

**Course Overview:**

As a consequence, more and more reliance is being placed upon the accurate and reliable analysis, representation and interpretation of data.

This course aims to provide engineers and technologists with the understanding and practical capabilities needed to convert data into information, and then to represent this information in ways that it can be readily exploited.

**Course Objective:**

To provide delegates 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 provide delegates with both 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 analytical problems.

**Course Outline:**

- The Basics Sources Of Data
- Data Sampling
- Data Accuracy
- Using Centrifugal Pump Performance Data.
- Fundamental Statistics Mean,
- Standard Deviation,
- Using Production Data From A Batch Fermentation Process.
- Data Mining And Representation Single
- Two And Multi-Dimensional Data Visualization
- Using Petrochemical Plant Control Data
- Probability And Confidence Probability Theory,
- Using Statistical Process Control Data In The Machinery Protection System
- Histograms & Frequency Of Occurrence Histograms
- Pareto Analysis
- Using Historical Failure Data From A Group Of Reciprocating Compressors.
- Frequency Analysis
- The Fourier Transform
- Using Failure Data From Large Three Phase Induction Motors
- Data Comparison Correlation Analysis
- The Power Of Matlab.
- Quality Control Applications Terminology
- Reliability Evaluation Applications Terminology

**Who Should Attend:**

The course has been designed for engineers, technologists, and managers whose jobs involve the manipulation, representation, and analysis of data.

**Training Language:**

EN / AR

**Training Methodology:**

- Presentation & Slides
- Audio Visual Aids
- Interactive Discussion
- Participatory Exercise
- Action Learning
- Class Activities
- Case Studies
- Workshops
- Simulation