

# Curriculum for 89098: "Continuing Windows Presentation Foundation (WPF) with C#"

## Contents

The purpose of the course is to give the participants a deeper knowledge of WPF and the MVVM design pattern. It is assumed that the participants have a basic knowledge of WPF controls (such as buttons and listboxes) and have a working knowledge of Visual Studio. It is assumed that the participants are familiar with the C# programming language.

The course material consists of

- Adam Nathan's book [1] which will be handed out to the participants.
- This curriculum including links to MSDN pages etc. describing additional subjects not in the book.

## Agenda

The course has a duration of 3 course days following the agenda outlined below.

Day 1	Introduction Module 01: "A Quick Tour of WPF Fundamentals" Module 02: "Data Binding Properties" Module 03: "Data Binding Collections"
Day 2	Module 04: "Events and Commands" Module 05: "Control Templates and User-Defined Controls" Module 06: "Threads and Asynchrony in WPF"
Day 3 (MVVM)	Module 07: "Introducing the MVVM Design Pattern" Module 08: "MVVM Problems and Solutions" Module 09: "WPF Testing and Debugging" Module 10: "Cross-Platform Code Reuse" (Optional)

## References

- [1] Adam Nathan: *"WPF 4.5 Unleashed"*.  
Sams Publishing (2013)

## Module 01: "A Quick Tour of WPF Fundamentals"

- [1, Chapter 1, s. 7 – 16]
- [1, Chapter 2, s. 17 – 54]
- [1, Chapter 3, s. 55 – 75]
- [1, Chapter 4, s. 77 – 96]

- [1, Chapter 5, s. 97 – 140]
- [1, Chapter 9, s. 241 – 254]
- [1, Chapter 10, s. 255 – 308]
- [1, Chapter 12, s. 341 – 360]
- [1, Chapter 14, s. 415 – 430]
- [1, Chapter 17, s. 605 – 650]

## Module 02: “Data Binding Properties”

- [1, Chapter 13, s. 361 – 384]

## Module 03: “Data Binding Collections”

- [1, Chapter 13, s. 385 – 411]

## Module 04: “Events and Commands”

- [1, Chapter 6, s. 141 – 150]
- [1, Chapter 6, s. 170 – 176]

## Module 05: “Control Templates and User-Defined Controls”

- [1, Chapter 14, s. 430 – 472]
- [1, Chapter 20, s. 717 – 746]

## Module 06: “Threads and Asynchrony in WPF”

- [1, Chapter 3, s. 56]
- [1, Chapter 7, s. 187]
- [1, Chapter 17, s. 606 – 607]
- <http://msdn.microsoft.com/en-us/library/system.threading.tasks.parallel.aspx>
- <http://msdn.microsoft.com/en-us/library/System.Windows.Threading.aspx>

## Module 07: “Introducing the MVVM Design Pattern”

- <http://msdn.microsoft.com/en-us/magazine/jj694937.aspx>

## Module 08: “MVVM Problems and Solutions ”

- <http://www.galasoft.ch/mvvm/>
- <http://anthymecaillard.wordpress.com/2012/03/26/wpf-4-5-validation-asynchrone/>

## Module 09: “WPF Testing and Debugging”

- <http://msdn.microsoft.com/en-us/library/aa970909.aspx>
- <http://msdn.microsoft.com/en-us/library/ms747327.aspx>
- <http://msdn.microsoft.com/en-us/library/system.diagnostics.presentationtracesources.aspx>
- [http://msdn.microsoft.com/en-us/library/dd409789\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/dd409789(v=vs.110).aspx)
- <http://msdn.microsoft.com/en-us/library/dd264915.aspx>

## Module 10: “Code Reuse Across Platform”

- [http://msdn.microsoft.com/en-us/library/vstudio/gg597391\(v=vs.110\).aspx](http://msdn.microsoft.com/en-us/library/vstudio/gg597391(v=vs.110).aspx)
- <http://msdn.microsoft.com/en-us/library/gg597391.aspx#assemblies>
- <http://www.hanselman.com/blog/CrossPlatformPortableClassLibrariesWithNETAreHappening.aspx>
- <http://msdn.microsoft.com/en-us/magazine/dn201744.aspx>
- <http://blog.tattoocoder.com/2013/01/portable-mvvm-light-move-your-view.html>