

20483BC

Programming in C#

5 DAYS

This training course teaches developers the programming skills that are required for developers to create Windows applications using the C# language. During their five days in the classroom students review the basics of C# program structure, language syntax, and implementation details, and then consolidate their knowledge throughout the week as they build an application that incorporates several features of the .NET Framework 4.5.

Module 1: Review of C# Syntax

Overview of Writing Applications using C#
Datatypes, Operators, and Expressions
C# Programming Language Constructs

Module 2: Creating Methods, Handling Exceptions, and Monitoring Applications

Declaring Variables and Assigning Values
Using Expressions and Operators
Creating and Using Arrays
Using Decision Statements
Using Iteration Statements

Module 3: Developing the Code for a Graphical Application

Implementing Structs and Enums
Organizing Data into Collections
Handling Events

Module 4: Creating Classes and Implementing Type-safe Collections

Creating Classes
Defining and Implementing Interfaces
Implementing Type-safe Collections

Module 5: Creating a Class Hierarchy by Using Inheritance

Creating Class Hierarchies
Extending .NET Framework Classes
Creating Generic Types

Module 6: Reading and Writing Local Data

Reading and Writing Files
Serializing and Deserializing Data
Performing I/O Using Streams

Module 7: Accessing a Database

Creating and Using Entity Data Models

Querying Data by Using LINQ

Updating Data by Using LINQ

Module 8: Accessing Remote Data

Accessing Data Across the Web

Accessing Data in the Cloud

Module 9: Designing the User Interface for a Graphical Application

Using XAML to Design a User Interface

Binding Controls to Data

Styling a User Interface

Module 10: Improving Application Performance and Responsiveness

Implementing Multitasking by using Tasks and Lambda Expressions

Performing Operations Asynchronously

Synchronizing Concurrent Access to Data

Module 11: Integrating with Unmanaged Code

Creating and Using Dynamic Objects

Managing the Lifetime of Objects and Controlling Unmanaged Resources

Module 12: Creating Reusable Types and Assemblies

Examining Object Metadata

Creating and Using Custom Attributes

Generating Managed Code

Versioning, Signing and Deploying Assemblies

Module 13: Encrypting and Decrypting Data

Implementing Symmetric Encryption

Implementing Asymmetric Encryption