Microsoft Excel Classes

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Level 1: Excel Introduction

Excel Basics

- Overview & Excel 2013/2016 Screen
- Title Bar
- Ribbon and Ribbon Tabs
- Name Box and Formula Bar
- Worksheets
- Selecting Cells
- Using Ranges
- Entering Data into the Worksheet
- Data Entry Techniques
- Entering a Formula
- AutoSum
- Managing your Workbook

Editing Data

- Editing the Contents of a Cell
- Find & Replace
- Editing a Formula
- Inserting Columns, Rows and Cells
- Copying and Moving Data
- Fill and Flash Fill
- Drag and Drop Editing
- Copying Formatting
- Clearing Format

Formulas and Functions

- Relative Formulas
- Absolute References
- Using Basic Functions
- Status Bar Calculations
- Using the Function Button

Preparing for Print

- Fine Tuning for Print
- Page Layout View
- Page Setup Options
- Print Preview
- Controlling Page Breaks
- Page Break Preview
- Printing a Worksheet
- Print Title

Themes & Graphics

- Themes & Graphics
- Themes and Styles
- Adding a Picture or Graphic
- Formatting Graphic

Charting

- Types of Charts
- Choosing the Source Data
- Category and Value Axis
- Working with Charts
- Chart Tools
- Moving and Sizing Embedded Charts
- Creating a Pie Chart
- Charting Non-Consecutive Data
- Changing the Axis Plot Order
- Layout Tools
- Printing a Chart

Spreadsheet Design

- Good Design
- Analyze a spreadsheet
- Design Principles
- Planning Checklist for Spreadsheets
- Microsoft Tips for Optimizing Speed
- Design Project

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Level 2: Excel Intermediate Managing Data

Absolute References

- Relative -v- Absolute
- Absolute Formulas
- Mastering Mixed References

Range Names

- Navigating Named Ranges
- Creating Range Names
- Assigning Names
- Using Range Names in Formulas
- Managing Names

Functions

- Date and Time functions: NOW, TODAY, YEAR, MONTH, DATE, WORKDAY, WEEKDAY
- Statistical functions: COUNT, COUNTA
- Financial functions: PMT, FV
- Logical functions: IF, COUNTIF, SUMIF, SUMIFS
- Lookup functions: VLOOKUP, HLOOKUP

Sorting and Filtering Data

- Sorting Data
- Using multiple sort keys
- Using Filters
- Filtering or Sorting by Color

Data Validation

- Restrict Cell entries to data from a list

Working with Large Worksheets

- Using Freeze Panes
- Using an Outline to hide data
- Using multiple sort keys

Multiple Worksheets & Workbooks

- Working with Multiple Worksheets
- Group and Ungroup Sheets
- Move & Copy Worksheets
- Print Selected Worksheets
- 3-D Formulas

Linking

- Linking formulas
- Using Copy & Paste method
- Updating and Managing links
- Creating Hyperlinks

Paste Special

- Copying Formats between work-sheets
- Copying Column Widths
- Transposing data
- Copying Column Widths

Managing workbooks

- Arranging Windows and Work-sheets
- Protect formulas
- Protecting Worksheet Structure

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Level 3: Excel Intermediate Presenting Data

Conditional Formatting

- Understanding Conditional Formatting
- Highlighting Top or Bottom Values
- Working with Data Bars, Color scales & Icon sets
- Creating a Schedule using Conditional Formatting

Tables

- Creating a Table
- Filtering a Table
- Creating Charts based on Tables
- Dynamic charts with Tables
- Using structured references with tables
- Calculated columns in Tables

Manage Formats with Styles

- Using Styles
- Creating a Style
- Copying Styles to another Workbook

Quick Charting Techniques

- Simple chart formatting
- Row/Column control
- Resizing charts
- Adding more data
- Creating combination charts
- User defined charts and templates

Creating Simple Interactive Charts

- Overview of worksheet controls
- Using a checkbox to include/exclude a data series
- Using a combo box to select data to be displayed
- Creating dynamic linked charts using option buttons
- Using a combo box to display different charts
- Using data validation for data selection
- Adding a scrollbar to control the display of a chart

Reporting Progress in Charts

- Actual v Target
- Sparklines
- Creating a dynamic Conditional Chart
- Creating a Waterfall chart to show the rise and fall of data

Creating Dynamic Labels and Legends

- Adding a dynamic message to a chart
- Managing Titles and Labels with formulas
- Managing Legends with formulas
- Using Symbols for Legends
- Using Conditional Formatting

Formulas to Manage Data

- CHOOSE() function
- NA() function
- SUMIFS()
- LARGE() and SMALL()

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Level 4: Excel PivotTables & Tables

PivotTable Fundamentals

- What is a PivotTable?
- Why should I use a PivotTable?
- What are the advantages?
- PivotTable Terminology
- Preparing your data for use in a PivotTable
- Creating a PivotTable
- Selecting the Data Source
- PivotTable Fields List
- Filtering data with Page Fields
- Adding Fields
- Removing Fields

Grouping Data

- Grouping Data
- Group by Dates
- Group by Number
- Ungrouping Data

Re-using PivotTables

- Requerying data
- Using Saved queries
- Automating PivotTable Updates
- Saving a PivotTable Template

Presenting Data in PivotTables

- PivotTable Ribbon
- Hiding and Unhiding Items
- Sorting Data in a PivotTable
- Using AutoSort
- Advanced AutoSort
- Refreshing a PivotTable Report
- Inserting Data into the Data Source
- Formatting Numerical Data
- Selecting Parts of a PivotTable
- PivotTable Formats
- PivotTable Options
- Change the Summary Function
- Adding Multiple Data Fields
- Changing Calculations
- Hiding and Showing Row/Column Details
- Displaying Data Details

Using PivotCharts

- PivotChart terms
- Modifying the Chart
- Caution – Loss of Formatting in PivotCharts

Calculations in PivotTables

- Changing custom calculations
- Creating Calculated Fields
- Calculated Items
- GetPivotData() to extract information
- Using Other Sources of Data
- Selecting data from another Excel workbook
- Connecting to an Database
- Using a Saved Query as the data source
- Using a csv text file as the source of a PivotTable

Publishing PivotTables to Web

- Saving a PivotTable as a web page
- Creating Interactive PivotCharts – Web
- Adding Fields to a PivotChart – Browser

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Level 5: Excel Dashboards

Introductions

- Overview of dashboard reporting
- Understanding the purpose of the dashboard
- How will the dashboard be used?
- Dashboard Design Principles
- Organizing your data

Analyzing Data

- Lookup functions – Vlookup(), Hlookhup()
- SumProduct function
- Choose() function
- Using Excel Lists/Tables to manage data

Advanced Chart Techniques

- Creating Mini Charts
- Managing Legends and X/Y axes
- Using Secondary axes
- Adding Autoshapes to a chart
- Creating Dynamic text boxes
- Creating better charts in Excel

Excel Camera Tools

- Using the Camera tool
- Creating dynamic Charts

Showing Trends

- Line chart trends
- Area chart trends
- Vertical scale
- Showing side-by-side comparison
- Marking significant events
- Representing forecasts
- Creating a Sparkline

PivotTables

- Using pivot tables to create interactive views
- Creating a histogram with a pivot table
- Highlighting top values
- Using external data with PivotTables

Performance against target

- Thermometer style charts
- Bullet graphs
- Creating qualitative bands
- Performance against a target range

Designing an Interactive Interface

- Using Data validation and in-cell lists
- Adding a check box to include a trendline
- Using Option buttons to dynamically feed data

Final Project

- Putting it all together
- Using functions to pull data into charting tables
- Designing the Mini-chart format
- Setting up the Dashboard layout

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Level 6: Excel Advanced Functions

Logical Functions

- This section covers using the logical functions. IF() is one of the most useful functions, but it is not the only one.
- IF, COUNTIF, COUNTIFS
- SUMIF, SUMIFS
- AND, OR and NOT

Lookup and Reference Functions

- This section you will learn how to search for and extract important data. There are three different types – lookup functions find and copy data from a particular cell; reference functions retrieve more general information like how many rows or columns are in a range.
- VLOOKUP, HLOOKUP
- MATCH
- INDEX
- CHOOSE
- OFFSET
- INDIRECT
- COLUMN, ROW

Date and Time Functions

- If you need to calculate with dates and times, Excel provides a number of useful functions.
- DATE, DAY, MONTH, YEAR
- HOUR, MINUTE, SECOND
- WEEKDAY
- WORKDAY
- NETWORKDAYS
- WEEKNUM
- DATEDIF
- EOMONTH
- EDATE

Text Functions

- Excel gives you specialized functions to manipulate text rather than performing numerical calculations. You may want to replace a character in a word, capitalize a name, or count the number of letters in a cell.
- CONCATENATE, TRIM
- VALUE, LEN
- LEFT, RIGHT, MID
- FIND, SEARCH

Auditing Functions

- These functions let you retrieve information about the type of content found in any particular cell. Most will be used in conjunctions with other functions.
- ISBLANK
- ISNUMBER, ISTEXT
- ISERROR
- ISLOGICAL
- ISFORMULA

Arrays

- Creating an array
- SUMPRODUCT

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Level 7: Excel VBA Programming

Introduction to VBA

- Why use VBA if I can record macros in Excel?
- Recoding a Simple macro
- Reviewing the code
- Overview of the VBA environment
- Running Code from VB Editor window
- Getting help on code
- Stepping through a procedure
- Using a Break point
- Communicating with the User

VBA Terminology

- Modules and procedures
- Components of your code
- Objects, Collections, Properties and methods, Using the Excel Object model
- Data Types, Variables and Operators
- Working with variables and constants
- Using Data types
- Working with operators and expressions
- Implicit and Explicit Declarations
- Variable Scope – Procedural, Modular or Public
- Passing variables by Value
- Passing variables by Reference
- Using Arrays

Functions

- Mathematical functions
- Date and time functions
- String functions
- Using Excel functions in VBA code

User Defined Function Procedures

- Creating User Defined functions
- Using user-defined functions in a worksheet
- Declaring Multiple arguments in a function
- Creating a Function Library

Loops

- Do Until and Do While loops
- Looping at least once
- For Next Loop
- For Each Loops with collections

Decision Structures

- Using IF to make decisions
- Testing for multiple conditions
- Establishing Flow control
- Branching
- Call other procedures

Manipulating data

- Working with the Ranges and Selections
- Using the Cells Property to Select a Range
- Using the Offset Property to Refer to a Range
- Using the Columns and Rows Properties
- Using the Union Method to Join Multiple Ranges
- Using the IsEmpty Function
- Using the CurrentRegion Property
- Using the Areas Collection

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Level 7: Excel VBA Programming

Custom Forms / Dialog boxes

- Creating a user form
- Labels, text boxes, combo boxes and list boxes
- Setting properties for the form and controls
- Assigning data to combo boxes and list boxes
- Option buttons, Groups, checkboxes and buttons
- Creating the event code for controls
- Initializing the form
- Closing the form
- Using RefEdit to allow user interaction

File management techniques in VBA

- Open and Save files
- Copy, move and delete files
- Changing folders
- Using Excel Open and SaveAs dialog boxes in code

Managing Information with VBA

- Linking Excel to an Access database
- Adding a Record to the Database from Excel
- Retrieving Records from the Database
- Updating an Existing Record

Working with Names

- Adding Names
- Deleting Names
- Creating Hidden Names
- Checking for the Existence of a Name

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