ADVANCED EXCEL, DATA MODELLING AND MANAGEMENT REPORTING TRAINING COURSE

Introduction

This programme develops advanced spreadsheet, data modelling and reporting capabilities for professionals who work with organizational data. It focuses on using Microsoft Excel to analyse large datasets, automate repetitive tasks, build reliable analytical models and produce accurate management reports. Participants explore advanced formulas, lookup functions, dynamic arrays, PivotTables, Pivot Charts, Power Query, data validation and spreadsheet automation. The course also addresses financial and operational modelling, budgeting, forecasting, variance analysis and performance reporting. Emphasis is placed on data accuracy, formula auditing, model integrity and the presentation of meaningful management information. Practical assignments use scenarios from finance, human resources, sales, procurement, project management and organizational performance monitoring.

Course Objectives

- Apply advanced Excel formulas and functions to complex datasets.
- Clean, validate and organize data for analysis.
- Develop structured data models for business and management applications.
- Automate recurring data preparation and reporting tasks.
- Conduct budgeting, forecasting and variance analysis.
- Develop management reports and interactive dashboards.
- Audit spreadsheet models and improve reporting accuracy.

Course Modules

> Module 1: Advanced Excel Fundamentals and Data Management

- Excel workbook architecture, tables and structured references.

- Data organization, formatting and consistency standards.
- Data validation, error prevention and input controls.
- Efficient management of large worksheets and workbooks.

> Module 2: Advanced Formulas and Functions
- Logical functions, nested conditions and error handling.
- Lookup functions, including XLOOKUP and INDEX-MATCH.
- Text, date, statistical and mathematical functions.
- Dynamic arrays, FILTER, SORT, UNIQUE and related functions.

> Module 3: Data Cleaning and Preparation
- Identifying duplicates, missing values and inconsistent records.
- Standardizing dates, text, codes and numerical formats.
- Text-to-columns, Flash Fill and data transformation techniques.
- Data validation rules and quality control procedures.

> Module 4: PivotTables and Analytical Reporting
- Creating and structuring PivotTables.
- Grouping, filtering and summarizing large datasets.
- Calculated fields, slicers and PivotCharts.
- Comparative analysis across departments, products and periods.

> Module 5: Power Query and Data Integration
- Importing data from Excel, CSV, folders and databases.
- Cleaning and transforming data using Power Query.
- Merging, appending and combining multiple datasets.
- Refreshing queries and developing repeatable reporting workflows.

> Module 6: Data Modelling and Relationships
- Designing structured datasets and analytical tables.
- Understanding fact tables, dimension tables and data relationships.
- Using the Excel Data Model and Power Pivot fundamentals.
- Developing measures and basic DAX calculations where supported.

> Module 7: Financial Modelling, Budgeting and Forecasting
- Building assumptions-driven financial and operational models.
- Preparing budgets, projections and cash flow forecasts.
- Conducting actual-versus-budget and variance analysis.

- Sensitivity analysis, scenario planning and what-if tools.

> Module 8: Management Reports and Interactive Dashboards

- Selecting management indicators and reporting structures.
- Designing charts, KPI summaries and performance dashboards.
- Using conditional formatting and interactive controls.
- Presenting findings through clear, decision-oriented reports.

> Module 9: Automation, Auditing and Model Integrity

- Automating repetitive tasks with recorded macros.
- Introduction to VBA and basic spreadsheet automation.
- Formula auditing, error tracing and model verification.
- Workbook protection, documentation and version control practices.

> Module 10: Integrated Data Modelling and Reporting Project

- Preparing a business dataset for analysis.
- Developing a structured analytical or financial model.
- Producing a management report with charts and performance indicators.
- Presenting findings, assumptions, risks and recommendations