



The following slides outline the course described as :

Design for Six Sigma Black Belt (20 days)

For further information please contact us:
Email: enquiries@burgehugheswalsh.co.uk
Tel: 00 44 (0) 1788 550015

Agenda for Design for Six Sigma Black Belt Module 1

Day 1	Day 2	Day 3	Day 4	Day 5
Introductions	Customers and Requirements	Viewpoint Analysis	Quality Function Deployment	Sensitivity Analysis
The why and what of DFSS	Textural Analysis			
Lunch	Lunch	Lunch	Lunch	Lunch
Roles and Responsibilities	Identifying Customers and Eliciting Requirements	Functional Modelling	Quality Function Deployment	Planning for Requirements Capture
Overview of the Identify Phase				What Next and review
Review of day 1	Review of day 2	Review of day 3	Review of day 4	

Agenda for Design for Six Sigma Black Belt Module 2

Day 1	Day 2	Day 3	Day 4	Day 5
Variation, Normal Theory and Span	Gauge R&R: Continuous Data	Hypothesis Tests: Z & t tests ANOVA: Type 1, Type 2, 1-way, 2-way, Balanced, GLM Model specification Fixed, Random, Nested & Crossed terms.	Proportion & Chi-squared tests. Non-parametric tests.	Process Capability: Discrete Data
Lunch	Lunch	Lunch	Lunch	Lunch
Data	Gauge R&R: Attribute Data	Hypothesis Tests - continued	Process Capability: Continuous Data using Z values	Managing CTQ's The Score Card
Sampling Theory	Introduction to Hypothesis Tests		Process Capability: Classic metrics	Course Review

Agenda for Design for Six Sigma Black Belt Module 3

Day 1	Day 2	Day 3
Introduction	Generating Design Concepts	Capturing Sources of Variation
Review of module 1	Concept Matching and Selection	
Design Phase Overview	Concept Matching and Selection	Lunch
Lunch	Lunch	QFD2
Understanding Sources of Variation	Concept Matching and Selection	What Next and review
Generating Design Concepts	Review of day 2	
Review of day 1		

Agenda for Design for Six Sigma Black Belt Module 4

Day 1	Day 2	Day 3	Day 4
Introduction			
Introduction to Robust design and Design of Experiments	Fractional Factorial & Screening DoE	Centre Points and Nonlinear Designs	Design of Experiments Wash up Exercise
Lunch	Lunch	Lunch	Lunch
Full Factorial Design of Experiments	Noise in DoE	Response Surface Methods	What Next and review
Review of day 1	Review of day 2	Review of day 3	Review of day 4

Agenda for Design for Six Sigma Black Belt Module 5

Day 1	Day 2	Day 3	Day 4	Day 5
Introduction	Statistical Design for Linear Systems	Parameter Design for Non-Linear Systems	Parameter Design Using Robust DoE	Parameter Design Using Robust DoE
QFD3				
Lunch	Lunch	Lunch	Lunch	Lunch
Introduction to Statistical Design	Robustness Metrics	Parameter Design for Non-Linear Systems	Parameter Design Using Robust DoE	Tolerance Design
Review of day 1	Review of day 2	Review of day 3	Review of day 4	What Next and review

Agenda for Design for Six Sigma Black Belt Module 6

Day 1	Day 2	Day 3	Day 4	Day 5
Introduction – Review of Module 5		Reliability – MEA and Modelling using Fault Trees, Block Diagrams	Reliability – Constant Failure Rates	Reliability - Accelerated Testing
QFD4	Statistical Tolerancing & Control		Reliability – Test Planning in Minitab	Reliability – Binary Response Analysis
Lunch	Lunch	Lunch	Lunch	Lunch
Design for Assembly	Statistical Tolerancing & Control	Reliability – Evaluation Introduction	Reliability - Sequential Testing	Course Overview & Summary
Review of day 1	Review of day 2	Reliability - Growth	Reliability - Modelling in Minitab	Course Examination
		Review of day 3	Review of day 4	