



MANUFACTURING SIX SIGMA BLACK BELT UPGRADE

9-Day Programme ~ commences September 13th 2010 ~ Leamington Spa



INTRODUCTION

For certified Green Belts, this exclusive programme provides a fast-track upgrade path to achieve Black Belt status. The 9-day programme focuses on the advanced DMAIC tools that are required for more complex projects. Candidates for this programme will have been trained and accredited as a Green Belt by a recognised training organisation.

The programme will:

- Provide a clear upgrade route from Green Belt to Black Belt (including re-cap key learning points from Green Belt)
- Ensure DMAIC flow and application of tools are fully understood
- Introduce the leadership & change management skills to support the Black Belt role
- Provide practitioner training in the more complex statistical tools required within the Black Belt toolkit

ENROLMENT FEES

Smallpeice offer an accreditation process for the Black Belt Upgrade trainees. This involves passing a multi-choice examination, submitting a Black Belt project report, and attending a panel assessment session with the Smallpeice Master Black Belt Team. Input from the sponsoring company will also be sought and taken into account.

ENROLMENT FEES

£2,925 per delegate, includes:

- Comprehensive course manuals,
- Lunch & refreshments daily at our professional training facility in central Warwickshire.

PROGRAMME CONTENT

BLOCK 1

OPTIONAL	MANDATORY			
September 13 (GL)	September 14 (GL)	September 15 (GL)	September 16 (GL)	September 17 (GL)
Green Belt Revision <ul style="list-style-type: none"> • Define Phase: review of project scoping tools; CTQs revisited • Measure Phase: Data collection planning review • Analyse Phase: Graphical Analysis using Minitab Master-class • Improve Phase: Review of key tools • Control Phase: Control Planning – lessons learned from GB projects 	Course Introduction <ul style="list-style-type: none"> • Expectations & objectives • The role of a Black Belt • Black Belt project selection • Project profile & certification Define Phase Revisited <ul style="list-style-type: none"> • Scoping complex cross-functional projects • Use of quality function deployment for understanding the voice of the customer • Benefits calculation & tracking • Planning for change 	Advanced Data Collection Planning <ul style="list-style-type: none"> • Sample size calculation and sampling techniques • Gauge R&R for variable and attribute data • Advanced statistical process control for attribute and variable data • Multi-vari charts • Process capability and use of Z tables 	Advanced Statistics <ul style="list-style-type: none"> • Basic statistics and probability revisited • Probability distributions • The central limit theorem • Dealing with non-normal data • Planning and communication data analysis 	Hypothesis Testing <ul style="list-style-type: none"> • Use of inferential statistics • Significance testing route map • Analysis of variable and attribute data • Non-parametric techniques

BLOCK 2

MANDATORY			
October 11 (GL)	October 12 (GL)	October 13 (GL)	October 14 (GL)
Multi-Variable Regression <ul style="list-style-type: none"> • Introduction to multiple regression • Analysis of multi-variable data • Further diagnostic techniques • Signpost to advanced regression techniques 	Advanced Design of Experiments <ul style="list-style-type: none"> • Benefits and limitations basic DOE techniques • Overview of advanced techniques • 3 level designs • Taguchi methods 	Advanced DoE (Cont'd) <ul style="list-style-type: none"> • Taguchi's robust engineering (CCD, CCF and Box-Behnken designs) • Introduction to evolutionary experimentation (EVOP techniques) 	Control <ul style="list-style-type: none"> • Control phase techniques • Embedding the change within the business • Application of long term MSA • Long-term control Intro to DFSS <ul style="list-style-type: none"> • Introduction to design for six sigma and the DMADV methodology • Links to DMAIC Review & Next Steps Planning