MERCURY

Business Decision-Making using Data Analysis

22 – 26 February 2027
Madrid (Spain)



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Ref: 15150_1077060 **Date:** 22 – 26 February 2027 **Location:** Madrid (Spain) **Fees:** 5600 Euro

Introduction:

This interactive, application-driven one-week data analysis in business decision-making course will highlight the added value that data analytics can offer professionals as a decision-support tool in management decision-making. It will show how data analytics can support strategic initiatives, inform policy information, and direct operational decision-making.

The data analysis in business decision-making course will emphasize data analytics applications in management practice, focus on validly interpreting data analytics findings, and create a clearer understanding of integrating quantitative reasoning into management decision-making. Exposure to the discipline of data analytics will ultimately promote greater confidence in the use of evidence-based information to support management decision-making.

The Importance of Data Analytics in Business Decision-Making:

Understanding and utilizing data analytics for business decision-making is crucial in today's data-driven world. Incorporating data analysis in the business decision-making process helps leaders make informed, evidence-based decisions that drive strategic initiatives forward. By defining business decision-making within the context of data analytics, this course aims to develop your ability to apply data analytics effectively, enhancing your business decision-making skills.

Targeted Groups:

- Professionals in management support roles.
- Analysts who typically encounter data / analytical information regularly in their work environment.
- Those who seek to derive greater decision-making value from data analytics.

Course Objectives:

At the end of this data analysis in business decision-making course, the participants will be able to:

- Appreciate data analytics in a decision support role.
- Explain the scope and structure of data analytics.
- Apply a cross-section of useful data analytics.
- Interpret meaningfully and critically assess statistical evidence.
- Identify relevant applications of data analytics in practice.

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Targeted Competencies:

Upon the end of this data analysis in business decision-making training, the target competencies will be able to:

- Discussions on applications of data analytics in management.
- The importance of data in data analytics.
- Applying data analytical methods through worked examples.
- Focusing on management interpretation of statistical evidence.
- How to integrate statistical thinking into the work domain.

Course Content:

Unit 1: Setting the Statistical Scene in Management:

- Introduction: The quantitative landscape in management.
- Thinking statistically about applications in management identifying KPIs.
- The integrative elements of data analytics.
- Data: The raw material of data analytics types, quality, and data preparation.
- Exploratory data analysis using Excel pivot tables.
- Using summary tables and visual displays to profile sample data.

Unit 2: Evidence-based Observational Decision Making:

- Numeric descriptors to profile numeric sample data.
- Central and non-central location measures.
- Quantifying dispersion in sample data.
- Examine the distribution of numeric measures skewness and bimodal.
- Explore relationships between numeric descriptors.
- Breakdown analysis of numeric measures.

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Unit 3: Statistical Decision Making - Drawing Inferences from Sample Data:

- The foundations of statistical inference.
- Quantify uncertainty in data - the normal probability distribution.
- The importance of sampling in inferential analysis.
- Sample methods random-based sampling techniques.
- Understand the sampling distribution concept.
- Confidence interval estimation.

Unit 4: Statistical Decision Making - Drawing Inferences from Hypotheses Testing:

- The rationale of hypothesis testing.
- The hypothesis testing process and types of errors.
- Single population tests tests for a single mean.
- Two independent population tests of means.
- Matched pairs test scenarios.
- Compare means across multiple populations.

Unit 5: Predictive Decision Making - Statistical Modeling and Data Mining:

- Exploit statistical relationships to build prediction-based models.
- Model building using regression analysis.
- Model building process - the rationale and evaluation of regression models.
- Data mining overview - its evolution.
- Descriptive data mining - applications in management.
- Predictive goal-directed data mining - management applications.