Arabian Institute For Training

Info-Graphics Data Analysis and Reporting Techniques

INTRODUCTION

- Corporate ethos continuously demands improvements and efficient in workplace. Infographics and data analysis technique are becoming increasing important for organisations regardless of their business activities. Availability of a large dataset imposes challenges to managers and requires them to be analytically competent. Knowledge of using the right techniques for analysing the data and reporting, are important in making decisions that result in improving business performance targets. Nevertheless, analysing the data requires skills of summarizing the data, presenting, and reporting. This Infographics: Data Analysis and Reporting Techniques training course is aimed to equip the delegates with necessary skills to analyse numerical data, reporting and using graphics to present the data.

This training course will highlight:

- 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

OBJECTIVES

- This Infographics: Data Analysis and Reporting Techniques training course aims to provide professionals and analysts' across different sectors, the necessary tools required to analyse numerical data and practical capabilities needed to convert data into information via appropriate analysis. Participants will acquire skills important in presenting data using Infographics and able to communicate to others in the organisation.

At the end of this training course, you will learn:

- Analytical techniques and graphical presentations using Infographics
- The ability to recognize the types of analysis suitable for the structure of the data
- Sufficient skills to converse with people who are experts in the areas of data analysis and able to read and comprehend common analytical report
- Strong foundation of statistical methods and concepts

TRAINING METHODOLOGY

- This Info-Graphics training course adopts a problem-based learning approach, in which delegates are presented with a series of real numerical data analysis problems drawn from the widest possible range of applications – from engineering to finance and from logistics to quality control.
- Each problem presents and exemplifies the need for a different data analysis approach. For reasons of time constraint, it will not be possible to develop solutions during the training course to all the problems posed. Nevertheless, all delegates will be given comprehensive solutions to all the problems, to take away with them at the end of the training course, as future learning resources.
- This Info-Graphics in Data Analysis and Reporting Techniques training course is entirely applications-oriented, minimizing the time spent on the mathematics of analysis and maximizing the time spent on the use of practical methods in Excel, along with the understanding why such methods work.
- Delegates will spend almost all the time exploring Excel's data analysis and representation functionality, including the Data Analysis Tool Pack, to investigate the totally realistic data analysis problems.

ORGANISATIONAL IMPACT

- Organisations that can make optimum decisions will enhance their ability to compete on the global stage. The participants on this Info-Graphics Data Analysis and Reporting Techniques training course, and the teams that they work within will, as a result of their training, be better positioned to influence the organisation with recommendations based on objective data analysis that in turn produce a higher performing business.
- Individuals exposed to this Info-Graphics in Data Analysis and Reporting Techniques training course will develop new insights to the usefulness of Excel and the field of data analysis, and they will learn why the best companies in the world see data analysis as being essential to delivering the right quality products and services at the lowest costs.

PERSONAL IMPACT

- 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 issue 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.

WHO SHOULD ATTEND?

- This Info-Graphics in Data Analysis and Reporting Techniques 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 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.

This training course is suitable to a wide range of professionals but will greatly benefit:

- Operational managers involved in the data analysis
- Financial managers
- Risk managers
- Board level executives and non-executives

Course Outline

Introduction and Descriptive Statistics

- What is data analysis
- A reminder of elementary statistics and compensations for small sample sizes
- A quick-start tutorial for Excel
- Describing data sets using statistics
- Representing data sets graphically
- How to create info-graphic in Excel
- How Info-graphics data presentation compares to the traditional methods
- The normal distribution

Frequency and Time Series Analysis

- Frequency of occurrence
- Histograms
- Pareto analysis
- Pivot tables and pivot charts

Scenario Analysis, Confidence and Six Sigma

- Modeling scenario
- Interactive spreadsheets
- Confidence intervals
- Usefulness of control chart for Oil and Gas companies
- An introduction to Six Sigma
- Error bars
- Mini case studies
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Regression Analysis Equations and System Modelling

- Simple regression analysis/maximum likelihood estimations
- Curve fitting
- Polynomial curve fits
- Describing data using equations
- Prediction
- Modeling single input single output systems
- Modeling multiple input single output systems/Multivariate analysis
- The applications of regression to Oil and Gas companies
- Presenting data using appropriate reporting style

Correlation Analysis and ANOVA

- Differences between data sets
- Correlation analysis
- Auto correlation functions
- Analysis of variance (ANOVA)
- Overall review of concepts learned and how they can be applied in practice

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