



LEAN SIX SIGMA BLACK BELT CERTIFICATION PROGRAM

<b>Lean Fundamentals / Define</b>		<b>Measure</b>		<b>Analyze</b>		<b>Improve / Control</b>	
<b>(4 Days)</b>		<b>(2 Days)</b>		<b>(5 Days)</b>		<b>(4 Days)</b>	
<p><b><u>Lean Fundamentals</u></b></p> <ul style="list-style-type: none"> <li>• Intro to Lean and Six Sigma</li> <li>• Process Simulation</li> <li>• Lean Principals</li> <li>• Value Stream Mapping</li> <li>• Process Flow Improvement and Pull Systems</li> <li>• 5S and Visual Tools</li> <li>• Set-Up Reduction</li> <li>• Kaizen Preparation</li> <li>• Team Facilitation and Change Mgt</li> </ul> <p><b><u>Define</u></b></p> <ul style="list-style-type: none"> <li>• Intro to Six Sigma</li> <li>• Voice of the Customer</li> <li>• Cost of Poor Quality</li> <li>• Project Selection and Definition</li> <li>• Intro to Minitab</li> <li>• Project Management Tools</li> <li>• Team Charter</li> <li>• Define Deliverables</li> </ul>	<i>Project Work (3 Weeks)</i>	<p><b><u>Measure</u></b></p> <ul style="list-style-type: none"> <li>• Report Out – Define Deliverables</li> <li>• Process Mapping</li> <li>• Multi Level Pareto Charts</li> <li>• Fishbone/5-Why</li> <li>• YX Matrix</li> <li>• FMEA</li> <li>• Basic Statistics</li> <li>• Measurement System Analysis (MSA)</li> <li>• Process Stability</li> <li>• Process Capability</li> <li>• Measure Deliverables</li> </ul>	<i>Project Work (3 Weeks)</i>	<p><b><u>Analyze</u></b></p> <ul style="list-style-type: none"> <li>• Report Out - Measure Deliverables</li> <li>• Analysis Plan</li> <li>• Documentation of Critical X's</li> <li>• Multi-Variable Analysis</li> <li>• Sample Size selection</li> <li>• Hypothesis Testing</li> <li>• Design of Experiments (Factorial)</li> <li>• Analysis of variance</li> <li>• Advanced Capability Analysis</li> <li>• Non-Normal Data Transformation Tools</li> <li>• Correlation</li> <li>• Linear Regression</li> <li>• Contingency Tables</li> <li>• Logistic Regression</li> <li>• Analyze Deliverables</li> </ul>	<i>Project Work (3 Weeks)</i>	<p><b><u>Improve</u></b></p> <ul style="list-style-type: none"> <li>• Report Out - Analyze Deliverables</li> <li>• Designed Experiments - Advanced</li> <li>• Solution Selection Matrix</li> <li>• Implementation Plan</li> <li>• Improve Deliverables</li> </ul> <p><b><u>Control</u></b></p> <ul style="list-style-type: none"> <li>• Statistical Process Control</li> <li>• Integrating Lean Techniques for Control</li> <li>• Control Plans</li> <li>• Process Capability Revisited</li> <li>• Final Report Requirements</li> <li>• Control Deliverables</li> <li>• Schedule Final Project Review</li> </ul>	<i>Project Work (3 Weeks)*</i>

\*Date of final presentations to be determined.