GLOBAL PLUS
HORIZON
TRAINING CENTER

Infographics: Data Analysis and Reporting Techniques

Istanbul - Radisson Blu Hotel, Istanbul Sisli

22-12-2024

Infographics: Data Analysis and Reporting Techniques

Course code: BI25 From: 22-12-2024 Venue: Istanbul - Radisson Blu Hotel, Istanbul Sisli Course Fees: 4445 £

Introduction

A corporate ethos that demands continuous improvement in workplace efficiencies and lower operating, maintenance, support service, and administration costs means that managers, analysts, and their advisors are constantly confronted with analytical problems and performance targets that are both challenging and time-consuming. It is critical to base decision making on appropriate numerical data analysis and interpretation in order to make decisions that result in improved business performance.

Course Objectives of Info-Graphics

This course sights to give those required in analyzing numerical data with the understanding and practical capabilities needed to convert data into information via appropriate analysis, and then to represent these results in ways that can be readily communicated to others in the organization.

Objectives include:

- To provide delegates with both understanding and practical experience of a range more common to analytical techniques and representation methods for numerical data
- To give delegates the ability to recognize which types of analysis are best suited to particular types of problems
- To give delegates sufficient background and theoretical knowledge to be able to judge when an applied technique will likely lead to incorrect conclusions
- To provide delegates with a working vocabulary of analytical terms that will enable them to converse with people who are experts in the areas of data analysis, statistics and probability, and to be able to read and comprehend common textbooks and journal articles in this field
- To introduce some basic statistical methods
- To explore the use of Excel 2010 or 2013 for Data Analysis and the capabilities of the Data Analysis Tool

It should be noted that the training course does not cover the subjects of data acquisition, databases, data management, data warehousing, or the analysis of text-based information.

Course Methodology of Info-Graphics

This training course uses a problem-based learning approach in which delegates are presented with a series of real numerical data analysis problems drawn from a wide range of applications ranging from engineering to finance, logistics to quality control.

Each problem presents and exemplifies the need for a different approach to data analysis. Due to time constraints, it will not be possible to develop solutions to all of the problems posed during the training course. Nonetheless, all delegates will be given comprehensive solutions to all of the problems to take away with them as future learning resources at the end of the training course.

This Data Analysis and Reporting Techniques training course is entirely application-oriented, minimizing time spent on analysis mathematics and maximizing time spent on using practical methods in Excel, as well as understanding why such methods work.

To investigate the totally realistic data analysis problems, participants will spend almost all of their time exploring Excel's data analysis and representation functionality, including the Data Analysis Tool Pack.

Organizational Impact of Info-Graphics

Organizations that can make good decisions will be better able to compete on a global scale. Participants in this Info-Graphics Data Analysis and Reporting Techniques training course, as well as the teams with which they work, will be better positioned to influence the organization with recommendations based on objective data analysis, resulting in a more successful business as a result of their training.
Individuals who attend this Info-Graphics in Data Analysis and Reporting Techniques training will gain new insights into the utility of Excel and the field of data analysis, as well as why the best companies in the world regard data analysis as critical to delivering the highest quality products and services at the most reasonable cost.

Personal Impact of Info-Graphics

Participants will gain an understanding and practical experience of a range of the more common analytical techniques and data representation methods, which have direct relevance to a wide range of issues. The ability to recognize which types of analysis are best suited to particular types of issues will be addressed, and delegates will be given sufficient background and theoretical knowledge to be able to judge when an applied technique will likely lead to incorrect conclusions.

Target Audience of Info-Graphics

This training course has been designed for project management professionals whose jobs involve the manipulation, representation, interpretation, and/or analysis of data. Familiarity with a PC and in particular with Microsoft Excel (2003, 2007, 2010, or 2013) is assumed.

This training course involves extensive computer-based data analysis using Excel 2010 and therefore delegates will be expected to be numerate and to enjoy working with numerical data on a computer.

Course Outlines of Info-Graphics

DAY 1

Introduction and Descriptive Statistics

- What is Data Analysis?
- A Reminder of Elementary Statistics
- A Quick-start Tutorial for Excel
- Describing Data Sets using Statistics
- Representing Data Sets Graphically
- How to create an infographic in Excel
- The Normal Distribution

DAY 2

Frequency and Time Series Analysis

- Frequency of Occurrence
- Histograms
- Pareto Analysis
- Pivot Tables and Pivot Charts

- Creating an Excel Dashboard
- Time Series Analysis
- Trending Data
- Estimation Theory

DAY 3

Scenario Analysis, Confidence, and Six Sigma

- **Modeling Scenario**

  - Interactive Spreadsheets
  - Confidence Intervals
  - Control Charts
  - An Introduction to Six Sigma
  - Error Bars

DAY 4

Regression Analysis Equations and System Modeling

- **Simple Regression Analysis**

  - Curve Fitting
  - Describing Data using Equations
  - Prediction
  - Modeling Single Input Single Output Systems
  - Modeling Multiple Input Single Output Systems
  - Constraint optimization using Solver

DAY 5

Correlation Analysis and Anova

- **Differences between Data Sets**

  - Correlation Analysis
  - Analysis Of Variance (ANOVA)
  - Overall Review of Concepts Learned and How they can be applied in Practice