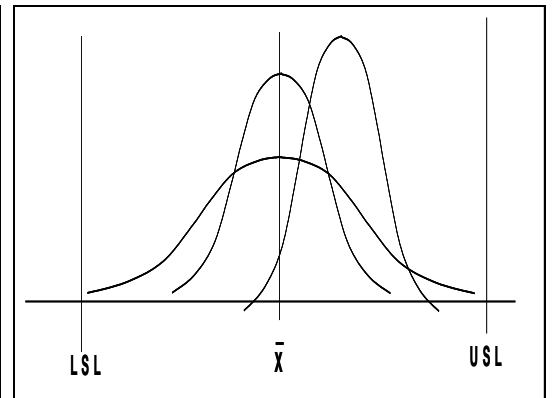
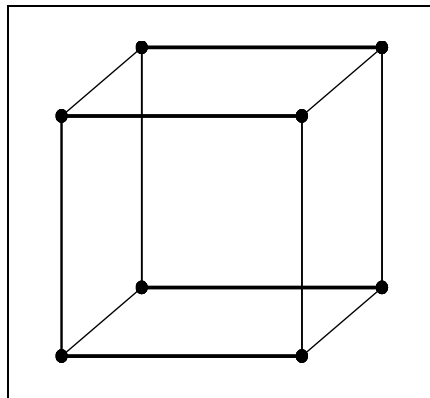


## One-Day Course

# Design Of Experiments (DOE)

### Course Contents

1. Introduction
2. Descriptive Statistics
3. Inferential Statistics
4. Types of Designs
5. DOE Process
6. Case Studies
7. DOE Failures
8. DOE Lab



This course is designed for technical personnel who deal with industrial process in all stages including design, manufacturing, QA, and automation. The course starts with a basic introduction to statistics including descriptive statistics such as mean and histogram followed by inferential statistics such as ANOVA and t-tests. The next section introduces concepts of simple DOE and introduced commonly used DOE designs include those Screening, Characterization, and Optimization. Basic concepts of Taguchi philosophy are also introduced in brief. The section on DOE process introduces the “how to” of understanding and defining a problem, selecting and setting up of a DOE design, executing the DOE, followed by analysis of results. Conclusions drawn from the first DOE can either be verified and implemented or can act as the starting point for the next level of experimentation. A sample case study on welding of fine wires takes the participants through all steps in the DOE process including screening and factorial designs. The section on DOE failures discusses the pitfalls of DOE that should be avoided at all costs. In DOE Lab, participants get the opportunity to present a case study and go through the steps of setting up a DOE.

Note: Participants are encouraged to bring Laptops to the training room.

**DOE with Microsoft Excel  
No need for special software!**

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