Design of Experiments (DOE)

Would you like to reduce engineering time and cost with powerful statistical tools?

Your instructor:

Susan Weum is a certified Six Sigma Black Belt, retired from Smiths Medical.

DOE statistical tools can be applied to improve quality, processes, designs and many Lean and 6 Sigma problems. It is a powerful statistical method to develop mathematical transfer functions (e.g., V=IR, but too complex for first principles) or relationships of a result based on complex dependencies.

Engineers often use the logical, but expensive, method of changing one factor at a time (OFAT) while holding the rest constant. A better alternative is DOE, which reduces the number of experiments while returning more information with less effort and time.
Bring a laptop with Minitab software loaded on it (do not access through a VPN). For a free 30-day trial version of Minitab, visit www.minitab.com.

After completing this workshop participants will know:

- Define DOE and explain the purpose and benefits of using DOE.
- The different types of DOE (Full & Fractional) and their purposes.
- How to generate a Full & Fractional Factorial DOE's.
- Use of Excel and Minitab for DOE's.
- Understanding how DOE's work (the math)
- Application to Design challenges.

Who Should Attend: Individuals involved in R&D, product development engineering, and manufacturing.

Wednesday, November 13, 2019   8:00 a.m. - 4:00 p.m.

Fee: **MA members** $329 per person   **Non-MA members** $449 per person
Receive a 10% discount if you register 14 days prior to the event

Location: **Manufacturers Alliance Training Center**
8421 Wayzata Blvd, Suite 190
Golden Valley, MN 55426
(For directions and map go to www.mfrall.com)

Register: Registration is required. Reserve on-line at **www.mfrall.com**,
by 3:00 pm on November 11, 2019. *Your satisfaction is guaranteed.*

Cancellation Policy: *No refunds* for cancellations after 3:00 p.m. on November 11, 2019, or for no-shows at workshop. *(Substitutions are accepted)*