

Course 2717 — Instructor-led

Course Length: 2 days

At the end of this course, students will be able to:

- Create a simple .NET solution by using Microsoft Visual J# .NET, Microsoft Visual C# .NET, and Microsoft Visual Basic .NET.
- Use Visual Studio .NET.
- Build simple Microsoft ASP.NET applications.
- Access data in a variety of formats.
- Apply object-oriented programming concepts.
- Create a simple .NET application based on the Microsoft Windows application template.
- Work with XML data.
- Create a Web service.
- Build scalable and reliable applications.
- Apply core security concepts in the .NET Framework 2.0.
- Use the lifecycle tools included in Visual Studio.

- Configure and deploy an application built on the .NET Framework 2.0.
- Interoperate with existing applications.
- Migrate existing applications to the .NET Framework 2.0.
- Build applications for mobile devices.
- Develop applications with Microsoft SQL Server 2005.
- Understand the capabilities of Visual Studio Team System.

Prerequisites:

Before attending this class, students must have:

- Basic programming experience with Visual Basic, Visual Basic Scripting Edition, C, C++, or Java.
- Familiarity with Microsoft development technologies such as Windows Forms and Active Server Pages (ASP).

Course Outline

Module 1: Introduction to Microsoft .NET

This module provides students with an introduction to .NET. The module identifies problems with existing technologies that are solved by the .NET initiative, and describes the core services and features provided by the .NET Framework 2.0. After completing this module, students will be able to describe the features and benefits of using Web Services and the .NET Framework 2.0.

Lessons

- The Microsoft Application Platform
- Introduction to Web Services
- Inside the .NET Framework
- Introduction to .NET Languages
- Microsoft Developer Tools Roadmap

Module 2: Using Visual Studio

This module shows how Visual Studio is a suite of programming tools that provide a complete development environment for building applications for the .NET platform. After completing this module, students will be able to describe the design goals, features, and benefits of using Visual Studio.

Lessons

- Introduction to Visual Studio
- Using Visual Studio for Windows Application Development
- Using Visual Studio for Web Application Development

Module 3: Building ASP .NET Applications

This module describes building ASP applications with the .NET platform. After completing this module, students will be able to describe how ASP.NET can be used to develop enterprise-class Web applications, including those designed for mobile browsers.

Lessons

- Introduction to ASP .NET
- Using Web Forms
- Introduction to ASP.NET Mobile Web Applications
- Introduction to ASP.NET Application Services

Module 4: Using ADO.NET

This module describes the newest version of the data access technology that is an evolutionary improvement to Microsoft ActiveX Data Objects (ADO). ADO.NET is a group of classes in the .NET Framework that integrates XML and ADO object models, and is designed for distributed applications that operating over the Web. After completing this module, you will be able to describe how to implement data services across enterprise-level applications using ADO.NET.

Lessons

- Introduction to ADO.NET
- The ADO.NET Object Model
- Using .NET Framework Data Providers

Module 5: Applying Object-Oriented Programming Concepts

This module describes how object-oriented programming techniques are available across .NET languages, and how

the .NET common language runtime (CLR) provides features to simplify the development of reusable components. After completing this module, you will be able to define object-oriented concepts such as inheritance and describe how namespaces and assemblies can be used to increase efficiency in component development.

Lessons

- Introduction to Classes and Their Members
- Inheritance
- Namespaces and Assemblies

Module 6: Developing Windows Applications

This module explains how to use existing forms and controls that are available for an application's user interface. After completing this module, you will be able to create forms and form templates, and describe how to utilize some advanced functionality of existing controls.

Lessons

- Introduction to Windows Applications
- Using Windows Forms
- Visual Inheritance

Module 7: Using XML in .NET

This module explains how you can work with XML by using classes defined within the .NET Framework. After completing this module, you will be able to explain the role of XML classes in the .NET Framework, describe how ADO.NET takes advantage of the power of XML to provide disconnected access to data, and retrieve and write XML data. You will also use the XML Designer to create and edit XML source code and XML Schema Definition (XSD) schemas.

Lessons

- XML in .NET
- Using the XML Designer
- ADO.NET and XML

Module 8: Web Services

This module describes a simple, standards-based model for binding applications together over the Internet by using Web services. After completing this module, you will be able to describe how to create, implement, deploy, secure, and consume a Web service.

Lessons

- Introduction to Web Services
- Creating and Implementing Web Services
- Deploying and Securing Web Services
- Consuming Web Services
- Web Services Enhancements

Module 9: Security in .NET

This module describes the core security features provided by the .NET Framework. After completing this module, you will be able to explain how to implement authorization and authentication for applications created within the framework. You will also be able to identify additional security

measures and tools provided by the framework.

Lessons

- Code-Based Security
- Role-Based Security
- Additional Security Measures

Module 10: Configuring and Deploying .NET-Based Applications

This module describes how the .NET Framework and the CLR help you to configure and deploy self-described, self-contained applications. After completing this module, you will be able to describe how to use assemblies and the global assembly cache to configure and deploy applications.

Lessons

- Configuring .NET Framework Applications
- Using Assemblies in .NET Framework Applications
- Deploying .NET Framework Applications

Module 11: COM Interoperability

This module explains how Microsoft Visual Studio helps you to enhance the reliability of your applications by using managed code. After completing this module, you will be able to call Component Object Model (COM) components from the .NET Framework, and call .NET Framework components from COM.

Lessons

- Introduction to Application Interoperability
- Calling COM Objects from .NET
- Calling .NET Components from COM
- Using Platform Invoke

Module 12: Developing with Microsoft SQL Server 2005

This module describes the .NET features included with SQL Server 2005 that help build robust data-centric applications. The latest version of Microsoft's enterprise-class database management systems includes tight integration with .NET and a host of features designed to enhance programmability.

Lessons

- Introduction to SQL Server 2005
- Programming SQL Server
- Working with XML
- Introducing SQL Server Service Broker

Module 13: Introduction to Visual Studio Team System

This module introduces Microsoft Visual Studio Team System, an integrated software development platform that combines role-based tools with process guidance.

Lessons

- Understanding the Visual Studio Team System Components
- Using Team System for Requirements and Design
- Programming with Team System
- Quality Assurance with Team System