

Scandinavian Academy Training Center

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Riyadh - Al Khaleej District - Sheikh Abdul Aziz Bin Abdul Rahman Bin Bishr Street - 13223 - Office No. 5 | P.O.BOX : 13224

Course: Data Analysis Techniques

Code	City	hotel	Start	End	price	Language - Hours
DAI-537SA	Abha	Hotel Meeting Room	2027-01-24	2027-01-28	10450 SR	En - 25

Introduction

In today`s data-driven world, organizations and professionals must harness the power of data to make informed decisions. This course provides a comprehensive overview of data analysis techniques, equipping participants with the essential skills to process, interpret, and visualize data effectively. Whether for business, research, or operational improvement, understanding data analysis is crucial for making strategic and evidence-based decisions.

Course Objectives

By the end of this course, participants will be able to:

- Understand key concepts of data analysis and its importance in decision-making.
- Apply different data analysis techniques to real-world scenarios.
- Utilize statistical and computational tools for data processing.
- Develop skills in data visualization for effective communication.
- Interpret and analyze datasets to extract meaningful insights.
- Recognize and avoid common data analysis pitfalls.

Target Audience

- Business analysts and strategists
- Data scientists and researchers
- Marketing and sales professionals
- Financial analysts
- Engineers and technical professionals

- Anyone interested in data-driven decision-making

Training Methodology

- Interactive lectures and discussions
- Real-world case studies and examples
- Hands-on exercises using Microsoft Excel and other analytical tools
- Group activities and problem-solving workshops

Course Outline

Module 1: Introduction to Data Analysis

- Importance of data in decision-making
- Types of data: Qualitative vs. Quantitative
- Common challenges in data analysis
- Overview of data analysis tools

Module 2: Data Collection and Cleaning

- Sources of data: Primary vs. Secondary
- Data acquisition techniques
- Handling missing values and outliers
- Data validation and standardization

Module 3: Descriptive Data Analysis

- Measures of central tendency (Mean, Median, Mode)
- Measures of dispersion (Variance, Standard Deviation, Range)
- Data visualization techniques: Bar charts, Histograms, Box plots
- Introduction to Excel’s Data Analysis Tool Pack

Module 4: Inferential Data Analysis

- Introduction to probability and distributions
- Hypothesis testing and confidence intervals
- t-tests, ANOVA, and Chi-square tests
- Regression analysis for predictive insights

Module 5: Exploratory Data Analysis (EDA)

- Identifying patterns and trends
- Correlation and causation
- Scatter plots and relationship analysis
- Cluster analysis and segmentation

Module 6: Predictive Data Analysis

- Introduction to forecasting methods
- Time series analysis
- Machine learning basics for predictive modeling
- Business applications of predictive analytics

Module 7: Statistical Process Control and Quality Assurance

- Understanding process variation
- Control charts and Six Sigma principles
- Root cause analysis and process improvement

Module 8: Data Visualization and Reporting

- Best practices in data visualization
- Creating impactful dashboards
- Storytelling with data
- Tools: Excel, Power BI, and Tableau

Module 9: Practical Case Studies and Hands-on Projects

- Real-world case studies from business, healthcare, finance, and engineering
- Hands-on exercises in Excel and other analytics tools
- Team-based problem-solving sessions

The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

Program Timings: 9:00 AM to 2:00 PM

The program includes:

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.
- **Note: All prices are exclusive of 15% Value Added Tax (VAT).**

Our Success Partners

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