

MINITAB REQUIRED

SPC consulting group

MINITAB

PRACTICAL USE OF THE SOFTWARE

Objective:

At the end of the course, the participant will know the main commands of Minitab software and will recognize the importance of data-driven decision-making.

Prerequisites:

- Basic statistical concepts (mean, range, standard deviation, population, sample)
- At least 3 months of work experience in the organization

Duration:

16 hours

The following studies and analysis will be performed using the software commands:

Introduction to Minitab

- Minitab Menu
- Command, window, data, and file management
- Graphs and their interpretation:
  - + Pareto
  - + Histograms
  - + Boxplots
  - + Time Series

Basic Statistics

- Basic Statistics
  - + Mean
  - + Median
  - + Range
  - + Mode
- Basic Concepts
  - + Normality
  - + Standard Deviation

Basic Statistical Analysis

- Distribution Shape
- Descriptive Statistics
- Graphical Summary
- Normality Test
- Hypothesis Testing
  - + One-Sample t-Test
  - + Two-Sample t-Test
  - + Paired Two-Sample t-Test

Regression and Correlation Analysis

- Concepts of Regression and Correlation
- Scatter Diagram
- Simple and Multiple Correlation
- Pearson Coefficient
- Assumptions and Residual Analysis

MSA - Measurement System Analysis

- Terminology
- Stability
- Accuracy
- Linearity
- Gage R&R Study (crossed)
- Attribute Study

SPC - Statistical Process Control

- X-R Chart for Data Samples
- P Chart for Defective Parts

Quality Tools

- Process Capability Studies
- Normal Distribution - Cp, Cpk, Pp, Ppk