Lean Six Sigma China Certification Course

Six Sigma Yellow Belt Course

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Lean Six Sigma China Certification Program

Six Sigma Yellow Belt

- Understanding Six Sigma
- Non-parametric statistics with Excel

Lean Management

- Understanding Lean principles and tools
- Value-Stream Mapping and Design

Lean Six Sigma Green Belt

- Introduction to R and Minitab
- Basic quality tools with R and Minitab
- Normal distributions
- Green Belt project

Lean Six Sigma Black Belt

- Advanced DMAIC tools with R and Minitab
- Non-normal distributions
- Black Belt project

Yellow Belt

→ Basic understanding of Six Sigma and process capability

→ Application of non-parametric statistics

1. What is Six Sigma? History and applications
2. Implementing Six Sigma, Six Sigma belt system
3. Process Excellence
4. Value-driven mgmt: VOC, CCR, KPOV
5. Data-driven mgmt: Data structure, evaluation, infrastructure
6. Six Sigma metrics: CTQ, CTS, CTC
7. Project selection, DMAIC/DMADV cycles
8. Non-parametric statistics

Lean Management

→ Understand Lean philosophy and principles

→ Apply lean knowledge in value stream analyses and planning

1. The origins of Lean Production
2. Vision and objectives of Lean
3. Just-in-time philosophy and tools (Pull, Kanban, One-Piece Flow, …)
4. Jidoka philosophy and tools (Andon, SMED, EPEx, …)
5. Lean prerequisites: Heijunka, standardized work, Kaizen
6. Lean organization and management (Hancho, Kumicho, Shusa, …)
7. Value stream mapping
8. Value stream design

Green Belt

→ Basic DMAIC Tools with R and Minitab

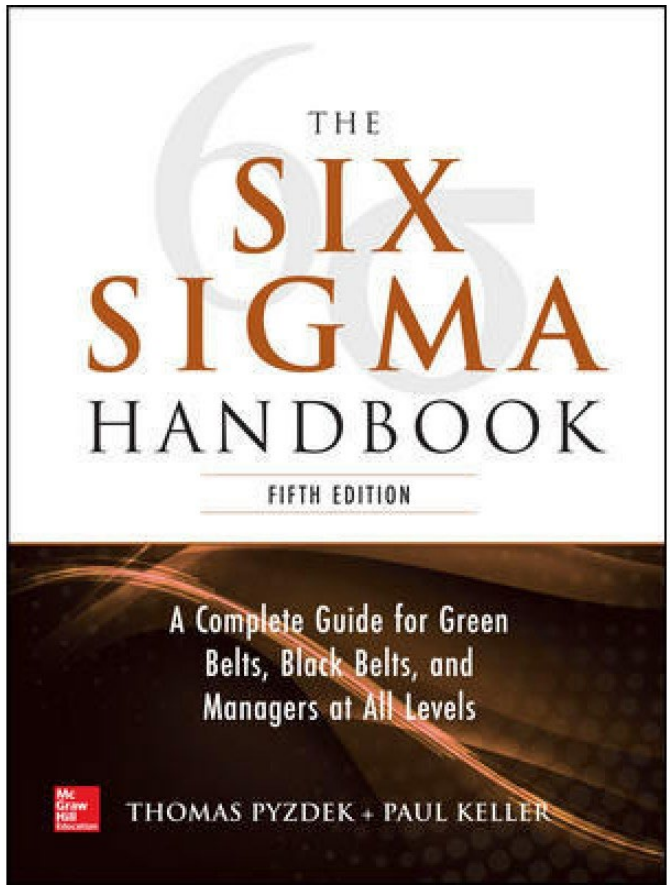
1. Data stratification, flow charts
2. Histogram, normal vs. non-normal Distributions
3. Check/tally sheet, sampling
4. Fishbone/Ishikawa diagrams (root-cause analysis)
5. Pareto chart (ABC-/20-80-rule)
6. Scatter diagrams, regression and correlation analyses
7. Control/Shewhart charts, Statistical Process Control (SPC)

Black Belt Belt

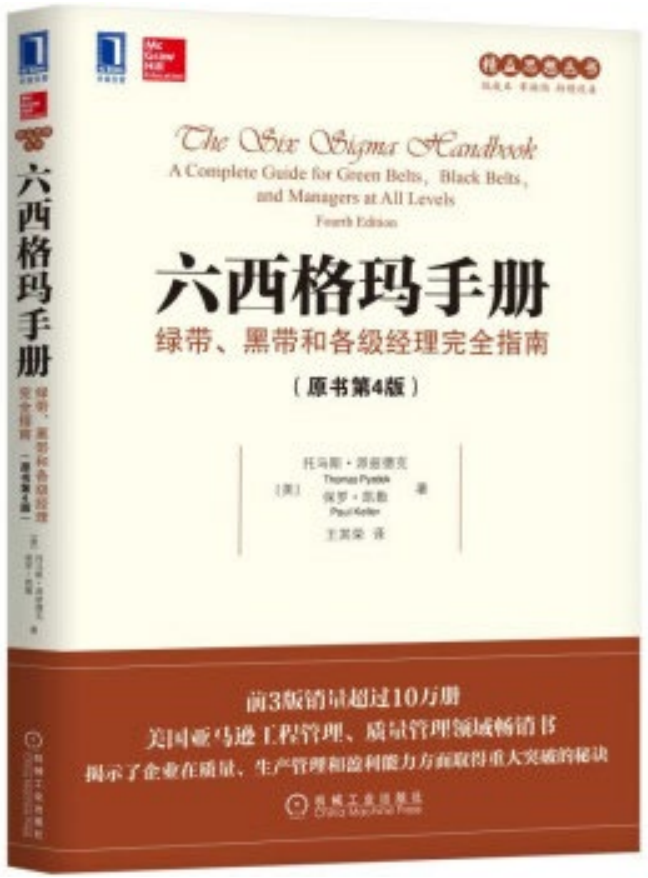
→ Advanced DMAIC tools with R and Minitab

1. Failure mode and effects analysis (FMEA)
2. Measurement system analysis (MSA)
3. Hypothesis testing
4. Analysis of variance (ANOVA)
5. Design of experiments (DOE)
6. Multiple regression
7. …

Literature



Pyzdek/Keller, The Six Sigma Handbook, 5th ed. 2018



派慈德克/凯勒，六西格玛手册，原书第4版 2019

Software

Microsoft Excel Spreadsheet Calculations

- Commercial
- Formulas, VBA, Add-ins
- Only basic statistics

Minitab Statistics Software

- Commercial
- No coding required
- Powerful

R Language for Statistical Computing

- Open source
- Coding required
- State-of-the-art

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