



Silverlight Programming

Students Will Learn:

- Silverlight Architecture
- XAML Syntax
- XAML Resources, Styles, Templates, Themes
- Working with Silverlight Controls
- Data Binding

- Working with Images, Media and Animations
- Working with ASMX and WCF Web Services
- Navigation Applications
- Line of Business Applications
- Interaction with ASP.NET and JavaScript

Course Description: This course provides students with hands on experience creating Silverlight applications using C# or VB.NET. Students will learn how to use XAML to build user interfaces, including managing appearance, spacing and opacity of elements, as well as applying scale, skew and rotation transformations. Students will learn how to work with XAML resources, building styles that can be applied to provide consistent UIs and use control templates that customize a control's UI appearance. Students will learn to use the powerful features of Silverlight data binding, which allows a programmer to build sophisticated UIs that display the data using a minimum of code. Students will learn how to build ASMX Web Services and WCF services and to interact with them from a Silverlight application to manage the movement of data to and from a back end server. Students will also learn how to use Silverlight's rich support for working with multimedia and animations. Students will also learn how to build and use data-driven WCF RIA Services that use Microsoft's Entity Framework. Students also learn how to make Silverlight interact with ASP.NET and JavaScript code.

The course includes coverage of how Silverlight fits in with other client-side web technologies, working with the native Silverlight controls, the Silverlight SDK controls and the Silverlight Control Toolkit, as well as how to build Silverlight "line of business" applications and Silverlight navigation applications. Students will also learn how to write Silverlight applications using the Windows Phone SDK.

Comprehensive labs and exercises provide the students with experience building a variety of Silverlight applications.



This course provides thorough coverage of Silverlight and XAML. Students requiring additional coverage of **ASP.NET Web Forms**, **Windows Forms** or **Windows Presentation Foundation** should [contact SPIRO](#) or refer to [SPIRO complete course listing](#) for additional training courses.

Course Prerequisites: Prior experience with C# or VB.NET is required. Knowledge of fundamental HTML syntax is helpful, but not required.

Silverlight Programming Course Overview:

Silverlight Development Platform

- Silverlight Functionality Overview
- Silverlight Architecture
- The Silverlight Plug-In
- Cross-Browser/Cross-Platform Compatibility

Understanding Control Basics

- Separating Appearance from Behavior
- Common Properties and Methods
- Dependency Properties
- Controlling Size, Position and Font
- Applying Transformations

Working with UI Controls

- Text Controls
- Buttons
- Items Controls
- Range Controls
- Navigation Controls
- Silverlight Control Toolkit

Introduction to XAML

- XAML as a Common Designer Format
- XAML Fundamental Syntax
- XAML Namespaces
- XAML Elements and Attributes
- Markup Extensions

Using Layout Controls

- Managing Layout
- Canvas vs. Grid
- StackPanel vs. WrapPanel
- ScrollViewer
- DockPanel
- ViewBox

Working with Graphics

- Shapes
- Brushes
 - Using Solid Brushes
 - Using Gradient Brushes
- Building Animations



Resources, Styles, Templates and Themes

- Working with Resources
 - Defining Resource Dictionaries
 - Working with Resources in XAML and Code
 - Understanding the Resource Lookup Mechanism
- Working with Styles
 - Defining Implicit Styles
 - Creating a Hierarchy of Styles Using Based-On
 - Applying Styles
- Working with Control Templates
 - Defining Templates
 - Using Templates
- Applying a Theme

Interacting with WCF Services

- Building SOAP-Based Web Services Using WCF
 - Defining Operation Contracts
 - Defining Data Contracts
 - Hosting the Service
 - Configuring Cross-Domain Calls
- Making Calls to SOAP-Based Web Services
 - Adding a Reference to a Service
 - Handling Exceptions
- Building REST-Based Web Services using WCF
 - Defining REST Methods
 - Hosting the Service
- Making Calls to REST-Based Web Services
 - Using the WebClient Class
 - Downloading Content
 - Uploading Content
- Handling XML Responses
- Handling JSON Responses

Using Data Binding

- Introduction to Data Binding
 - Binding Markup Extensions
 - Binding Modes
 - Value Converters
- Property vs Data Binding
- Working with Data Bound Controls
- Sorting and Filtering Data
- Working with Change Notifications

Interacting with ASMX Web Services

- Building an ASMX Web Service
- Making Calls to ASMX Web Services
 - Adding a Web Reference
 - Making Calls to Web Methods



Building and Using WCF RIA Services

Creating Silverlight Line of Business Applications

- Using the Silverlight Business Application Template
- Configuring Authentication
- Displaying Data

- Building Data-Driven Architectures
- Working with Entity Framework
- Using LINQ
- Building a Domain Service
- Using a Domain Context
- Querying Data
- Updating Data
- Validating Data

Integrating Silverlight Applications with ASP.NET

- Integrating Silverlight with ASP.NET
 - Accessing the Browser
 - Controlling HTML Page Content
- Calling JavaScript from Silverlight
- Calling Silverlight from JavaScript

Creating Silverlight Navigation Applications

- Using the Silverlight Navigation Application Template
- Creating Friendly URIs
- Creating Pages
- Working with Query String Parameters

Building Silverlight Applications for Windows Phone Working with Images, Media and Ink

- Understanding the Windows Phone
- Installing the Tools
- Creating a Windows Phone Application

- Working with Images
- Working with Sound
- Adding Video
- Using the InkPresenter