Experimental Design for Process Development and Improvement
Duration 2 days
(MAN4-1)

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. To use statistical software to both design and analyse experiments. To understand and interpret the graphical and statistical outputs. To enable attendees to develop a programme of experimentation from screening key variables to process optimisation.

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 course content to meet specific requirements. This course can also be offered as a series of 6 webinar modules, each of 2 hours in length.

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 design.

For further information and pricing contact: Qi Statistics Ltd at www.qistatistics.co.uk or telephone +44 (0)1189 34572