Advanced Excel – Syllabus

Section 1: Design and Risk

Unit 1.1 - Templates

Get a head start with templates ● Set up an Excel template that will save you an hour each time you create a new workbook ● Create new default workbook and worksheet templates ● Learn how modular templates can make your spreadsheets more consistent and much quicker to set up ● Your Excel, your way: customise the Excel interface to put the tools that you need at your fingertips

Unit 1.2 - Efficiency and Risk

Make spreadsheets more efficient and less risky ● How to build in checks and controls from the outset ● Key techniques that reduce risk and increase automation and efficiency ● Introduce standards to help your team ● Documentation and review tools

Unit 1.3 - Data Validation

Extended uses of Data Validation ● Working with validation formulae ● Lists and lists that depend on other list selections ● Other methods of tracking down invalid entries

Section 2: Advanced Techniques

Unit 2.1 - Functions with Super Powers

Functions with super powers ● Finding the right functions and how they work ● Functions with hidden powers – MOD() for patterns, OFFSET() for simple choices, INDIRECT() to manipulate formulae ● Making references to ranges of cells adapt automatically for new data

Unit 2.2 - Array Formulae

Array formulae ● One formula, one million calculations ● SUMPRODUCT() - all the gain of an array formula with less of the pain

Unit 2.3 - Tables

Tables – structure comes to Excel ● Why Tables are so much more than just a new format ● Make your spreadsheets more automatic with a single command ● Table formulae – instant readability ● Data tools in Tables ● It’s not all good

Unit 2.4 - Advanced Range Names

Advanced Range Names ● Use the same name on different sheets ● Using the Name Manager ● Names in formulae – efficient inclusion of Names, the use of intersections ● Formulae in Names – how to allocate a formula directly to a Range Name and why you might need to

Unit 2.5 - What If Analysis

Using Excel to help you make decisions ● Use Goal Seek to find where you need to start to get where you need to go ● Use an Excel Data Table to calculate dozens of possible outcomes ● Create and manage alternative scenarios ● Make more profit or incur less expense by using Excel Solver to identify the best solution

Unit 2.6 - Problem Solving

Problem solving ● Calculations that make decisions – understanding TRUE ad FALSE ● What Boolean Logic is and why it's useful in practice ● combining logic and arrays to solve complex problems ● Practical examples

Section 3: Excel Interactivity

Unit 3.1 - Form Controls

Use Form controls to make life easier for users ● Use a Spin Button to choose a value easily ● Use an Option Button to choose with a single click ● Choosing from lists

Unit 3.2 - Visual Basic and Macros

Create macros by writing Visual Basic code ● A macro that performs one or more actions on selected cells ● Write your own Excel functions with VB code ● Understanding volatile functions ● Trigger a macro when a particular cell is changed ● Handling errors elegantly

Section 4: Spreadsheet Impact

Unit 4.1 - Practical Interactivity with VBA

Exchanging information with VB code ● Displaying a Message box ● Asking for user input using an Input box ● Create an Excel form with a List box containing values from a range of cells ● Sample VB projects: an automatic index to sheets, printing selected ranges ● Avoiding macros when they're not really necessary

Unit 4.2 - Conditional Formatting

Conditional Formatting – beyond simple Conditional Formats ● Basing conditions on a formula and deciding whether a batsman is out or not ● Choose currency symbols for a whole sheet by changing

a single cell ● Getting your rules in the right order and knowing when to stop ● Graphical Conditional Formats – the detailed options ● Using invisibility to your advantage

Unit 4.3 - Charts that Inspire

Create charts to inspire ● What makes a good chart – is it really a 6.5 cucumbers? ● Simple steps to make your charts clearer ● Why small can be better than large ● Are pie charts evil? ● Why 3D charts can be 50% worse ● Mixed chart types, trendlines and projections ● Advanced chart techniques: break-even lines and waterfall charts ● Pictures in chart columns

Unit 4.4 - Sparklines

In-cell charts – showing 12 times as much information in the same amount of space ● Careful with that Axis ● The different types of Sparkline: lines, columns and win loss ● Sparklines based on a dynamic data range

Unit 4.5 - Graphics Tricks and Techniques

Further graphics tips and techniques ● Taking dynamic pictures with the Excel camera ● Use the Excel camera to combine areas from multiple sheets on the same sheet of paper ● Formatting Excel Camera pictures ● Power View – using the Excel 2013 data visualisation add-in including plotting values on maps and 'playing' bubble charts

Section 5: Turning Data into Decisions

Unit 5.1 - Working with External Data

Getting at your data using the Get External Data tools ● Understand relational databases in 10 minutes and liberate your data ● Excel 2013 Data Model create relationships within Excel

Unit 5.2 - Advanced Uses of PivotTables

Use advanced PivotTable techniques to do more with your data ● Calculated Fields and Calculated items ● Using PivotTables as the calculation engine behind management reports ● Using GETPIVOTDATA() and CUBE formulae to create flexible reports ● Excel 2010 and 2013 Slicers and Timelines - make your PivotTables more interactive ● Working with Pivot Charts ● Building and interactive dashboard using PivotTables and Slicers

Unit 5.3 - PowerPivot

The Excel 2010 and 2013 Power Pivot add-in ● PowerPivot data tools ● Calculations in Power Pivot – an introduction to Data Analysis Expressions (DAX) ● DAX in table columns ● DAX to create new measures and calculated fields ● Understanding advanced DAX expressions – functions that combine

calculations and database techniques ● the Time Intelligence DAX functions – why you need a table containing all possible dates

Unit 5.4 - Reporting with PowerPivot

Creating powerful reports with PowerPivot ● Hierarchies, Perspectives and Sets ● Adding Key Performance Indicators (KPIs) to a Power Pivot report ● Creating CUBE formulae to report on your data in just the way you want to ● Use all these techniques to turn millions of rows of data into a dashboard that supports better decisions