

## Design of Experiments (DOE)



**Course Duration: 3 Days - 8 Hours/day**

CONSULTING \* TRAINING \* SOFTWARE

USA \* CANADA \* CHINA \* EUROPE \* INDIA \* MALAYSIA \* MEXICO  
MIDDLE EAST \* SINGAPORE \* THAILAND

[www.omnex.com](http://www.omnex.com)

# Design of Experiments (DOE)

Course Duration: 3 Days

## Seminar Content

This three-day seminar will develop the knowledge and skills necessary to design, conduct and analyze industrial experiments. Basic principles of experimental design and their applications to quality and productivity improvement projects will be presented. This seminar utilizes Minitab software for experimental design and analysis.

## Learning Objectives

This seminar provides an intuitive, graphically oriented introduction to the theory and practice of experimental design. This seminar also provides instruction and practice in the planning and analysis of experimental data.

## Seminar Outline

- ❖ Introduction to DOE
- ❖ Experimental Planning
- ❖ Statistical Foundations
- ❖ Introduction to Mini Tab
- ❖ One Way ANOVA
- ❖ Classroom Learning Exercises
- ❖ Two-level Full Factorial Designs?
- ❖ Classroom Learning Exercises
- ❖ Measuring and Evaluating Experimental Effects
- ❖ Two-level Fractional Factorial Designs
- ❖ Classroom Learning Exercises
- ❖ Linear Models and Designed Experiments
- ❖ Classroom Learning Exercises
- ❖ Response Surface Methodology
- ❖ Classroom Learning Exercises

- ❖ Response Surface Methodology
- ❖ Classroom Learning Exercises
- ❖ DOE Workshop - Catapult Exercise
- ❖ Wrap-up and Conclusions

## Who Should Attend

This seminar is especially useful for individuals who want to understand and apply a collection of formal experimental procedures specifically designed to identify optimal process conditions. Quality engineers, Six Sigma Black Belts and those assigned responsibility for leading quality and productivity improvement teams will benefit from participating in this seminar.

## Seminar Materials

Each participant will receive a seminar manual. Worksheets and spreadsheets for analyzing factorial experiments will also be provided. Participants will be expected to provide a laptop computer pre-loaded with Minitab software.

This seminar provides an intuitive, graphically-oriented introduction to the theory and practice of experimental design. This seminar also provides instruction and practice in the planning and analysis of experimental data.

## Pre-Requisite

A basic knowledge of computational mathematics, a practical understanding of elementary applied statistics and familiarity with Minitab software will be helpful.

A current, working version of Minitab is required for all attendees of this training course.

CONSULTING ★ TRAINING ★ SOFTWARE

## OMNEX INC

Global Headquarters Omnex Inc., 315 E. Eisenhower Parkway, Suite 214, Ann Arbor, MI 48108, USA.  
Phone: (734) 761-4940 | Fax: (734) 761-4966 | Email: [info@omnex.com](mailto:info@omnex.com) | Web: [www.omnex.com](http://www.omnex.com)

USA | CANADA | CHINA | EUROPE | INDIA | MALAYSIA | MEXICO | MIDDLE EAST | SINGAPORE | THAILAND