Beyond Z's Lean Six Sigma Curriculum for Black Belts

- Additional topics post GB training (GB +)

1.0 Introduction & Define
Covered in Green Belt Training

2.0 Measure
2.1 Process Capability
2.2 Additional Examples for Capability Measurement
2.3 Non-Normal Data Capability
2.3.1 Box Cox Transformation

3.0 Analyze
3.1 Hypothesis Testing
3.2 Review of 1 sample and 2 sample t test
3.3 Confidence Interval Revisited
3.4 One Way ANOVA Revisited
3.5 Balanced ANOVA
3.6 General Linear Model

3.7 Regression -Statistical Concepts review
3.7.1 Least Squares Method
3.7.2 Multiple Linear Regression
3.7.3 Residuals Analysis
3.7.4 Best Subsets

3.8 Non- Linear Regression

3.9 Logistic Regression

4.0 Improve
4.1 Design of Experiments
4.1.1 Type of Experiment
4.1.2 Full Factorial Experiments
4.1.3 Linear & Quadratic Model
4.1.4 Balanced & Orthogonal Designs

4.2 Fractional Factorial Designs
4.2.1 Alias Structure
4.2.2 Design Generator
4.2.3 Half Fraction
4.2.4 Design Resolution

4.3 Center Points in DOE
4.3.1 Confounding and Blocking

4.4 Evolutionary Operation (EVOP)

4.5 Planning a DOE

4.6 Response Surface Models
4.6.1 Central Composite Design
4.6.2 Response Optimizer
4.6.3 Multiple Response Optimization

4.7 Lean Implementation
4.7.1 Visual Management
4.7.2 SMED
4.7.3 Kaizen Events Revisited

5.0 Control
5.1 CuSum Chart
5.2 EWMA Chart