# Introduction to C# Programming with Microsoft .NET

*Duration:* *5 Day(s)*

## Course Overview

In this five-day instructor-led course, developers learn the fundamental skills that are required to design and develop object-oriented applications for the Web and Microsoft Windows by using Microsoft Visual C# .NET and the Microsoft Visual Studio .NET development environment. This course provides an alternative entry point for less experienced programmers who are not familiar with object-oriented design and programming with Windows or the Web.

Review this course online at https://www.alta3.com/courses/2609

## Objectives

- Understand the Microsoft .NET platform and Visual Studio environment.
- Implement object-oriented programming techniques using C#.
- Develop applications with C# for web and Windows using ADO.NET and XML Web services.
- Create and deploy efficient, robust applications using advanced C# features.

## Who Should Attend

- Novice developers
- University-trained programmers
- Non-object-oriented language programmers
- Web and Windows application developers

## Prerequisites

- Familiarity and comfort with basic operating system functions such as file manipulation.
- Understanding of the basics of structured programming, including concepts such as flow control, variables and parameters, and function calls.
- At least three months experience developing applications in either a graphical or non-graphical environment, or equivalent knowledge.

## Course Outline

### Module 1: Getting Started

1. Introduction to .NET and the .NET Framework
2. Exploring Visual Studio .NET
3. Creating a Windows Application Project

### Module 2: Understanding C# Language Fundamentals

4. Understanding the Fundamentals of a C# Program
5. Using C# Predefined Types
6. Writing Expressions

7. Creating Conditional Statements

8. Creating Iteration Statements

## Module 3: Creating Objects in C

9. Defining a Class

10. Declaring Methods
11. Using Constructors

12. Using Static Class Members

## Module 4: Implementing Object-Oriented Programming Techniques in C

13. Designing Objects

14. Using Inheritance

15. Using Polymorphism

## Module 5: Programming with C

16. Using Arrays

17. Using Collections
18. Using Interfaces
19. Using Exception Handling

20. Using Delegates and Events

## Module 6: Building .NET-based Applications with C

21. Examining the .NET Framework Class Library

22. Overriding Methods from System.Object
23. Formatting Strings and Numbers

24. Using Streams and Files

## Module 7: Using ADO.NET to Access Data

25. ADO.NET Architecture

26. Creating an Application That Uses ADO.NET to Access Data

27. Changing Database Records

## Module 8: Creating Windows-based Applications

28. Creating the Main Menu

29. Creating and Using Common Dialog Boxes
30. Creating and Using Custom Dialog Boxes
31. Creating and Using Toolbars
32. Creating the Status Bar

## Module 9: Using XML Web Services in a C# Program

## Module 10: Creating a Web Application with Web Forms

## Module 11: Application Settings and Deployment

## Module 12: Exploring Future Learning