Training Roadmap for Six Sigma: Black Belt

	Courses			
Videos	Six Sigma Foundations	Learning Minitab	Six Sigma: Green Belt	Six Sigma: Black Belt
Introduction to Six Sigma				
• What is Six Sigma?	X			
• An overview of DMAIC	X			
• Key roles of executive and champions	X			
• Levels of expertise	X			
• Six Sigma and the organization			X	
Key Concepts in Six Sigma				
• Critical to quality metrics	X			
• Variation and the normal curve	X			
• Defects per million opportunities	X			
• Learn Sigma levels	X			
Selection of Six Sigma Projects				
• Identify potential projects	X			
• Project identification			X	
• Select the Six Sigma team	X			

Define Phase				
Steps in the Define phase	X			
Problem and goal statements	X			
Complete the project charter	X			
How to use SIPOC diagrams	X			
Collecting VOC (voice of the customer)			X	
Project management basics			X	
Measure Phase				
Steps in the Measure phase	X			
How to map the current process	X			
Types of process maps			X	
Process flow metrics				X
Plan for data collection	X			
Sampling in data collection			X	
Sample sizes				X
Types of data and graphs	X			
Minitab overview		X		
Display graphs and charts		X		
Describe data with statistics		X		
Descriptive statistics			X	
Graphical displays of data			X	
Measurement system analysis (MSA)	X			
Validating the measurement system (MSA)			X	
Key terms in MSA				X
Conduct MSA for continuous data				X
Conduct MSA for attributes				X
Process capability and Sigma level	X			
Process performance measures			X	
Process capability for continuous data				X

Analyze Phase				
Steps in the Analyze phase	X			
How to use the cause-effect diagram	X			
Introduction to hypothesis testing	X			
How to analyze graphs and charts	X			
How to analyze process maps	X			
Hypothesis testing basics			X	
Hypothesis testing road map				X
Data collection in the Analyze phase	X			
Sample size determination				X
Inferences on continuous data		X		
Confidence intervals				X
Testing for normality				X
Tests for means			X	
T-tests				X
Tests for variances			X	
Comparing variances				X
ANOVA				X
Nonparametric methods				X
Inferences on categorical data		X		
Tests for proportions			X	
Test of independence			X	
Contingency tables				X
Correlation and linear regression			X	
Correlation				X
Linear regression				X
Multiple regression				X

Improve Phase				
Steps in the Improve phase	X			
Introduction to design of experiments (DOE)			X	
Two-level fractional factorial experiments				X
Full-factorial experiments				X
DOE with curvature				X
Response surface methods				X
Introduction to design for Six Sigma			X	
Generate, evaluate, and select solutions	X			
Selection matrices			X	
Reduce the risk of failure through FMEA	X			
How to use FMEA			X	
Mistake proofing	X			
Pilot test and implement	X			
Control Phase				
Steps in the Control phase	X			
How to use SPC charts	X			
SPC charts			X	
SPC chart selection				X
SPC charts of variables			X	
SPC charts for attributes			X	
SPC chart analysis				X
The control plan	X			
How to develop control plans			X	
Display improved process capability				X
Save and share your work using Minitab		X		