



Advanced-Data Analysis Techniques Training Course

5 – 9 October 2026
Cape Town (South Africa)



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Ref: 1142_1050121 **Date:** 5 – 9 October 2026 **Location:** Cape Town (South Africa) **Fees:** 5300 Euro

Introduction

Nowadays, it is common for the corporate staff to be overwhelmed by the abundance of unstructured data. ERPs and databases have evolved to a point where they can house large amounts of data.

The question now is, what do you do with this data to add value? This advanced-data analysis techniques program will introduce hands-on business intelligence BI, allowing you to clean, normalize, and interpret large volumes of data.

You can establish historical relationships, analyze the current situation, and predict future strategies. The application of BI is borderless, covering operational, tactical, and strategic business decisions.

This advanced-data analysis techniques course spans all departments and cascades down to all users who perform data cleansing, reporting, analysis, modeling, integration, and automation.

In this advanced data analysis techniques course, we use MS Excel exclusively as an ultimate and readily available BI tool, allowing you to develop an exclusive level of expertise and add immediate value to your job and company.

Targeted Groups

- Business professionals.
- Business analysts.
- Data analysts.
- Research analysts.
- Finance professionals.
- Marketing and sales professionals.
- HR professionals.
- IT professionals.
- Administrative staff.
- Supervisors, general business professionals, and staff from any function who need to learn and apply state-of-the-art data analysis techniques to their daily business reporting and decision-making.

Course Objectives

At the end of this advanced-data analysis techniques course, the participants will be able to:

- Boost Excel Business Intelligence BI expertise in data slicing, dicing, massaging, and data aggregation and modeling.
- Performed data normalization, consolidation, report writing, analysis, and reconciliation.
- Develop dynamic BI models, dashboards, scorecards, and flash management reports by linking Excel with Access, Web, Text, Internet, SQL, ERPs, and other databases.
- Advance and enhance the look and feel of reports using dynamic visualization techniques.
- Acquire numerous tips and tricks that enable them to work efficiently.

Targeted Competencies

- Massaging and normalizing data.
- Reporting, analysis, and reconciliation.
- Interpretation of large data sets.
- Modeling and what-if scenarios.
- Establishing data integration.
- Developing dynamic dashboards and scorecards.
- Designing key performance indicators.

Course Content

Unit 1: Data Analysis Tools and Techniques

- Consolidating data from separate files and sheets.
- Advanced data validation using lists, dates, and custom validation.
- Powerful array functions.
- Cell management tools: left, right, mid, concatenate, value.
- Naming, editing, and managing cells and ranges.
- Subtotal, Sumif, Sumifs, Sumproduct, Count, Countif, and Countifs for Excel.
- Looking-up to data, Texts, and values using Vlookup in Excel.
- The incredible table-tools technique.
- Slicing dates into day names, weeks, week numbers, month names, years, and quarters.
- Text-to-columns and dynamic trimming using trim and len.
- Managing texts and numbers using replace, find, and substitute.
- Text change functions.

Unit 2: Mastering Data Reporting

- The 20 must-learn pivot-tables tools.
- Creating pivot tables.
- Number formatting techniques.
- Designing report layout.
- Sorting in ascending, descending, and more sort options.
- Filtering labels and values.
- Expanding and collapsing reports.
- Drill down option.
- Summarize values by sum, average, minimum, maximum, count.
- Show values as % of total and % of.
- Pivot table options.
- Inserting formulas.
- Data analysis.
- Copying pivot tables.
- Creating pivot charts.
- Dynamic chart labeling.
- Mastering the slicer.
- Showing report filter pages.
- Linking pivot tables and pivot graphs with PowerPoint.
- Conditional formatting with pivot tables.
- Designing reports using the get pivot data.

Unit 3: Data Modeling and Integration

- Spinner.
- Checkbox data modeling with the if function.
- Option button data modeling with if function.
- List box data modeling with choose function.
- Scenario manager.
- Linking Excel with text files.
- Linking Excel with databases Access.
- Connecting Excel with SQL.
- Linking Excel with the Internet.
- Linking Excel with Excel.

Unit 4: Overview of Financial Modelling

- Define the terms model and financial model.
- Learn the 10 steps to create sound, good economic financial models.
- Use flowcharting techniques to improve your model.
- Overview of the strategic and operational aspects of a global business entity.
- The organizational planning model.
- The product/ decision/ information cycle.
- Objectives of financial analysis.
- Creating wealth by adding value.
- Basic metrics of wealth creation and financial performance.

Unit 5: Use of Time Series Analysis and Evaluating Investment Portfolio

- Development of time series models using histograms and moving averages.
- Exponential smoothing and regression analysis to develop are used data analysis techniques.
- Mastering the use of exponential smoothing as a data analysis tool.
- Validation of time series analysis.
- Appreciate the meaning and importance of sensitivity analysis.
- Developing "What-if" scenarios in your financial or operational models.
- Using the Excel tools "scenario and goal seek."
- Principles of risk measurement in individual shares.
- Graphing expected return and risk using variance analysis.
- Modern portfolio theory uses the capital asset pricing model.
- Managing a balanced portfolio.
- Use Excel to determine the beta of listed shares on a securities market.

Unit 6: The Look and Feel

- Charting and visualization techniques.
- Using the camera tool.
- Working with formula-driven visualizations.
- Using fancy fonts.
- Leveraging symbols in formulas.
- Working with sparklines.
- Creating unconventional style charts.

Unit 7: Tips and Tricks

- Controlling and protecting your reports, worksheets, and workbooks.
- Data entry form.
- Custom list.
- Text-to-speech.
- Advanced conditional formatting.
- Shortcuts for your daily work.

Advanced-Data Analytics Techniques

As part of our advanced data analytics course, learners will immerse themselves in high-level methodologies and tools that push the envelope of conventional data analysis.

This advanced data analytics techniques course draws upon cutting-edge data analytics techniques. It is meticulously designed to equip professionals with an intricate understanding of advanced data analytics, positioning them at the forefront of data interpretation and decision-making models.

This advanced analytics training enhances their analytical capabilities beyond the traditional analytical skill set.

Through the advanced data analysis course outline, this comprehensive learning experience unfolds across various units that will ultimately bolster your proficiency with advanced data analysis techniques, such as predictive analytics, data mining, and modern visualization tools.

By combining theory with practicality, our advanced Excel data analysis course is tailored to expand on foundational concepts and intricate strategies required for a superior data command within Excel's extensive capabilities.

Participants in the advanced data analytics techniques course can expect to leave the course with a profound understanding of advanced data analysis and actionable insights and skills directly applicable to real-world scenarios.