## Design of Experiments (DOE):

### Using Minitab to Create and Interpret Design of Experiments for Breakthrough Process Improvement

**October 28 – 29, 2009; 8:00am – 4:30pm;**
**Sigmas Conference & Event Center – 1717 Babcock Blvd., Pittsburgh 15209**
**412-821-2530**

This workshop will introduce participants to a powerful and user-friendly statistical software package (Minitab) with a focus on teaching the philosophy, mechanics and interpretation of a classical approach to design of experiments (DOE). When properly planned & executed, a DOE is an effective way to gain the knowledge necessary for making breakthrough process improvements. Process improvement leads to quantifiable business results for all types of organizations.

**Description**:

Gathering the right kind of data in the most efficient way and knowing how to interpret the data are key components for making sustainable process improvements. The motivation for doing DOE will be discussed along with a summary of the types of experimental techniques often employed including the pros and cons. This workshop will teach the full factorial approach for DOE to include the setup and analysis using Minitab and interpretation of this classical and proven technique for improving process performance. Process understanding through appropriate data collection and analysis leads to process improvement, a necessity for remaining competitive.

This hands-on introduction to DOE workshop is presented to the participants in a clear and effective manner complemented by an array of relevant examples.

**Areas Covered in the Seminar**:

- Minitab (statistical software package) introduction
- Definition of design of experiments (DOE) and discussion of other, less effective techniques for process learning
- Components for planning and conducting a DOE; Using Minitab to setup the DOE
- Analyzing the DOE practically, graphically and analytically using Minitab
- Interpreting the DOE results and making recommendations for next steps
- Examples of applications of DOE

**Who Will Benefit**:

This workshop will be valuable for any member of any industry desiring process improvements. A few specific roles that might benefit include:

- Process managers, engineers, sales, human resources, IT, customer support, manufacturing, continuous improvement leaders
- Individuals in the "quality" department
- Operators or floor personnel responsible for collecting data and/or process improvements
- Any associates trying to measure and make process improvements