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Mastering Excel:

From Basics to Advanced Analytics

FA-0305 · two-day

Data & Analytics

Introduction

This two-day comprehensive course is meticulously designed for participants aiming to master Microsoft Excel, starting from foundational concepts to advanced data analysis and visualization techniques. Excel, being an indispensable tool in the world of business and data analysis, offers a plethora of features that can enhance efficiency, support complex calculations, and enable insightful data visualization.

Whether you are a beginner looking to understand the basics or someone aiming to dive deep into advanced features like Pivot Tables, Power Query, and creating stunning visualizations, this course is tailored to meet your needs. Through interactive lectures, hands-on exercises, and real-world case studies, participants will become proficient in Excel, enabling them to handle any data analysis task with confidence.

Learning outcomes

By the end of this course, participants will be able to:

- Navigate and effectively utilize the Excel interface.
- Perform basic to advanced data manipulation and validation.
- Create complex formulas and functions to analyze data.
- Utilize PivotTables and PivotCharts for summarizing and analyzing large datasets.
- Leverage Power Query for data importation and transformation.
- Design dynamic reports and dashboards with advanced visualization techniques.
- Apply best practices in data analysis and presentation to make data-driven decisions.

Prerequisites

- Basic computer literacy and familiarity with the Windows or macOS operating system.

- No prior experience with Microsoft Excel is required.
- Microsoft Excel's Power Pivot is only available in the Windows version, as such Microsoft Windows 10 and above are required.

Training outline

1. Introduction to Excel

1. Overview of Excel interface and key features.
2. Understanding workbooks, worksheets, and basic navigation.

2. Data Entry, Manipulation, and Validation

1. Efficient data entry techniques.
2. Data types and formatting options.
3. Introduction to data validation and conditional formatting.

3. Formulas and Functions

1. Basic arithmetic operations and cell referencing.
2. Commonly used functions: SUM, AVERAGE, MIN, MAX, COUNT, etc.
3. Introduction to more complex functions: VLOOKUP, HLOOKUP, INDEX, MATCH.

4. Managing Data

1. Sorting and filtering data.
2. Introduction to Excel tables and structured references.
3. Basic data cleaning techniques.

5. Introduction to Data Visualization

1. Creating and customizing charts and graphs.
2. Using conditional formatting for data visualization.

6. Advanced Data Analysis

1. Introduction to PivotTables and PivotCharts.
2. Slicing and dicing data with Slicers and Timeline filters.

3. Creating calculated fields and items in PivotTables.

7. Power Query for Data Importation and Transformation

1. Overview of Power Query interface.
2. Importing data from various sources (Excel, Web, Text, CSV).
3. Data transformation and cleaning with Power Query.

8. Advanced Data Visualization and Dashboards

1. Design principles for effective data visualization.
2. Advanced chart types and when to use them.
3. Creating dynamic and interactive dashboards.

9. Introduction to Macros and VBA

1. Overview of Excel Macros and the VBA editor.
2. Recording simple macros to automate repetitive tasks.
3. Introduction to VBA programming concepts (Variables, Loops, and Conditional Statements).

10. Real-World Case Studies and Hands-on Exercises

1. Applying learned skills to solve real-world business problems.
2. Designing a comprehensive dashboard from scratch.
3. Interactive Q&A and problem-solving sessions.

Conclusion:

The course wraps up with a detailed review of the key concepts covered, followed by a final Q&A session to address any lingering questions. Participants will leave the course with a deep understanding of Excel's capabilities, equipped with the skills to perform advanced data analysis and create compelling data visualizations. The course shall not follow the sequence of the outline list but rather cover all the topics in a mix-and-match agile technique.

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