IEE Blended Online Green Belt Curriculum Content

Project Define
- Project definition statements
- SIPOC process diagramming
- Planning the project schedule and participation

Project Measure
- Identifying primary metric performance (predictability and capability)
  - Control charting of business level metrics (high level outputs of continuous and attribute data)
  - Distribution analysis and transformations of data
  - Capability assessments (continuous and attributes)
  - Rolled Throughput Yield
  - Pareto chart
- Identification of Quick Fix (Low Hanging Fruit) issues
- Process flow charting
  - High level charting
  - Detailed process charting
- Lean assessment tools
  - Value Stream Map
  - Spaghetti diagrams
  - Combination work charts
  - Work Flow Analysis
  - Physical flow maps
  - Transaction flow analysis
  - 5S
  - General Lean concepts
  - Value added/ Non-value added analysis
  - Time value mapping
  - Logic flow diagrams
  - Takt time analysis
- Theory of Constraints analysis
- Data collection and sampling methods
- Measurement System Analysis
  - Attribute gauge analysis
  - Decision system analysis
  - Continuous gauge analysis
- Wisdom of the Organization
  - Process mapping
  - Benchmarking
  - Affinity diagrams
  - Brainstorming (Cause and Effect Diagram)
  - Why-Why diagrams (fault tree diagrams)
  - Prioritization matrixes (Cause and Effect Matrix)
  - Failure Modes and Effects Analysis (FMEA)
- Measure Phase Coaching/Mentoring Session reviewing Measure Phase topics and project progress.

Project Analyze Phase
- Basic Statistics (t, z, f…. testing)
- Extensive Minitab charting techniques for insight into performance data
  Box plots, Dot plots, Time Series plots, Individual Value plots
- Simple regression
- Simple one way Analysis of Variance (ANOVA) for comparing multiple groups
- Distribution analysis
- Analyze Phase coaching/mentoring session reviewing Analyze Phase topics and project progress.

Project Improve Phase
- Solution selection methods
- Lean improvement methods
  - Kaizen improvement events
  - 5S improvements
  - Pull systems
  - Future Value Stream Mapping
  - Visual controls
  - Cellular flow
  - Process flow improvement (pull, supermarkets, pace maker management)
  - Kanban implementation
  - Flow leveling (balancing)
  - Constraint analysis
  - Total Productive Maintenance (TPM) issues
- Improvement plan development
- Improve Phase coaching/mentoring session reviewing Improve Phase topics and project progress.

Project Control Phase
- Control plan development
  - Documentation and deployment issues
  - Reaction plans
  - Continuous performance assessment methods
- Statistical Process Control methods (SPC)
- Implementation planning
- Deployment of improvement
- Control Phase coaching/mentoring session reviewing Control Phase topics and project progress.

Other Topics
- Capability metrics (Cp, Cpk, Pp, Ppk)