

# Short Courses in Microsoft Excel

## Course Outlines

Aimed at business users, these half-day training courses each focus on a specific area of expertise in Microsoft Office applications. They apply to all current versions of Microsoft Office and are suitable for users at all levels of experience in the programs. The following courses are currently available:

Calculating for New Users – Calculating 101  
Calculating for Power Users - Special Functions  
Data Analysis – Organising Data  
Data Analysis – Tools and Functions  
Data Analysis – PivotTables and PivotCharts  
What-If Analysis and Basic Forecasting  
Building Better Charts  
Auditing Worksheets and Workbook Security  
Building Dashboards

### Calculating for New Users – Calculating 101

Everything you need to know to get started with calculating in Excel. Every Excel user should be familiar with all these topics if they are to work confidently with calculations. This course teaches all the basic rules of calculating in Excel.

- **The Rules of Calculating:** It is important to understand how Excel thinks so that you get the results you expect, and discover exactly which calculations you can perform in Excel.
- **The AutoSum Tool:** It can do a lot more than just add-up. Find out how it works and how it can save you time and ensure accuracy in your workbooks.
- **Working with Percentages:** What is the difference between typing a percent sign and using the percent format? How to calculate percentages manually.
- **Working with Dates:** How to add and subtract days, find the difference between dates and discover some useful date functions.
- **Using the Fill Handle:** Save time and guarantee accuracy by letting Excel do the work of copying formulas.
- **Relative and Absolute Cell References:** You have probably seen dollar signs in formulas but what do they mean and why are they so important?
- **Named Ranges:** How to name a range of cells and use names in formulas. How names can simplify formula writing and help prevent errors.
- **All About Cell References:** How to refer to cells on different worksheets and in different workbooks.
- **Introduction to Functions:** How to use the Paste Function tool and get access to the hundreds of ready-made calculations that Excel can perform.

### Calculating for Power Users - Special Functions

Within Excel's vast collection of built-in functions are many that can help users with their everyday tasks, if only they knew about them and how to use them. This course introduces many of the special functions most valuable to the business user.

- **Date Functions:** Working with dates often causes problems. This collection of functions, including DAY, MONTH, YEAR, WEEKDAY, DATE, DATEVALUE, and DATEDIF, help you extract important information from dates so that you can more easily analyse your data.
- **Text Functions:** Extracting information from text values can be difficult and time-consuming. Functions like LEFT, RIGHT, MID, FIND, LEN, REPLACE and TRIM make the job of working with text simpler and more reliable.
- **Conditional Functions:** Sometimes we need our calculations to behave intelligently and make decisions. The functions IF, AND and OR let the user apply conditions to their calculations.
- **Array Formulas:** these let you perform calculations you can't do with regular Excel Functions. They also ensure consistency and prevent accidental changes. We also take a look at the SUMPRODUCT function.

## Data Analysis – Organising Data

Often the data you need to analyse is stored in different places. Your first task is to bring together your various datasets so that you can work with them at one time. This course teaches you what tools are present in Microsoft Excel to help you achieve this task quickly and efficiently:

- **The Consolidate Tool:** This tool helps you bring together similar sets of data from different worksheets or workbooks, at the same time summarising the values.
- **External Data Sources:** Excel makes it easy to gather data from a variety of different sources such as a text file, a database such as Microsoft Access, a server database such as SQL Server and even a web page.
- **Lookup Functions:** The range of lookup functions in Excel: VLOOKUP, HLOOKUP, INDEX, MATCH and OFFSET help you organise your data, saving time and increasing accuracy, by setting up associations between datasets in different locations.

## Data Analysis – Tools and Functions

This course introduces users to the various tools and functions included in Microsoft Excel for the analysis of Business Data. The following topics are covered:

- **Conditional Functions:** Functions such as SUMIF, SUMIFS, COUNTIF, COUNTIFS, AVERAGEIF, and AVERAGEIFS used to extract information from data using predefined conditions. The IF function allows you to build on your data using simple or complex decisions.
- **Summarizing Functions:** The MAX and MIN functions are used to determine the range of values in the data and in calculating ratios; SUBTOTAL, STDEV and VAR are used for statistical analysis of the variation in a data set; CORREL compares two sets of data.
- **Custom Sorting:** Organise data using multiple levels of sorting; create Custom Lists and use them as custom sorting criteria.
- **The Subtotal Tool:** Use this time-saving tool to organise and summarise large sets of data.

## Data Analysis – PivotTables and PivotCharts

The PivotTable is the single most powerful and flexible tool you have for analysing your business data. Once learned it is easy to use can handle almost any kind of data in volumes from a few dozen rows to hundreds of thousands. This course deals exclusively with the theory and practice of analysing data with PivotTables and PivotCharts, exploring:

- **PivotTables:** These dynamic tables summarise single sets of data or analyse multiple data sets by plotting them against each other in a variety of configurations, whilst at the same time performing a range of different types of calculation.
- **PivotCharts:** These use the analytical power of PivotTables to create graphic representations of data making use of the full range of Excel's powerful charting tools.
- **Slicers:** Create an interactive dashboard by adding these flexible filtering tools.

## What-If Analysis and Basic Forecasting

An important aspect of decision-making in business is the ability to predict future performance on the basis of known results, and to calculate what the consequences would be if circumstances change. Excel provides several useful tools to help with Forecasting and What-if Analysis.

- **Scenario Manager:** Assign different values to variables within your calculations and use this tool to save them as scenarios to recall or create a scenario report.
- **Goal Seek:** This tool calculates the required value of an input variable to achieve a result you specify in your calculation.
- **Data Tables:** Save time and guarantee accuracy by using this tool to create a table of results from the same original calculation with a selection of values for one or two input variables.
- **Plot Trends:** Use the Series command to create Linear or Exponential trends from existing data on a worksheet or add Trend Lines to charts to display forecasts graphically.

## Building Better Charts

Excel's charting tools are powerful and easy to use but most users don't make use of the wealth of design and formatting options that Excel offers. This course helps users create great looking charts that show their data to the best advantage. Topics include:

- **Selecting the Data:** It sounds easy but deciding exactly which and how much data should be included has a strong influence in the effectiveness of a chart.
- **Choosing the Right Chart Type:** It isn't always obvious which kind of chart to use. A few simple rules will help you decide whether to use a Column, Bar, Line or Pie or maybe one of the many other types of chart on offer.
- **Dealing with Multiple Series:** When to use a Stacked Columns or add a second axis to the chart.
- **Plotting Large Amounts of Data:** How Scatter Charts and Bubble Charts can help make sense out of difficult data.
- **Ensuring Consistency of Style:** How to save time by saving your chart layouts as templates and tips for quickly duplicating a chart's design with a simple Copy and Paste.

## Auditing Worksheets and Workbook Security

In a business environment users often share workbooks or create workbooks for others to use. It is easy to assume that a workbook contains no mistakes. Excel offers a number of tools to help you check the accuracy of a spreadsheet and apply protection to prevent unwanted changes.

- **Data Validation:** Apply rules to cells to control the data that is entered. Applied to existing data this tool can display which cells do not conform to the rules you apply.
- **Conditional Formatting:** Use colours and icons to give a visual indication of the values in cells.
- **Formula Auditing:** Visually trace the cells that contribute to a formula, or to see which calculations depend on the value of a specific cell. How to use the Evaluate Formula tool.
- **Showing and Hiding Formulas:** How to quickly view all the formulas on a worksheet, and how to hide calculations from view when required.
- **Restricting User Access:** Lock the cells that you want to keep safe from accidental or intentional changes. Specifying what a user can do with a workbook and protect your rules with a password.
- **Managing the Metadata:** How to use the Document Panel to view and edit a workbook's hidden properties.

## Building Dashboards

As the amount of information available to business expands in volume and complexity there is an increasing requirement from decision-makers for quick, concise and accurate summaries of their key data. A popular way to satisfy this requirement is with a Dashboard and in Excel you have the ideal tools for building one. A Dashboard should be user friendly, accurate and, above all, fulfil its defined task. This course teaches you how to build great Dashboards in Excel.

- **Understanding Dashboards:** What exactly is a Dashboard and why is it different from a simple collection of data and charts?
- **Defining a Dashboard:** Before building starts you should have a clear idea of its purpose, its target audience, and what sort of information it is required to show (e.g. KPIs – Key Performance Indicators).
- **Establishing Data Sources:** All Dashboards are based on data so it is important to know where your raw data is coming from, whether or not it needs to be refreshed periodically, and how this is to be achieved. This section examines some of the most useful tools and functions for manipulating your data.
- **Data Analysis Tools:** Excel contains a wealth of tools for analysing data, several of which are ideally suited for extracting key information from the raw data.
- **Dashboard Design Principles:** Simplicity is the key. A Dashboard should be clear and concise and not confused by inappropriate use of formatting of the data and objects it displays.
- **Presenting the Data:** Above all, the Dashboard is a visual tool and Excel has some excellent tools to help you including Conditional Formatting, Smart Tables, Pivot Tables and Pivot Charts, Charts and Sparklines.
- **User Interaction and Usability:** A good Dashboard doesn't need an instruction manual. Any user-operated controls should be intuitive. You can make use of drop-down lists, Slicers and other tools to allow the user to make changes to the display with the minimum of effort.