

# Curriculum for 89098:

## ”Continuing WPF with C# – Special course for Terma A/S”

### 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

- 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                  | “Module 1: A Quick Tour of WPF Fundamentals”<br>“Module 2: Data Binding Properties [Foundation]”<br>“Module 3: Data Binding Collections [Foundation]”<br>“Module 4: Events and Commands [Introduction]”    |
| Day 2                  | “Module 5: Control Templates and User-Defined Controls”<br>“Module 6: Threads and Asynchrony in WPF [Foundation]”<br>“Module 7: MVVM Design Pattern [Foundation]”<br>“Module 8: WPF Testing and Debugging” |
| Day 3<br>(Deeper Dive) | “Module 9: Data Binding [Deeper Dive]”<br>“Module 10: MVVM Design Patterns [Deeper Dive]”<br>“Module 11: Threads and Asynchrony in WPF [Deeper Dive]”  |

### 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 [Foundation]”

- [1, Chapter 13, s. 361 – 384]

## Module 03: “Data Binding Collections [Foundation]”

- [1, Chapter 13, s. 385 – 411]

## Module 04: “Events and Commands [Introduction]”

- [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 [Foundation]”

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

## Module 07: “MVVM Design Pattern [Foundation]”

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

## Module 08: “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>
- <https://docs.microsoft.com/da-dk/visualstudio/xaml-tools/xaml-hot-reload?view=vs-2019>

## Module 09: “Data Binding [Deeper Dive]”

- [1, Chapter 13, s. 361 – 411]

## Module 10: “MVVM Design Patterns [Deeper Dive]”

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

## Module 11: “Threads and Asynchrony in WPF [Deeper Dive]”

- [https://github.com/lbugnion/mvVMLight/blob/master/GalaSoft.MvvmLight/GalaSoft.MvvmLight%20\(PCL\)/Command/RelayCommand.cs](https://github.com/lbugnion/mvVMLight/blob/master/GalaSoft.MvvmLight/GalaSoft.MvvmLight%20(PCL)/Command/RelayCommand.cs)
- <https://docs.microsoft.com/en-us/archive/msdn-magazine/2014/march/async-programming-patterns-for-asynchronous-mvvm-applications-data-binding>
- <https://docs.microsoft.com/en-us/archive/msdn-magazine/2014/april/async-programming-patterns-for-asynchronous-mvvm-applications-commands>