



**About the instructor:**

**Larry Rodgers** is a Certified Black Belt with Honeywell Intl. He has 40 years of experience in product development and Six Sigma. He is currently a full time training specialist worldwide to Honeywell technical staffs in R&D, product development and manufacturing. He holds a PhD in Engineering from the University of Minnesota.

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# Design of Experiments (DOE)

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

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 (eg.  $V=IR$ , but too complex for first principles) or relationships of a result based on complex dependencies.

Engineers will often use the logical, but expensive, method of changing one factor at a time (OFAT) while holding the rest constant. The better alternative often is DOE which *reduces the number of experiments* while returning greater knowledge at minimum cost!

## Course Objectives

After completing this workshop you will know:

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

**Who Should Attend:** Individuals who are involved in R&D, Product Development Engineering, and Manufacturing.

**Wednesday, October 6, 2010 8:30 a.m. - 4:30 p.m.**

**Fee:** MA members \$299 per person Non-MA members \$399 per person  
**Receive a 10% discount if you register 10 days prior to the event**

**Location:** **Maple Grove Community Center**  
12951 Weaver Lake Rd.  
Maple Grove, MN 55369  
(For directions and map go to [www.mfrall.com](http://www.mfrall.com))

**Reservations:** For instant confirmation, reserve on-line at [www.mfrall.com](http://www.mfrall.com), click on **Training & Education** then **Workshops** by October 4, 2010.  
**Your satisfaction is guaranteed.**

**Cancellation Policy:** **No refunds** for cancellations after 5:00 p.m. on October 4, 2010, or for no-shows at workshop. (Substitutions are accepted)

**Pre-registration required!**