

## 4994 Introduction to Programming .NET Applications with Visual Studio 2005

Days of Training: 5

### Overview

This course enables introductory-level developers who are not familiar with the Microsoft .NET Framework or Visual Studio 2005 to gain familiarity with the Visual Studio 2005 development environment.

### Prerequisites

- Exposure to developing applications in either a graphical or a non-graphical environment.
- Familiarity with structured programming concepts.
- 2667 Introduction to Programming.

### At Course Completion

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

- Create a simple Windows Forms application.
- Create simple object-oriented applications.
- Develop the user interface in a Visual Studio 2005 application.
- Validate user input on a Windows form.
- Implement debugging and exception handling in a Visual Studio 2005 application.
- Access data in a Visual Studio 2005 application.
- Create simple Web applications and XML Web services.
- Test and deploy Microsoft .NET Framework applications.

### Lesson 1: Getting Started

Introduction to Microsoft .NET and the .NET Framework  
Introduction to the Software Development Life Cycle  
Exploring Visual Studio 2005

### Lesson 2: Creating a Simple Windows Forms Application

Creating a Windows Forms Project  
Adding Controls to a Windows Forms Project  
Compiling and Running a Windows Forms Project

### Lesson 3: Programming Fundamentals

Understanding Programming Concepts  
Defining Program Structure and Flow  
Styling and Writing Code

### Lesson 4: Data Types and Variables

Introduction to Data Types  
Defining and Using Variables  
Defining and Using Collections  
Converting Data Types

### Lesson 5: Controlling Program Execution

Writing Expressions  
Creating Conditional Statements  
Creating Iteration Statements

### Lesson 6: Fundamentals of Object-Oriented Programming

Introduction to Object-Oriented Programming  
Defining a Class  
Creating a Class Instance

### Lesson 7: Creating Object-Oriented Applications

Designing Classes with the Class Designer Tool  
Implementing Inheritance  
Defining and Implementing Interfaces

### Lesson 8: Building a User Interface

Managing Forms and Dialog Boxes  
Creating Menus and Toolbars  
Providing User Assistance

### Lesson 9: Validating User Input

Restricting User Input  
Implementing Field-Level Validation  
Implementing Form-Level Validation

### Lesson 10: Debugging and Exception Handling

Types of Errors  
Debugging Applications  
Handling Exceptions in Applications

### Lesson 11: Accessing Data

Overview of Data Access  
Accessing Data by Using the Visual Studio 2005 Integrated Development Environment  
Programmatic Access to Data

### Lesson 12: Creating Web Applications and XML Web Services

Creating Web Applications  
Creating and Using XML Web Services

### Lesson 13: Exploring .NET Framework 3.0 Technologies

Introduction to the .NET Framework 3.0 Technologies  
Introduction to Windows Presentation Foundation  
Introduction to Windows Communication Foundation

### Lesson 14: Testing and Deploying Microsoft .NET Framework Applications

Overview of Testing  
Creating Object Test Bench Objects  
Deploying Microsoft .NET Framework Applications

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