Data Analysis using Minitab

3days

When good quality data is available, businesses want to be able to extract the maximum information from it in order to increase process understanding. What factors affect process performance? Which do not? What is the size and nature of the effect of factors on output performance? This programme provides detailed training in the practical application of Hypothesis Testing and Regression Analysis which are used to answer these questions.

Our 3 day programme **Understanding Process Performance using Minitab** provides the skills needed to obtain high-quality process data and is often taken prior to this course.

The course includes training on:
- t-test
- ANOVA
- Chi Square Tests
- Simple Linear Regression
- Multiple Regression
- Logistic Regression
- An Introduction to Design of Experiments
- The background statistical knowledge to correctly apply, interpret and communicate the above

Detailed training materials and data files are provided.

Who is the course for?
- Anyone who needs to learn the application of the most fundamental statistical tools to data analysis. Engineers, business analysts, quality professionals, scientists, business consultants.

Learning Outcomes
- You will be able to correctly apply a comprehensive set of statistical tools to analyse data using Minitab.
- You will learn how statistical tools and the robust approach required to apply them enhances your thinking and promotes process learning.
- An appreciation of Design of Experiments

Course Contents

Hypothesis Testing
- Confidence Intervals
- T tests for comparing 2 groups
- Type I and Type II Errors
- Power and Sample Size
- ANOVA for comparing multiple group means
- Standard Deviations Tests
- Proportions and Chi Square tests for 2 or more groups – discrete data

Regression Analysis
- Linear Regression
- Validating the Model
- Multiple Linear Regression and Model Building
- Curvilinear regression
- Introduction to Logistic Regression

Introduction to Design of Experiments

The course is 100% hands-on from the outset so delegates will need to have at least the 30 day Minitab demo installed on their pc.

Catalyst offers Minitab statistical analysis training at introductory and advanced level in topics including Statistical Process Control, Capability Analysis (Cp/CpK), Hypothesis Testing, Regression Analysis, Measurement Systems Analysis, Design of Experiments.