhancing the Usability of Applications
  - Adding accessibility features
  - Adding help to an application
  - Localizing an application
  - Adding tooltips to an application
  - Localizing resources in an application
  - Exercises
- Deploying Windows Forms Application
  - .NET assemblies
  - Deploying a .NET application
  - Using an application configuration file
  - Exercises
- Securing Windows Forms Applications
  - Security in the .NET Framework
  - Using code access security
  - Using role-based security
  - Exercise: Adding and testing permission requests

### **How You Will Learn**

- You will be taught by an experienced programmer and instructor.
- This course will be taught as a workshop and include hands-on practice.
- The instructor will offer real-world examples, applications, and exercises to help master the material.
- Learn the dos and don'ts and both the tricks of the trade as well as the hidden pitfalls.
- The course is accompanied by a comprehensive study guide that will help you recall and reference what you learned in the course.

*Revised*

*April 5, 2007*