



# 2-day In-person Seminar:

# Applied Statistics for Scientists and Engineers

Baltimore, MD

September 21st & 22nd, 2017

9:00 AM to 6:00 PM

# Richard (Rick) K. Burdick

Richard (Rick) K. Burdick is an Emeritus Professor of Statistics, Arizona State University (ASU) and former Quality Engineering Director for Amgen, Inc. for 10 years. He taught at ASU for 29 years at all levels including undergraduate business students, MBAs, Master of Statistics students, and doctoral candidates in both business and engineering. He received numerous teaching awards and taught a variety of courses for adult learners. His research and consulting interests consider several CMC statistical applications including comparability studies

# Overview:

Throughout 21 CFR and guidance documents for the pharmaceutical, biopharmaceutical, and medical device industries, the application of statistical methods are specified for: setting validation criteria and specifications, performing measurement systems analysis (MSA), conducting stability analysis, using design of experiment (DOE) for process development and validation, developing process control charts, and determining process capability indices.

Different statistical methods are required for each of these particular applications. Data and tolerance intervals are common tools used for setting acceptance criteria and specifications. Simple linear regression and analysis-of-covariance (ANCOVA) are used for setting expiries and conducting stability analysis studies.

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

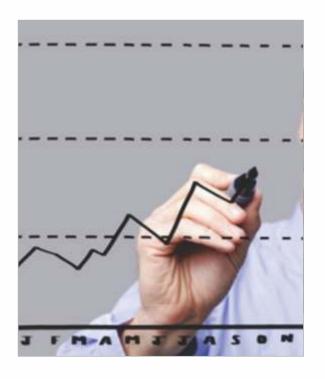
Register for 10 attendees

Price: \$8,222.00 You Save: \$6,728.0 (45%)\*

\$14,950.00

**ENROLL** 

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





# Agenda:

# **Day One**

#### Lecture 1: Basic Statistics

- •sample versus population
- descriptive statistics
- describing a distribution of values

#### Lecture 2: Intervals

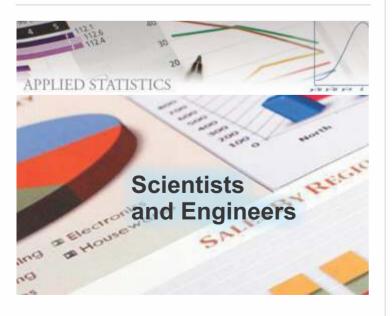
- confidence intervals
- prediction intervals
- tolerance intervals

#### Lecture 3: Hypothesis Testing

- introducing hypothesis testing
- •performing means tests
- performing normality tests and making nonnormal data normal

#### Lecture 4: ANOVA

- defining analysis of variance and other terminology
- discussing assumptions and interpretation
- •interpreting hypothesis statements for ANOVA
- •performing one-way ANOVA
- •performing two-way ANOVA



#### **Day Two**

#### Lecture 1: Regression and ANCOVA

- producing scatterplots and performing correlation
- performing simple linear regression
- performing multiple linear regression
- performing ANCOVA
- using model diagnostics

# Lecture 2: Applied Statistics

- setting specifications
- Measurement Systems Analysis (MSA) for assays
- stability analysis
- •introduction to design of experiments (DOE)
- process control and capability
- presenting results

# Why should you attend:

21 CFR and guidance documents for the pharmaceutical, biopharmaceutical, and medical device industries specify the application of statistical methods across the product quality lifecycle.

According to the Quality System Regulation (QSR) for medical devices, "Where appropriate, each manufacturer shall establish and maintain procedures for identifying valid statistical techniques required for establishing, controlling, verifying the acceptability of process capability and product characteristics." Although there are many statistical method that may be applied to satisfy this portion of the QSR, there are some commonly accepted methods that all companies can and should be using to develop acceptance criteria, to ensure accurate and precise measurement systems, to fully characterize manufacturing processes, to monitor and control process results

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	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
- Check: Kindly make the check payable to NetZealous DBA GlobalCompliancePanel and mailed to 161 Mission Falls Lane, Suite 216, Fremont, CA 94539, USA
- 3 PO: Please drop an email to support@globalcompliancepanel.com or call the our toll free +1-800-447-9407 for the invoice and you may fax the PO to 302 288 6884
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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**