Experimental Design for Process Development and Improvement
Duration 2 days
(RND6-1)

Pre-requisite

Knowledge of basic statistical methods (t-test, ANOVA, regression and correlation) will be assumed.

Course Summary

The aim of the course is to introduce attendees to the benefits of statistical experimental design and to use statistical software to both design and analyse experiments. Following the course, attendees will be better able to understand and interpret the graphical and statistical outputs as well as develop a programme of experimentation from screening key variables to process optimism. The course includes a hands on practical using the 'Statapult' to get participants fully engaged with how design issues can affect results.

Software

Access to a general statistics package is required to take part in the course workshops and have a go yourselves at analyzing some data to fully understand how to apply the course content. We recommend Minitab but can also advise on the appropriateness of other software packages such as Design Expert, XLSTAT, JMP etc.

Usually free demo versions can be used for the training if the software is not already available, so no purchases are necessary.

Flexibility

We can customise the module content to meet specific requirements.

Course Content

- Statistical modeling refresher
- Factorial experiments – benefits, design issues, interpretation of effects and importance of understanding interactions
- Screening design – to deal with many factors, fractional factorials benefits and dangers
- Optimisation experiments – Experimental designs for process optimization: Box-Behnken, central composite and other options
- Optimisation - identification of viable operating regions when there are many output parameters
- Mixture designs

For further information and pricing contact:
Qi Statistics Ltd at www.qistatistics.co.uk or telephone +44 (0)1189 345722