

Advanced Data Analysis Techniques

Course code: DMBI-001



SPARK TRAINING

Professional training courses for leaders, specialists, and organizations seeking practical capability development.

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— Workshop Overview

Data-driven decision-making is now essential across all industries, from engineering and construction to business and technology. This course equips participants with advanced data analysis techniques to transform raw data into meaningful insights that support strategic and operational decisions. Participants will learn how to handle complex datasets, apply statistical and analytical methods, and use modern tools to identify trends, patterns, and performance indicators. By attending, you will significantly improve your ability to support evidence-based decisions, optimize processes, and enhance organizational performance.

Why Attend

This course combines conceptual explanations with hands-on practice using real-world datasets. Participants will engage in guided exercises, case studies, and problem-solving sessions. Practical demonstrations using analytical tools (such as Excel advanced functions, Power BI, or Python-based analysis concepts) will be included.

Who Should Attend

Data Analysts and Business Analysts
Engineers and Technical Professionals
Project and Operations Managers
Financial Analysts and Consultants
IT Professionals working with data systems
Decision-makers seeking analytical skills

— Learning Objectives

- Understand advanced concepts in data analysis and interpretation
- Clean, structure, and prepare complex datasets for analysis
- Apply statistical methods for decision-making
- Identify trends, correlations, and patterns in data
- Use data visualization techniques to communicate insights effectively
- Apply predictive and descriptive analytics techniques
- Improve reporting and business intelligence capabilities
- Support data-driven strategic decisions

— Course Outline

DAY
1

Foundations of Advanced Data Analysis

- Role of data analysis in decision-making
- Types of data and data structures
- Data lifecycle: collection, processing, analysis
- Introduction to descriptive and inferential analytics
- Overview of analytical tools and environments

DAY
2

Data Preparation and Transformation

- Data cleaning techniques and error handling
- Handling missing data and outliers
- Data normalization and transformation methods
- Data integration from multiple sources
- Building structured datasets for analysis

DAY
3

Statistical Analysis and Interpretation

- Descriptive statistics and summary measures
- Probability concepts in data analysis
- Correlation and regression analysis
- Hypothesis testing fundamentals
- Interpretation of statistical outputs

DAY
4

Data Visualization and Insights

- Principles of effective data visualization
- Charts, dashboards, and reporting techniques
- Storytelling with data
- KPI tracking and performance dashboards
- Introduction to BI tools (e.g., Power BI concepts)

DAY
5

Predictive Analytics and Practical Applications

- Introduction to predictive modeling concepts
- Trend analysis and forecasting techniques
- Decision-making using analytical models
- Case studies from real-world industries

- Final project: end-to-end data analysis exercise

— Upcoming Classroom Dates

DATE	LOCATION	FEE
19 - 23 October 2026	Munich - Germany	€1,725
2 - 6 November 2026	London - United Kingdom	€2,100
21 - 25 December 2026	Barcelona - Spain	€1,925
18 - 22 January 2027	Amsterdam - Netherlands	€2,125
15 - 19 February 2027	London - United Kingdom	€2,100
15 - 19 March 2027	Munich - Germany	€2,125
19 - 23 April 2027	Barcelona - Spain	€1,925
17 - 21 May 2027	Rome - Italy	€2,125

— Certificate and Registration

Participants who attend and complete the full programme receive a SPARK Training Certificate of Completion. For registration, in-house delivery, or availability questions, contact info@sparktraining.eu or +31 85 115 0004.