SANDHOLM EXCELLENCE CENTER

Training and consulting in quality management, excellence and continual improvements since 1971.

Advanced statistical analysis

A training course that gives a deep understanding for how to analyse complex data

The need for advanced statistical analysis rapidly rises as the amount of available data increases. Not understanding data makes an organization blind. In this course we focus on learning more advanced statistical tools such as hypothesis testing, analysis of variance, correlation, regression and measurement system analysis. Participants learn by working with real case studies. Focus is on choosing the right method, applying the method using correct data, interpreting the results, and explaining the conclusion to others.

Purpose
To provide the knowledge and ability to use applied statistical tools when analyzing data from processes in an organization. The participants should be able to use the basic tools of statistical process control (SPC) and have an understanding of more advanced methods.

Aimed at
Persons from different functions that in different ways make decisions, analyze data and/or take part in quality and improvement work.

General information
The lectures will be led by consultants from Sandholm Associates. The course is given in English.

All analyses are done by using the software Minitab. The software has a free 30-day version which the participants are expected to download and install on their computers prior to the course.

Pre-qualifications needed
To take part in this training course you should already have completed our course *Applied statistical analysis*.

Documentation
Participants will receive the book *Practical Statistics – part 2* which will also serve as a useful reference after the course.

Length
3 days.

Place
The course is given in a training building in the area of Ponte de Lima in northern Portugal or company internal at your site.

CONTENT →

Main parts of the training course *Applied statistical analysis*:

- Introduction to advanced statistical analysis and optimization
- Hypothesis testing: 1-proportion, 2-proportion, power and sample size, and general linear model
- ANOVA: 1-sample t, 2-sample t, paired-t, 1-variance, 2-variance and comparison of two or more groups
- Correlation between variables and regression analysis
- Measurement System Analysis (MSA) and Gage R&R
- Introduction to Design of Experiment (DoE).