Webinar on

Modeling And Optimizing Process/ Product Behavior Using Design Of Experiments GRCEDUCATORS Axons Technology and Solutions

#### **Learning Objectives**

- Structured Experimentation (DOE)
- DOE Approach / Methodology
- Using Models to Develop Optimal Solutions
- *Types of Experimental Designs and their Applications*
- DOE Techniques
- Developing Predictive Models
- Case Study



This webinar will cover several DOE topics including Structured Experimentation, DOE Approach / Methodology ,Types of **Experimental Designs** and their Applications ,DOE Techniques, **Developing Predictive** Models, Using Models to Develop Optimal Solutions, Case Study.

#### **PRESENTED BY:**

Steven Wachs has 25 years of wide-ranging industry experience in both technical and management positions. Steve has worked as a statistician at Ford Motor *Company where he has* extensive experience in the development of statistical models, reliability analysis, designed experimentation, and statistical process control.



On-Demand Webinar Duration : 75 Minutes

Price: \$200

### **Webinar Description**

Experimentation is frequently performed using trial and error approaches which are extremely inefficient and rarely lead to optimal solutions. Furthermore, when it's desired to understand the effect of multiple variables on an outcome (response), "onefactor-at-a-time" trials are often performed. Not only is this approach inefficient, it inhibits the ability to understand and model how multiple variables interact to jointly affect a response. Statistically based Design of Experiments provides a methodology for optimally developing process understanding via experimentation.

Design of Experiments has numerous applications, including

Shortening R&D Efforts
Optimizing Product Designs
Optimizing Manufacturing Processes
Developing Product or Process Specifications
Improving Quality and/or Reliability
Fast and Efficient Problem Solving (root cause determination)



This webinar will review the key concepts behind the Design of Experiments. A strategy for utilizing sequential experiments to most efficiently understand and model a process is presented. Many common types of experiments and their applications are presented. These include experiments appropriate for screening, optimization, mixtures/formulations, etc. Several important techniques in experimental design (such as replication, blocking, and randomization) are introduced. A Case Study involving optimizing a manufacturing process with multiple responses is presented.



## Who Should Attend ?

Product development personnel

Quality personnel , R&D personnel

Lab personnel , Manufacturing personnel



## **Topic Background**

Learn a methodology to perform experiments in an optimal fashion

*Review the common types of experimental designs and important techniques* 

Develop predictive models to describe the effects that variables have on one or more responses

Utilize predictive models to develop optimal solutions



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