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Your Total Training Resource

Microsoft® Excel®

Microsoft Excel is an electronic spreadsheet program that organizes date, text and numeric data in columns and rows in a series of worksheets. Create spreadsheets from scratch or from available templates in a fraction of the time. Add basic to complex calculations by inserting self-made formulas or powerful function formulas from a vast library of designs. Analyze and visualize your data in intuitive ways with a fresh user interface plus your favorite keyboard shortcuts. Give your spreadsheet a professional polished look using a wide range of formatting tools. Perform simple to advanced data analysis using a wide range of data tools and formulas. Paint pictures of your numbers by inserting charts and graphics.

The modules for Excel are as follows:

- [Module 1 – Worksheet Design and Templates](#)
- [Module 2 – Worksheet Formatting and Printing](#)
- [Module 3 – Conditional Formatting Rules and Formulas](#)
- [Module 4 – Worksheet Formulas and Linking](#)
- [Module 5 – Function Formulas](#)
- [Module 6 – Statistical Formulas and Functions](#)
- [Module 7 – Database Analysis and Functions](#)
- [Module 8 – Pivot Tables and Pivot Charts](#)
- [Module 9 – Graphs, Charts and Graphics](#)
- [Module 10 – Recording Macros and VBA](#)

To Schedule / Need Additional Information

To schedule sessions, receive more information or for questions/clarifications contact us at:

Email: Ken Keller at kkeller@c-kg.com or Dean Carroll at dcarrroll@c-kg.com or

Phone: (630) 495-0505 or (800) 869-7497.

[To see a complete list of our current computer training options click here.](#)

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Module 1 – Worksheet Design and Templates

Worksheet Design and Templates:

- Learn how to conceptualize and put to design that perfect worksheet.
- Create worksheets from scratch or from a library of time-saving spreadsheet templates to save time.
- Learn why and how to create multiple worksheet spreadsheet files.
- Learn how smart tags can be used to effectively save time and avoid mistakes and errors.
- Insert the proper row and column labeling and best ways for adding text, numbers and dates.
- Learn how undo and redo can save time and frustration in developing your worksheet.
- Efficiently select worksheet areas using keyboard shortcuts and selection techniques.
- Apply essential formatting to text and numeric data, and to columns and rows.
- Use find and replace tools to search for data and formatted data and optionally replace data and/or the formatting.
- Modify worksheet structure by adding and removing columns and rows, and flip columns to read as rows and vice versa.
- Move or copy the data contents of entire rows and columns as well as specific cells and ranges of cells.
- Insert basic formulas and functions to perform common calculations.
- Sort your worksheet's data to order rows by specific values.
- Hide columns and rows with a mouse click using hide, group and outlining tools.
- Quickly move about your worksheet with keyboard shortcuts and effective navigation tools.
- Change your viewing perspective utilizing zooming tools, screen splitting techniques and row/column freeze panes.
- Manage creating additional worksheets or duplicate existing ones to expand the scope of your spreadsheet design.
- Prepare your worksheets for perfect printing and learning how to troubleshoot and avoid common pitfalls.
- Learn how to save your spreadsheet file locally, network and to the cloud.
- Learn to customize the quick access toolbar and command ribbons to make interacting with the spreadsheet/worksheet time effective and productive.
- Save files locally and on the cloud.

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Module 2 – Worksheet Formatting and Printing

Worksheet Formatting and Printing:

- Learn how formatting not only gives your worksheets a polished and professional look but also stand out with visual clarity and understanding.
- Use techniques to select cell ranges, entire columns and rows.
- Overview the standard and custom formatting tools for all things in your worksheet.
- Format text, numbers and dates using the tools located on the ribbons, dialogue boxes and via keyboard and mouse shortcuts.
- Apply alignment tools that change the horizontal and vertical positioning and orientation of data within cells.
- Add standard and customized background coloring, patterning and bordering to columns, rows and cell ranges.
- Use the mini toolbar to quickly format from directly on the screen.
- Use the find and replace tool to replace specific and multiple combinations of formatting with different ones in some or all your worksheet.
- Use the format painter to copy formatting of one or more cells onto one or more other cells. Use the undo and re-do formatting tool correct mistakes and save time formatting.
- Clear formatting from a range of cells.
- Create and apply packages of formatting called styles.
- Apply program-included styles to selected areas.
- Modify and remove styles from a worksheet.
- Format cells based on cell values called conditional formatting.
- Apply preset conditional format rules as well as create and apply new and customized ones.
- Learn to modify and remove formatting rules.
- Add instant personality using themes that effect colors, fonts and the overall way objects look on the worksheet.
- Learn all that you need to know when printing worksheets.
- Learn the tools for perfect printing.
- Insert, move and remove page breaks using keyboard and mouse shortcuts.
- Modify headers and footers, rearrange paging order, page orientation and centered on the page.
- Change page margins, paper size and scaling to less pages or more pages.

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Module 3 – Conditional Formatting Rules and Formulas

Conditional Formatting Rules and Formulas:

- Learn how conditional formatting can add another dimension to worksheet formatting.
- Create conditional formatting rules that automatically apply formatting to cells and ranges of cells that meet certain criteria that you set forth.
- Create rules that format cells whose values are “greater than”, “less than”, “between” and “equal to” a certain value.
- Design rules that cells that contain certain dates and even text values.
- Quickly spot duplicate values applying a rule that finds those.
- Apply statistical rules that apply formatting based on “top and bottom” value tiers as well as above and below overall averages of the entire range in question.
- Add horizontal data bars in the background of cells whose lengths are based on each cell’s value relative to the entire range in question.
- Add color scales (heat mapping) to cells that consists of single and multiple colors and gradients that change relative to the entire range in question.
- Apply icon set formatting where cells will partially be filled with directional arrows, shapes, indicators and ratings icons for powerful eye-catching effects.
- Learn how to apply multiple formats to the same range and remove some or all from a range of cells.
- Learn how to create new customized rules based on any of the existing rules that are currently available in the program.
- Create custom rules based on formulas and function formulas.
- Create rules that apply alternating formatting effects for odd and even, rows and columns.
- Apply alternating formatting for groups of rows and columns.
- Apply conditional formula rules to format row based on values in one or more cells on that row.
- Apply formatting that formats a row based on dates, values and text in one or more cells on that row.
- Create project Gantt charts using conditional formatting.

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Module 4 – Worksheet Formulas and Linking

Worksheet Formulas and Linking:

- Use formulas to see deeper into your numbers and other data.
- Learn formula syntax to see how a formula is constructed.
- Create a variety of powerful formulas to fit a range of business applications.
- Perform calculations without using formulas.
- Learn the role of parenthesis, when to use them and in what quantities.
- Know the differences between using relative cell references versus absolute when creating formulas.
- Apply absolute referencing to a number of formulas.
- Check formula construction by displaying the formula in the cell it resides in using the show formulas button.
- Learn about tools that troubleshoot the formula creation process to find errors and oversights.
- Learn how to use formula auditing tools to evaluate formulas, error checking and trace formula precedents and dependents.
- Learn the top five ways to copy and edit simple and complex formulas.
- Learn ways to copy formulas to other cells, down a column, across a row and to other worksheets and spreadsheet files.
- Create formulas that pull (link) values from the current worksheet or any other worksheet anywhere.
- Create dozens of formulas including running totals, carry-overs, percentage change, period-over-period, variances, indices, budget-remain, commission/bonus, date calculations and projections, area and volume, to name a few.
- Link cell values between multiple worksheets.
- Consolidate multiple worksheets into a single worksheet.
- Link multiple worksheets to a master worksheet.
- Link cell values between worksheets of multiple spreadsheet (workbook) files.
- Link multiple spreadsheet files to master spreadsheets.
- Manage spreadsheet links and learn how to troubleshoot broken links due to renamed, moved and deleted files.
- Set a spreadsheet file to shared mode so that multiple users can access the same file without experiencing read-only errors.
- Set the worksheet to calculate manually or automatically.
- Learn how to remove formulas from worksheets while leaving behind the calculation's most recent outcome/value.

Module 5 – Function Formulas

Function Formulas:

- Learn how to take your formulas to the next level using function formulas.
- Learn a variety of function formula syntax to create powerful calculations for a wide range of business applications.
- Learn how functions can be combined or nested to produce powerful calculations.
- Understand the important role that relative and absolute referencing plays in successful calculations.
- Learn the 3 techniques used in building function formulas including direct, autocomplete and the function dialogue.
- Learn about tools that troubleshoot the function formula creation process to find errors and oversights.
- Learn how to use function formula auditing tools to evaluate functions, error checking and trace function precedents and dependents.
- Learn the top five ways to copy and edit simple and complex functions.
- Learn how to remove functions from worksheets while leaving behind the calculation's most recent outcome/value.
- Use popular functions including IF, VLOOKUP, SUM, AVERAGE, ROUND, RANK, WORKDAY, NETWORKDAYS, CONCATENATE, FREQUENCY, MATCH, OFFSET, IFERROR and many others.
- Use other popular function formulas that remove extra characters, convert between upper and lower case, convert Excel data types, convert between characters and numeric codes, cutting up and piecing together text strings, information functions and replacing/substituting parts of a text string.
- Other functions that display error information, numerical information, returning a constant value, data type functions and general information.
- Popular statistical functions for counting and frequency, that find finding the largest and smallest values, percentiles, quartiles and rank, averages, deviation and variance, confidence intervals, trend line, permutations, distributions and tests of probability.
- Many of the math functions for basic numeric information, basic math operations, rounding functions, matrix functions, random numbers, conditional sums, advanced mathematical operations and more.
- Some of the financial functions that calculate investment value, price functions, internal rate of return, asset depreciation, dollar conversion, payment, interest rate and yield.
- Date and time functions for creating dates and times, current date and time, extracting the components of a date, extracting components of a time and performing calculations with dates.
- Lookup and reference functions for date lookup, row/column/area information, return references to cell ranges and more.
- And finally, database functions that use criteria to dig deep into data summarization.
- Analysis tools including Goal Seek, Scenarios, Forecasting and The Solver.

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Module 6 – Statistical Formulas and Functions

Statistical Formulas and Functions:

- Learn the importance of statistics in making decisions, predictions and discoveries.
- Take the understanding of your data to a deeper level in business and academia using proven statistical tools.
- Learn to organize and present data and how to draw conclusions using function formulas, calculations, charts, and 3D maps.
- Apply the Solver and powerful Analysis Tool Pak to your data.
- Understand data types and variables.
- Calculate probability and variability.
- Calculate mean, median, mode, variance, standard deviation and correlation.
- Test differences with analysis of variance (ANOVA).
- Use linear, multiple, and nonlinear regression testing to analyze relationships between variables and make predictions.
- Perform advanced correlations, variable frequency testing, and simulations.
- Organize and graph distributions, visualize sampling distributions and making estimations.
- Test hypothesis, mean testing, “z” and “t” testing, and analyze variance.
- Perform repeated measure testing while understanding correlation and regression.
- Perform comparisons and two-way analysis with ANOVA.
- Analyze linear regression and perform multiple regression and nonlinear regression analysis.
- Run simulations and perform forecasting.
- Make advanced correlations and test variable frequencies.
- Use statistical functions to calculate count and frequency using functions that may include COUNT, COUNTA, COUNTBLANK, COUNTIF, COUNTIFS AND FREQUENCY.
- Use functions to find the largest and smallest values that may include MAX, MAXA, MAXIFS, MIN, MINA, MINIFS, LARGE and SMALL.
- Use functions that calculate percentiles, quartiles and rank that may include PERCENTILE, QUARTILE, RANK and PERCENTRANK.
- Calculate averages that may include AVERAGE, AVERAGEIF, AVERAGEIFS, MEDIAN, MODE, GEOMEAN, HARMEAN and TRIMMEAN.
- Measure deviation and variance that may include AVEDEV, DEVSQ, STDEV, CAR AND COVAR.
- Measure confidence intervals using variations of CONFIDENCE.
- Calculate trends that may include FORECAST, INTERCEPT, LINEST, SLOPE, TREND, GROWTH, LOGEST and STEYX.

Module 7 – Database Analysis and Functions

Procure Data:

- Move or insert rows and columns of data with simple dragging.
- See how to restructure data, remove unwanted characters, convert data into the desired format – Prepare data for efficient analysis.
- Adjust row and column placement, transpose row-column layouts to column-row layouts and by using “Replace” and “Substitute” functions, Text to Columns tool and Flash Fill.
- Convert and Format text, numbers and other values.
- Replace data at the character level.
- Add and use special characters and wildcards during search and replace.
- Convert dates with text functions and text data to values and numbers.
- Checking and correcting spelling mistakes.
- Split data into multiple columns using the text to columns feature and the flash fill feature.
- Combining data from different columns via concatenation and Flash Fill.
- Remove duplicated and redundant data with powerful keyboard techniques and Remove Duplicates tool.
- Add data validation rules and tools to restrict data entries.
- Fix cell contents with text functions like “Left”, “Right”, “Mid”, “Trim”, “Len”, “Text” and “Find”.
- Change cell text case with “Upper”, “Lower” and “Proper”.

Analyze:

- Apply easy-to-use commands, features, formulas and functions to maintain any sized lists of data.
- Learn how to keep any amount of data under control.
- Manage small and large amounts of worksheet data using data management and analysis features.
- Learn how to normalize, restructure and prep your data to work optimally with Excel’s wide range of data mining and management tools.
- Extract the most important information from your data, quickly.
- Multiple-key sorting and sorting by rows and by columns as well as by color.
- Text, numeric and date filtering with customization including by color.
- Add Advanced Filtering to create filtered lists and the like.
- See the advantages of converting a worksheet database list to a table.
- Quickly calculate data using built-in functions.
- Use the form tool as an interface to build and view data.
- Apply slicer filters to tabular tabled data to take data filtering to the next level.
- Setting single and multi-level subtotals to see what your data is all about.
- Apply a wide-ranging array of data analysis function formulas including “SumIf”, “SumIfs”, “Count”, “CountIf”, “CountIfs”, “Average”, “AverageIf”, “AverageIfs” “DSum”, “DMax”... to isolate and analyze data.
- Analyze hypothetical business cases using formulas and variable data.
- Build data tables, define alternative data sets with scenarios and find target values with goal seek.
- Analyze complex problems using Solver.
- Add sliders and check boxes to run simulations.
- Add additional data tools using free program add-ins.

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Module 8 – Pivot Tables and Pivot Charts

Pivot Tables:

- Learn to use Pivot Tables to summarize, sort, count and chart your data.
- Learn to navigate the complexity of pivot tables while taking advantage of their power.
- Format your data to be used in the pivot table.
- Learn to build Pivot Tables from single and multiple data sources.
- Connect to a variety of data sources including data consolidation.
- Add, remove and (re)position subtotals and grand totals.
- Apply a variety of built-in pivot table designs and layouts including spacing.
- Add calculated fields, Sort and filter results and format your layout to make it more readable.
- Apply packets of formatting with styles.
- Advanced filtering with powerful slicers to focus on the most important data.
- Create macros to automate updating and refreshing of data sources.
- Print pivot tables perfectly.

Pivot Charts:

- Learn how to create Pivot Charts and chart trendlines to visualize your data.
- Enhance your pivot tables with conditional formatting to highlight subsets of data by using color scales and more to emphasize specific information.

Power Pivot and Power Pivot Dax:

- Learn how Power pivot makes it easy to aggregate and analyze data.
- See how to build an effective collection of data tables or what is called a data model.
- Learn data modeling concepts and terminology.
- Explore the Power Pivot interface.
- Establish relationships between the tables and configure hierarchies.
- Utilize many-to-many data table relationships.
- Implement banding.
- Add and remove data table sources.
- Understand the language behind the calculated columns and calculated fields called DAX that allows for powerful Pivot Tables.
- Add functions.
- Learn its syntax, operators, data types and functions.
- Apply the revolutionary calculate function.
- Learn how evaluation context affects expression output and integrate time and dates into Power Pivot calculations.
- Understand perspectives and key performance indicators or KPIs.
- Understand DAX syntax and evaluation context.

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Module 9 – Graphs, Charts and Graphics

Graphs and Charts:

- Create charts from column, bar, line, area, scatter, surface and radar to donut, waterfall, box & whisker, sunburst, Treemap and histogram.
- Create single-celled Sparkline graphs in line, bar and win-loss formats.
- Create combo charts that include multiple types.
- Analyze further with varieties of trendlines and forecasting.
- Use the recommended charts feature to pick just the right graph for your specific data.
- Fine-tune chart color and style, resize, titles, gridlines, labels and legends.
- Modify axes and add additional axes.
- Duplicate and move within sheet, between sheets and spreadsheet files.
- Link and dynamically link graphs to other program files.
- Pull data from multiple sources.
- Change data sources for charts as well as printing and sharing charts.
- Convert your data into table format to create dynamic data charts that adjust as the data changes.
- Learn how to integrate formulas into your charts for powerful results.

Graphic Objects:

- Create, modify and format text boxes to enter text over and independent of the worksheet grid.
- Use drawing tools to add a variety of shapes.
- Add text to a shape and use the drawing canvas to control drawing elements.
- Change an existing shape and apply formatting styles and effects.
- Make and insert screen shots to your worksheets.
- Rearrange, resize, organize and format shapes.
- Applying special effects to graphics and enhance them with fills, themes, shadows, preset formats, textures, gradients, 3D effects and more.
- Use special paste options to paste a copied object as a picture or to create a link.
- Import external objects and text using the Text from File option.
- Convert bulleted text into SmartArt diagrams.
- Insert a variety of SmartArt diagram objects including lists, processes, cycles, hierarchy's, matrixes, pyramids and more.
- Adjust the layout of the shapes used in the SmartArt objects.
- Apply new layouts and formatting styles.
- Add additional object shapes using the pane.

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Module 10 – Recording Macros and VBA

Recording Macros and VBA:

- Learn how to record macros in stages.
- Share macros between workbooks.
- Set up keyboard shortcuts, quick access toolbar icons and tab ribbon icons, to run your macros quickly.
- Learn to create macros from scratch by inserting VBA that provides custom functionality to enhance Excel's performance and efficiency.
- Add code to macros and create, export and delete code modules.
- Create macros that add additional tools and features not found normally in the program.
- Create user-defined functions (UDF's) that add additional function formulas to the program.
- Use VBA to calculate using Excel's built-in functions.
- Create custom add-ins that package groups of macros for use on other computers.
- Learn how to edit/expand your macros to make them do more and work faster.
- Learn about macro security and how to protect your computer.
- Learn how to join and combine macros along with streamlining them.