

ADVANCED DATA ANALYTICS AND AUTOMATION IN EXCEL

COURSE OVERVIEW

This course provides a comprehensive exploration of advanced data analytics and automation techniques using Microsoft Excel. Designed for professionals seeking to maximize efficiency and derive actionable insights, the course emphasizes mastering complex formulas, advanced data visualization, and integrating automation tools like Power Query, VBA, and Power Automate. Participants will develop expertise in analyzing large datasets, implementing predictive models, and optimizing workflows through automation. The course combines best practices with practical applications to ensure participants can translate knowledge into impactful business decisions.

TARGET COMPETENCIES

- Data Analysis
- Process Automation
- Predictive Modeling
- Advanced Visualization
- Workflow Optimization
- Data Integration
- Formula Mastery

COURSE OBJECTIVES

By completely attending this course, participants will be able to:

- Apply advanced Excel formulas for complex calculations.
- Visualize data using dynamic and interactive dashboards.
- Automate repetitive tasks using VBA and macros.
- Integrate and transform data with Power Query.
- Implement predictive analytics techniques for forecasting.
- Optimize workflows through process automation.
- Leverage Power Automate to streamline cross-application workflows.

TARGET AUDIENCE

This course is designed for professionals responsible for data-driven decision-making and operational efficiency. Ideal attendees include:

- Data Analysts
- Financial Analysts
- Business Managers
- Operations Managers
- Project Managers
- IT Specialists

NOTE

This course requires participants to bring their own laptops with a Windows operating system and Excel 2019/365 fully installed, including Power Automate.

COURSE METHODOLOGY

The course uses a blend of instructor-led training, practical demonstrations, and hands-on exercises to ensure effective learning and application of skills.

COURSE OUTLINE

ADVANCED EXCEL FORMULAS AND FUNCTIONS

- Nested formulas for enhanced calculations.
- Array formulas and dynamic ranges.
- Logical and conditional functions for data manipulation.
- Text functions for string analysis and cleanup.

DATA CLEANING AND TRANSFORMATION

- Identifying and removing duplicates.
- Handling missing or inconsistent data.
- Using Power Query for advanced data shaping.
- Splitting, merging, and reformatting datasets.

ADVANCED DATA VISUALIZATION

- Designing interactive dashboards with slicers.
- Implementing custom charts and sparklines.
- Leveraging conditional formatting for insights.
- Best practices for visual storytelling with data.

AUTOMATION WITH VBA AND MACROS

- Introduction to VBA programming fundamentals.
- Recording, editing, and running macros.
- Automating repetitive tasks and workflows.
- Error handling and debugging VBA scripts.

PREDICTIVE ANALYTICS TECHNIQUES

- Introduction to regression analysis and forecasting.
- Using Excel's Solver for optimization problems.
- Scenario analysis with What-If tools.
- Using forecast sheet.

POWER QUERY AND DATA INTEGRATION

- Connecting to external data sources.
- Merging and appending queries for unified datasets.
- Creating calculated columns and measures.
- Automating data refreshes and updates.

POWER AUTOMATE FOR WORKFLOW EFFICIENCY

- Overview of Power Automate and its integration with Excel.
- Automating repetitive cross-application tasks.
- Creating and managing automated workflows.
- Applications of Power Automate in business processes.

DATA VALIDATION

- Setting up data validation rules and drop-downs.
- Preventing data entry errors with custom rules.
- Auditing and troubleshooting errors in formulas.
- Advanced Data validation rules.

To register or for complete course information

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