

# **Design of Experiments and Reliability Custom Workshop: Session Agenda**

## Week 1:

### Day 1:

- EDA by Correlation
- Components of Variance
- Components of Variance and Measurement Studies

### Day 2:

- Introduction to Design of Experiments
- Full factorial Experimentation
- Construction of ANOVA's
- Aspirin Experiment

### Day 3:

- Introduction to Fractional Factorials
- Fractional Factorials Case Study
- Reliability Introduction (Graphical Methods)
- Project discussions

### Day 4:

- Introduction to Blocking
- Factor Relationship Diagram's and Blocking
- Blocking Case Study

### Day 5:

- Review and Summary
- Go Forward Plans

Week 2:

Day 1:

Review of Week 1  
Fractional Factorial Analysis by Case Study  
Historical Regression  
Regression in Design of Experiments

Day 2:

Project Presentations  
Center Points  
Central Composite Design  
Analysis of Covariance

Day 3:

Introduction to Split Plot Experiments  
Split Plot Case Study  
Analysis of a Blocked Experiment by Case Study  
Analysis of Experiment with Center Points by Case Study  
Project Discussions

Day 4:

Reliability (Statistical Methods)  
CCD Follow up Analysis  
Replication vs. Repeated Measures by Case Study

Day 5:

Wrap Up  
Project Plan Presentations