

# Mastering Lean Six Sigma: Black Belt Certification Program

Audit & Quality Assurance  
Accra (Ghana)  
04 - 15 Aug 2025

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## Mastering Lean Six Sigma: Black Belt Certification Program

**Ref:** 321575\_126404 **Date:** 04 - 15 Aug 2025 **Location:** Accra (Ghana) **Fees:** 5600 **Euro**

### Course Description

This intensive 10-day Lean Six Sigma Black Belt course equips participants with advanced skills in process improvement, statistical analysis, and project management. Designed for experienced professionals, the program covers complex problem-solving techniques, advanced statistical tools, and leadership strategies essential for driving organizational excellence and leading high-impact projects.

### Learning Objectives

- Master advanced statistical tools and techniques for complex process analysis
- Develop expertise in leading large-scale improvement projects across multiple functions
- Enhance strategic thinking and decision-making skills for process optimization
- Gain proficiency in mentoring and coaching Green Belts and project teams
- Learn to align Lean Six Sigma initiatives with organizational goals and strategies

### Course Modules

#### Day 1: Advanced Lean Six Sigma Concepts

- Review of Lean Six Sigma fundamentals
- Advanced DMAIC methodology
- Strategic project selection and scoping
- Change management and leadership principles

#### Day 2: Advanced Statistical Analysis

- Hypothesis testing and confidence intervals
- Analysis of Variance ANOVA
- Multiple regression analysis
- Non-parametric tests

#### Day 3: Design of Experiments DOE

- Full factorial designs
- Fractional factorial designs
- Response surface methodology
- Taguchi methods

A graphic of a chessboard with several chess pieces (king, queen, rook, knight, and pawns) in gold and silver. The text 'UK Training PARTNER' is overlaid on the board.

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#### **Day 4: Advanced Process Capability and Control**

- Multivariate process capability analysis
- Short run SPC techniques
- Advanced control charts
- Process capability for non-normal data

#### **Day 5: Lean Methods and Tools**

- Value Stream Mapping VSM for complex processes
- Theory of Constraints TOC
- Advanced pull systems and Kanban
- Lean for non-manufacturing environments

#### **Day 6: Advanced Root Cause Analysis**

- Fault Tree Analysis
- Failure Mode and Effects Analysis FMEA
- Shainin Red X methodology
- Advanced problem-solving techniques

#### **Day 7: Financial Analysis and Project Management**

- Cost-benefit analysis for complex projects
- Risk assessment and mitigation strategies
- Advanced project management techniques
- Stakeholder management and communication

#### **Day 8: Data Mining and Predictive Analytics**

- Introduction to data mining techniques
- Predictive modeling
- Machine learning applications in Six Sigma
- Big data analytics for process improvement

#### **Day 9: Design for Six Sigma DFSS**

- DMADV methodology
- Quality Function Deployment QFD
- Robust design principles
- Design for reliability and maintainability

#### **Day 10: Leadership and Deployment Strategies**

- Developing a Lean Six Sigma culture
- Coaching and mentoring techniques
- Organizational deployment strategies

A graphic of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a gold pawn behind it. In the background, there are concentric circles emanating from a point on the board.

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- Sustaining improvements and continuous learning

## Practical Wins for Participants

- Ability to lead complex, cross-functional improvement projects with significant financial impact
- Enhanced skills in advanced data analysis and strategic decision-making
- Expertise in mentoring and developing Green Belts and project teams
- Capability to align process improvement initiatives with organizational strategy and goals

A graphic illustration of a chessboard with several chess pieces. A large gold king piece is prominent in the foreground, with a silver pawn and a silver knight nearby. In the background, there are concentric circles emanating from a point, suggesting a strategic or analytical theme.

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