

This course introduces Windows Presentation Foundation or WPF ("Avalon"), the new .NET technology from Microsoft for building rich Windows applications. The course covers the essentials of WPF, providing an orientation to this technology and a firm foundation for creating applications.

Prerequisites: Working knowledge of C# and the .NET Framework.

Minimum software requirements: Windows XP with Service Pack 2 or Windows Vista, Visual Studio 2008 Standard Edition or higher, and .NET Framework 3.5.

Minimum hardware requirements: Pentium PC running at 1 GHz; 512 Mb RAM; 4 GB free hard disk space before installation.

Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.

Module 1: Introduction to WPF

- Why WCF?
- What is WPF?
- .NET Framework 3.0 (WinFX)
- WPF Overview
- Application and Window
- A Simple WPF Application
- Using Visual Studio
- Brushes
- Panels

Module 2: XAML

- Role of XAML
- Elements and Attributes
- Namespaces
- Property Elements
- Type Converters
- Content Property
- Collections
- XAML and Procedural Code

Module 3: WPF Controls

- Button
- Label
- TextBox
- ToolTip
- RadioButton
- CheckBox
- ListBox
- ComboBox

Module 4: Layout

- Sizing
- Positioning
- Transforms
- Canvas
- Drawing Shapes
- StackPanel
- WrapPanel
- DockPanel
- Grid
- Scrolling
- Scaling

Module 5: Dialogs

- Message Boxes
- Win32 Common Dialogs
- Custom Modal Dialogs
- Custom Modeless Dialogs

Module 6: Menus and Commands

- Menus
- Context Menus
- Icons on Menu Items
- Commands
- Keyboard Shortcuts
- Disabling Menu Items
- Checking Menu Items

Module 7: Toolbars and Status Bars

- Toolbars
- Toolbars and Commands
- Status Bars

Module 8: Dependency Properties and Routed Events

- Dependency Properties
- Change Notification
- Property Value Inheritance
- Support for Multiple Providers
- Routed Events
- Routing Strategies

Module 9: Resources

- Resources in WPF
- Binary Resources
- Logical Resources
- Static vs Dynamic Resources

Module 10: Styles, Templates, Skins and Themes

- Styles
- Style Sharing
- Triggers
- Validation
- Templates
- Templated Parent's Properties
- Skins
- Themes

Appendix A. Learning Resources