




2-day In-person Seminar:

# Design of Experiments (DOE) for Process Development and Validation

-  Los Angeles, CA
-  March 30th & 31st, 2017
-  9:00 AM to 6:00 PM



## Jim Wisnowski

Jim Wisnowski is the cofounder of Adsurgo LLC and co-author of the book *Design and Analysis of Experiments* by Douglas Montgomery: A Supplement for using JMP. He has over 25 years of experience and currently provides training and consulting services to industry and government in Design of Experiments (DOE), Reliability Engineering, Data Visualization, Predictive Analytics, and Text Mining. Dr. Wisnowski has been an invited speaker on applicability of statistics for national and international conferences.

### Overview :

Prior to developing a process control plan as part of an overall risk management strategy, process development studies must be completed. The objective of these process development studies is to gain knowledge and understanding about how variation in process parameters explains variation in the product quality characteristics of the product.

The use of DOE methodology provides a means to identify process parameters which impact product quality (critical process parameters) and determine the functional relationship that links the process parameters to those critical quality attributes. Screening designs, such as 2k factorial and D-optimal designs, are used to determine critical process parameters. Response surface designs, such as Central Composite Designs (CCDs) and I-optimal designs

## Price

Price: **\$1,495.00**

(Seminar for One Delegate)

Register for 5 attendees:

Price: **\$4,485.00** You Save: \$2,990.0 (40%)\*  
~~\$7,475.00~~

**ENROLL**

*\*\*Please note the registration will be closed 2 days (48 Hours) prior to the date of the seminar.*



## Agenda:

### Day One

#### Lecture 1: Primer on Statistical Analysis

- basic statistics
- two-sample t-test
- ANOVA
- regression

#### Lecture 2: Introduction to Design of Experiments (DOE)

- steps to DOE
- defining critical quality attributes (CQAs)/responses
- identifying and prioritizing potential process parameters

#### Lecture 3: Screening Designs

- full factorial designs
- 2k factorial designs

#### Why should you attend:

The Global Harmonization Task Force (GHTF) Process Validation Guidance for Medical Device Manufacturers provides guidance on where design of experiments should be applied during process validation; it suggests the use of both screening and response surface designs during Operational Qualification. In addition, DOE should be used during multiple phases of design controls: design and development planning, design verification, design validation, design transfer, and design changes.

In Guidance for Industry Q8 Pharmaceutical Development (as well as the annex to Q8), suggests applying experimental design to demonstrate "...an enhanced knowledge of product performance over a range of...process parameters.

### Day Two

#### Lecture 1: Screening Designs (continued)

- fractional factorial designs
- D-optimal designs

#### Lecture 2: Response Surface Designs

- 2k factorial designs with center points
- Central Composite Designs (CCDs)
- Box-Behnken designs
- I-optimal designs

#### Lecture 3: Utilizing Systematic Understanding from DOE Studies

- presenting results
- control plan/risk management strategy

#### Who Will Benefit:

This seminar is designed for pharmaceutical, biopharmaceutical, and medical device professionals who are involved with product and/or process design:

- Process Scientist/Engineer
- Design Engineer
- Product Development Engineer
- Regulatory/Compliance Professional
- Design Controls Engineer
- Six Sigma Green Belt
- Six Sigma Black Belt
- Continuous Improvement Manager

### Group Participation

10%	2 Attendees to get offer
20%	3 to 6 Attendees to get offer
25%	7 to 10 Attendees to get offer
30%	10+ Attendees to get offer

### Payment Option

- 1 Credit Card: Use the Link to make Payment by Visa/Master/American Express card click on the register now link
- 2 Check: Kindly make the check payable to NetZealous DBA GlobalCompliancePanel and mailed to 161 Mission Falls Lane, Suite 216, Fremont, CA 94539, USA
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### What You will get

- 1 Learning Objectives
- 2 Participation certificates
- 3 Interactive sessions with the US expert
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### Contact Information: Event Coordinator

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Kindly get in touch with us for any help or information.

Look forward to meeting you at the seminar

**GlobalCompliancePanel**