



CBIS Business
Compliance
and Excellence

We Provide a Simple, Smart and
Affordable route to Lean Six
Sigma Training and Certification

 **SIX SIGMA**

**SIX SIGMA
BLACK BELT**



**CLASSROOM
TRAINING**

WHO WE ARE



At CBIS, we offer classroom training for Lean Six Sigma Yellow Belt, Green Belt and Black Belt courses under accreditation of International Association for Six Sigma Certification (IASSC) and the Council for Six Sigma Certification. We are also Exemplar Global Certified TPECS Provider for the various Lean, Six Sigma, Lean & Six Sigma training courses from introductory to advanced level in compliance with ISO 18404:2015 international standard.

Here is a handful of our clients:



COURSE OVERVIEW



This Six Sigma Black Belt course prepares participants to perform the role of a Six Sigma Black Belt. The Six Sigma Black Belt training materials comprise a comprehensive curriculum covering everything within the Six Sigma Body of Knowledge required to successfully complete Black Belt certification. After achieving this qualification, the Black Belts contribute their knowledge and expertise and utilise the learnt DMAIC methodology and the relevant tools as well as the project management skills during execution of a project throughout the organisation as project manager to manage a team of Yellow and Green Belts.

DURATION



7 Full days – 9 am to 5 pm

CERTIFICATION



After passing the knowledge exam and successful completion of the Six Sigma Black Belt Project Portfolio within 6 months, participants will be certified as Six Sigma Black Belt.

The certificate will be granted under Exemplar Global banner according to ISO 18404 international standard and includes the project title.

TARGET AUDIENCE



The Six Sigma Black Belt certification program is perfect for participants with limited or no exposure to Six Sigma who want to achieve their Six Sigma Black Belt Certificate without achieving Yellow Belt and Green Certificates. The Six Sigma Green Belt Body of Knowledge is covered in the first 3-days with the additional topics covered in the remaining 4-days for upgrading to Six Sigma Black Belt.

WHAT IS INCLUDED



- ✓ Pre-course On-line Introduction Video
- ✓ Black Belt Course Material (Hard Copy)
- ✓ Minitab Exercises Manual (Hard Copy)
- ✓ Data files for Minitab practices
- ✓ One-month Minitab exercise support
- ✓ Black Belt project templates pack to be used for the Six Sigma Project
- ✓ Black Belt practice test
- ✓ Black Belt Certification Exam
- ✓ Black Belt Project Portfolio
- ✓ Six months project support service

PREREQUISITES



As all Six Sigma Black Belt topics are covered during the course, there is no formal prerequisite for the Six Sigma Black Belt Certification. Intermediate numeracy and statistical knowledge is required.



COURSE OUTLINE



Introduction to Six Sigma

- What is Six Sigma?
- Six Sigma History
- DMAIC Methodology
- DMAIC Vs. DMADV

Define Phase

- Team, Teamworking, Team Building, Team roles and responsibilities
- Creative Thinking and Brainstorming
- Generating Project Ideas
- Affinity Diagram
- Project Selection Matrix
- Project Planning / Project Management
- Stakeholders Analysis
- Project Risk Assessment
- Communication Skills and Communication Planning
- Project Charter
- Cos of Poor Quality (COPQ)
- Process Definition
- SIPOC
- Voice of Customer (VOC)
- Critical to Quality (CTQ)

Measure Phase

- C&E (Fishbone) Diagram
- Pareto Chart
- C&E Matrix (X-Y Diagram)
- FMEA
- Different types of Data
- Inferential and descriptive statistics
- Population and Sampling
- Sample Size Calculation
- Stratification
- Data Collection Plan
- Measurement System Analysis (MSA)
- Accuracy and Precision
- Bias
- Linearity
- Stability
- Repeatability & Reproducibility (G R&R)
- Attribute MSA (KAPPA)
- Statistical Measures (Mean, Median, Mode, Range, Variance, Standard Deviation, Skewness, Kurtosis)
- Different Types of Variation
- Histogram
- Normal Distribution and Normality
- Data Transformation, Box Cox, Johnson
- Run Chart
- Individual Control Chart
- Discrete Statistical Distributions (Binomial, Poisson)
- Normal and standardised normal distributions
- Central Limit Theorem
- Process Capability Indices (Cp, Cpk, Pp, Ppk)
- Short Term and Long Term Sigma Level



Analyse Phase

- Process Mapping Tools (SIPOC, Spaghetti Diagram, Process Flow Chart, etc.)
- Graphical Cause Validation Tools (Fishbone Diagram, 5 Whys, ...)
- Statistical Cause Validation Tools
- Box Plot, Dot Plot, Main Effect Plot, Multi-vari Chart
- Hypothesis Test
- Chi-square Test
- Scatter Plot and Correlation
- Simple Linear Regression
- Non-Linear Regression
- Multiple Linear Regression

Improve Phase

- Improvement Strategy
- Design of Experiment (DOE)
- Cost-Benefit Analysis
- Improvement Solution Selection
- Resistance Management and Force Field Analysis
- Motivation and Motivating Others
- Project Pilot
- Project Planning

Control Phase

- Standardisation
- Control Plan
- Documentation
- Training
- Self-Review and Self Development
- Individual and organisational changes
- Statistical Process Control
- Variable Control Charts (Xbar-R, Xbar-S, ...)
- Attribute Control Charts (C chart, P chart, ..)
- Advanced Control Charts (EWMA, CUSUM,...)
- Before and After Analysis
- Presentation and Report Writing Skills
- Project Closure

CONTACT US



Melbourne Office: Level 9, 440 Collins Street Melbourne VIC 3000

T +61 3 8686 9161

Sydney Office: Level 5, 7 Eden Park Drive, Macquarie Park, NSW 2113

T +61 2 8598 8597

Brisbane Office: 9/204 Alice St, Brisbane QLD 4000

T +61 7 3708 3273

Perth Office: 202/37 Barrack St, Perth WA 6000

T +61 8 6165 8840

E info@cbisco.com.au

W www.cbisco.com.au