



Training Description:

Corporate ethos which demands continual improvement in work place efficiencies and reduced operating, maintenance, support service and administration costs means that managers, analysts and their advisors are faced with ever-challenging analytical problems and performance targets. To make decisions which result in improved business performance, it is vital to base decision making on appropriate analysis and interpretation of numerical data.

Training Objectives:

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. Objectives includes:

- ✓ To provide participants with both an understanding and practical experience of a range of the more common 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 participants sufficient background and theoretical knowledge to be able to judge when an applied technique will likely lead to incorrect conclusions
- ✓ To provide participants with a working vocabulary of analytical terms to 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 and concepts
- ✓ To explore the use of Excel 2010 or 2013 for data analysis and the capabilities of the Data Analysis Tool Pack

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.

Training Designed for:

This course is intended for 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.

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

Training Program:

FIVE DAYS:

❖ The Basics

- Sources of data, data sampling, data accuracy, data completeness, simple representations, dealing with practical issues

- ❖ **Fundamental Statistics**
 - Mean, average, median, mode, rank, variance, covariance, standard deviation, “lies, more lies and statistics”, compensations for small sample sizes, descriptive statistics, insensitive measures
- ❖ **Basics of Data Mining and Representation**
 - Single, two and multi-dimensional data visualisation, trend analysis, how to decide what it is that you want to see, box and whisker charts, common pitfalls and problems
- ❖ **Data Comparison**
 - Correlation analysis, the auto-correlation function, practical considerations of data set dimensionality, multivariate and non-linear correlation
- ❖ **Histograms and Frequency of Occurrence**
 - Histograms, Pareto analysis (sorted histogram), cumulative percentage analysis, the law of diminishing return, percentile analysis
- ❖ **Frequency Analysis**
 - The Fourier transform, periodic and a-periodic data, inverse transformation, practical implications of sample rate, dynamic range and amplitude resolution
- ❖ **Regression Analysis and Curve Fitting**
 - Linear and non-linear regression, order; best fit; minimum variance, maximum likelihood, least squares fits, curve fitting theory, linear, exponential and polynomial curve fits, predictive methods
- ❖ **Probability and Confidence**
 - Probability theory, properties of distributions, expected values, setting confidence limits, risk and uncertainty, ANOVA (analysis of variance)
- ❖ **Some more advanced ideas**
 - Pivot tables, the Data Analysis Tool Pack, internet-based analysis tools, macros, dynamic spread sheets, sensitivity analysis
- ❖ **Course Conclusion**
- ❖ **POST-ASSESSMENT and EVALUATION**

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request.”

Contents can be adapted to your specific wishes. It is therefore possible to focus on specific modules of the training course as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Gamification, Software & General Discussions
- Pre and Post Test

Training Fees:

TBA as per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:00	Recess (Prayer Break & Lunch)
13:00 - 14:00	Last Session

For training registrations or in-house enquiries, please contact:

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