

Advanced Excel Plus Course Syllabus for Aspiring Analysts

Formula Basics

- Displaying and highlighting formulas
- Auditing tools
- Using entire row/column references
- Copying column formulas instantly
- Converting formulas to values with a simple drag
- Updating values without formulas
- Simplifying debugging formulas
- Enhancing readability with range names
- Creating 3D formulas to gather data from multiple sheets

Formula and Function Tools

- Understanding the hierarchy of operations in Excel formulas
- Using the Formulas tab on the Ribbon for locating functions
- Using the Insert Function button for guidance with unfamiliar functions
- Using and extending AutoSum button capabilities
- Using absolute and relative references in formulas
- Using mixed references in formulas

IF and Related Functions

- Exploring IF logical tests and using relational operators
- Creating and expanding the use of nested IF statements
- Using the AND and OR functions with IF to create compound logical tests

Lookup and Reference Functions

- Looking up information with VLOOKUP and HLOOKUP
- Finding approximate matches with VLOOKUP
- Finding exact matches with VLOOKUP
- Nesting lookup functions
- Using VLOOKUP with large tables
- Finding Second Match using VLOOKUP
- Using Wildcard Characters in VLOOKUP
- Using VLOOKUP for Merging Different Sheets and Workbooks

- Using VLOOKUP for comparing Data and Separate inconsistent fields
- Finding table-like information within a function with CHOOSE
- Locating data with MATCH
- Retrieving information by location with INDEX
- Using MATCH and INDEX together
- Using INDEX to build dynamic Ranges

Power Functions

- Tabulating information using a single criterion with COUNTIF, SUMIF, and AVERAGEIF
- Tabulating information using multiple criteria with COUNTIFS, SUMIFS, and AVERAGEIFS

Statistical Functions

- Finding the middle value with MEDIAN
- Ranking data without sorting with RANK
- Finding the largest and smallest values with LARGE and SMALL
- Tabulating blank cells with COUNTBLANK
- Using COUNT, COUNTA, and the status bar

Math Functions

- Working with ROUND, ROUNDUP, and ROUNDDOWN
- Working with MROUND, CEILING, and FLOOR for specialized rounding
- Using the INT and TRUNC functions to extract integer data
- Finding the remainder with MOD and using MOD with conditional formatting
- Practical uses for the random number functions RAND and RANDBETWEEN
- Converting a value between measurement systems with CONVERT
- Using the powerful AGGREGATE function to bypass errors and hidden data
- Using the ROMAN and ARABIC functions to display different numeral systems

Date and Time Functions

- Understanding Excel date/time capabilities in formulas
- Using TODAY and NOW functions for dynamic date/time entry
- Identifying the day of the week with WEEKDAY
- Counting working days with NETWORKDAYS
- Determining a completion date with WORKDAY
- Tabulating date differences with DATEDIF

- Calculating end-of-month and future/past dates with EDATE and EOMONTH
- Converting text entries into dates and times with DATEVALUE and TIMEVALUE

Array Formulas and Functions

- Extending formula capabilities with arrays
- Counting unique entries in a range with an array formula
- Determining frequency distributions with FREQUENCY
- Flipping row/column orientation with TRANSPOSE
- Building analysis via regression techniques with TREND and GROWTH
- Using array formula techniques with the MATCH function for complex lookups

Reference Functions

- Getting data from remote cells with OFFSET
- Returning references with INDIRECT
- Using INDIRECT with data validation for two-tiered pick list scenarios

Text Functions

- Locating and extracting data with FIND, SEARCH, and MID
- Extracting specific data with LEFT and RIGHT
- Removing extra spaces with TRIM and removing hidden characters with CLEAN
- Using ampersands and CONCATENATE to combine data from different cells
- Adjusting the case within cells with PROPER, UPPER, and LOWER
- Adjusting character content with REPLACE and SUBSTITUTE
- Using other utility text functions: LEN, REPT, VALUE, TEXT

Information Functions

- Extracting information with the CELL and INFO functions
- Using ISBLANK, ISODD, ISEVEN, ISTEXT, ISNUMBER and other Functions
- Using error-checking functions ISERR, ISERROR, IFERROR, ISNA, and IFNA etc
- Using the ISFORMULA function with conditional formatting

Pivot tables

Creating and Pivoting PivotTables

- Formatting data for use in a PivotTable
- Connecting to an external data source

- Connecting to an Access database
- Consolidating data from multiple sources
- Updating and refreshing PivotTable data sources
- Adding, removing, and positioning subtotals and grand totals
- Changing the PivotTable data field summary operation
- Summarizing more than one data field
- Creating a calculated field
- Grouping PivotTable fields
- Using PivotTable data in a formula
- Drilling down to the underlying data

Sorting and Filtering PivotTable Data

- Sorting PivotTable data
- Creating a custom sort order
- Filtering a PivotTable field by selection
- Filtering a PivotTable by rule
- Filtering a PivotTable using a search filter
- Filtering a PivotTable using slicers
- Formatting slicers
- Filtering a PivotTable with report filter fields
- Clearing and reapplying PivotTable filters

Formatting PivotTables

- Applying a PivotTable style
- Creating a PivotTable style
- Changing the PivotTable layout
- Changing the data field number format

Applying Conditional Formatting to PivotTables

- Highlighting cells by applying a rule
- Highlighting the top or bottom values in a PivotTable
- Formatting PivotTable cells using data bars
- Formatting PivotTable cells using color scales
- Formatting PivotTable cells using icon sets
- Editing conditional formatting rules
- Controlling how multiple rules are applied
- Deleting a conditional formatting rule

Creating and Manipulating Pivot Charts

- Creating a PivotChart
- Pivoting a PivotChart
- Filtering a PivotChart
- Formatting a PivotChart
- Changing a PivotChart layout
- Changing a PivotChart chart type
- Adding a trend line to a PivotChart

Printing PivotTables and PivotCharts

- Printing a PivotTable
- Printing each item on its own page
- Printing a PivotChart

Manipulating PivotTables Using Macros

- Recording and reviewing a macro
- Running a macro
- Creating a simple PivotTable presentation kit

Data Validation

Controlling the Limits of Numeric Data

- Whole-number vs. decimal limitations
- Using the input message box
- Using the Error Alert tab

Setting Up Dropdown Lists (Pick Lists)

- Short-list and long-list variations
- List location and order
- Multitiered lists: Lists depending on lists

Date Controls

- Date limitations with basic controls
- Date limitations using formulas

Time Controls

- Time limitations with basic controls
- Time limitations using formulas

Text-Length Controls

- Text-length limitations with basic controls
- Text-length limitations using formulas

Specialized Custom Formula Controls

- Requiring entries to be unique
- Locating cells with data validation rules
- Identifying cells that violate data validation rules

Conditional Formatting

- Different types of Conditional Formatting – Color Scales, Data Bars, Icon Sets etc.
- Format only cells that contain text, number, or date or time values
- Format only top or bottom ranked values
- Format only values that are above or below average
- Format only unique or duplicate values
- Adding many levels of Conditional Formatting
- Advanced Conditional Formatting using Formulas

Charts and Dashboards

- Identifying chart elements like plot area, chart area, gridlines, and legends
- Selecting the right chart type
- Understanding chart terminology
- Understanding the Ribbon and the Design, Layout, and Format tabs

Creating Basic Charts Quickly

- Selecting data to display as a chart
- Creating charts instantly with shortcuts
- Creating charts with standard menu commands
- Creating presentation-ready charts with just a few adjustments

- Creating graphic-in-cell charts with sparklines

Fine-Tuning Charts with Design Tab Choices

- Switching rows and columns for a different view of the data
- Setting a default chart type and creating a template
- Dealing with empty and hidden cells
- Choosing a chart layout
- Changing the location of a chart
- Moving and resizing a chart

Layout Tab Options: Inserting Pictures, Shapes, and Text Boxes

- Using pictures as chart elements
- Adding shapes and arrows
- Adding floating text and text boxes

Layout Tab Options: Adding Titles, Labels, and Legends

- Adding, editing, and removing chart titles
- Adding horizontal and vertical titles
- Linking titles to content
- Showing numbers of different scales
- Specifying the position of tick marks and axis labels
- Changing the numeric format on labels
- Adding, editing, and removing legends
- Adding and editing data labels
- Showing the source of a chart's data

Layout Tab Options: Using Axes and Gridlines

- Modifying axis scaling
- Working with gridlines

Layout Tab Options: Using the Analysis Tools

- Analyzing existing and future data with trendlines
- Adding drop lines
- Adding high-low lines and up-down bars
- Adding error bars

Format Tab Options:

- Adding Shapes and WordArt Styles
- Selecting shape fill and outline
- Adding shape effects
- Applying WordArt styles

Using Other Formatting Tools

- Formatting lines and borders
- Filling an area with a color gradient
- Specifying line style, color, and weight
- Working with chart text
- Changing the rotation of chart text

Adjusting Specific Chart Types

- Using column and bar charts
- Using line charts
- Using pie charts
- Using area, stock, and XY charts
- Using doughnut, bubble, and radar charts

Changing a Chart's Data Source

- Pasting new data into a chart
- Creating charts from multiple data sources
- Adding new data using a table

Printing and Sharing Charts

- Printing charts
- Copying and linking charts with Word and PowerPoint

Building Dynamic Charts

- Using Index and Offset Function to Build Dynamic Charts
- Adding Interactivity to Charts Using Form Controls