CERTIFICATION SYLLABUS

Certified Lean Six Sigma Master Black Belt

Exam Code: CLMBB™



A complete preparation guide covering exam objectives, core competencies, domain weightage, and topics to prepare.

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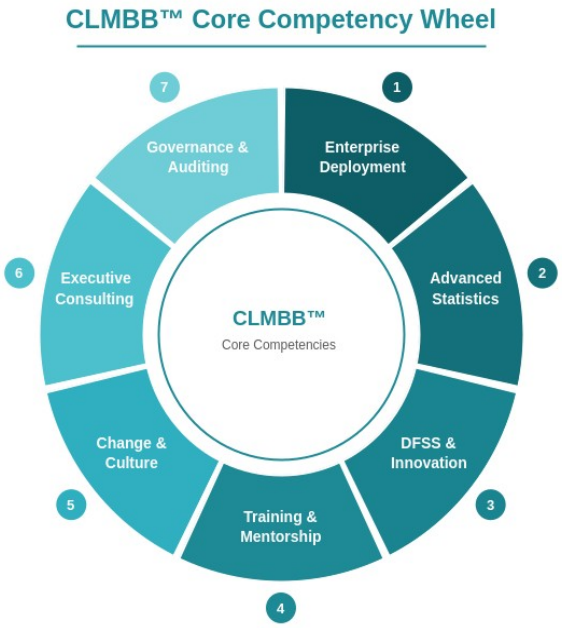
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Objective of the Certification

- **Own enterprise-wide Six Sigma strategy —** design, govern, and continuously evolve the organization's overall deployment model, methodology standards, and long-term capability roadmap.
- **Master advanced statistical and analytical methods —** go beyond applied statistics to develop, validate, and adapt statistical methodologies for novel or highly complex organizational problems.
- **Lead innovation through Design for Six Sigma (DFSS) —** drive proactive, enterprise-scale design initiatives for new products, services, and business models, not just process improvement.
- **Build and certify the organization's Black Belt and Green Belt talent pipeline —** design training curricula, mentor and formally certify Black Belts, and establish technical standards across the program.
- **Drive large-scale organizational and cultural transformation —** lead multi-year change initiatives that embed a continuous improvement culture across the enterprise.
- **Serve as a strategic advisor to executive leadership —** translate business strategy into an enterprise improvement portfolio and advise C-suite stakeholders on where and how to deploy Six Sigma capability.
- **Govern program quality and consistency —** audit projects, methodology adherence, and Black Belt performance across the organization to ensure rigor and sustained results.
- **Continuously improve the improvement methodology itself —** evaluate, adapt, and evolve DMAIC, DFSS, and Lean practices based on emerging tools, industry trends, and organizational learning.
- **Act as an internal and external consultant —** apply Six Sigma leadership across industries, functions, and business units, including M&A integration, digital transformation, and other enterprise initiatives.
- **Prepare the next generation of Master Black Belts —** build succession capability so the organization's Six Sigma leadership is not dependent on any single individual.

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Core Competencies — CLMBB™ (Lean Six Sigma Master Black Belt)



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1. Enterprise Deployment Leadership

- Design and govern the organization's overall Six Sigma deployment strategy, structure, and roadmap.
- Determine deployment models (centralized, decentralized, hybrid) appropriate to organizational maturity and goals.
- Own the enterprise project portfolio, ensuring alignment with strategic priorities across business units.

2. Advanced Statistical Methods & Methodology Design

- Develop and adapt advanced statistical approaches (multivariate methods, advanced DOE, simulation, machine-learning-adjacent analytics) for novel business problems.
- Validate and standardize statistical methodology and tools used across the Black Belt population.
- Serve as the final technical authority on statistical rigor for high-stakes or ambiguous analyses.

3. Design for Six Sigma (DFSS) & Innovation Leadership

- Lead enterprise-scale DFSS initiatives for new products, services, processes, or business models.
- Apply advanced DFSS frameworks (e.g., IDOV, DMADV) and tools (QFD, robust design, TRIZ-adjacent innovation methods) at a strategic level.
- Champion innovation practices that embed quality and customer value from the earliest design stages.

4. Training, Mentorship & Talent Development

- Design and deliver Black Belt and Green Belt training curricula, including case studies and certification standards.
- Mentor and formally certify Black Belts, validating both technical rigor and leadership readiness.
- Build a sustainable internal pipeline of Six Sigma talent, including succession planning for future Master Black Belts.

5. Organizational Change & Culture Transformation

- Lead multi-year, enterprise-wide change management initiatives tied to continuous improvement culture.
- Influence senior leadership and cross-functional stakeholders to sustain long-term transformation efforts.
- Diagnose and address systemic and cultural barriers to continuous improvement adoption.

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6. Executive Consulting & Business Strategy Alignment

- Advise executive leadership on where Six Sigma capability should be deployed to maximize strategic impact.
- Translate enterprise business strategy into a coherent, prioritized improvement portfolio.
- Quantify and communicate the enterprise-level financial and strategic value of the Six Sigma program.

7. Program Governance, Auditing & Methodology Evolution

- Audit Black Belt projects, methodology adherence, and statistical rigor across the organization.
- Establish governance standards, review boards, and quality checkpoints for the enterprise improvement program.
- Continuously evaluate and evolve the organization's methodology based on emerging tools, industry benchmarks, and lessons learned.

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Who Should Take This Certification

- Experienced Black Belts ready to move from project execution into enterprise methodology ownership and leadership.
- Senior Quality Directors, VPs of Operational Excellence, and Continuous Improvement Executives shaping organization-wide strategy.
- Internal or external consultants responsible for designing and scaling Six Sigma deployment programs across organizations.
- Professionals responsible for building, training, and certifying an organization's Black Belt and Green Belt talent pipeline.
- Leaders driving large-scale organizational transformation, digital transformation, or M&A integration initiatives.
- Individuals aspiring to the most senior technical and strategic leadership roles within a Six Sigma program.

Prerequisite: Lean Six Sigma Black Belt certification (Mandatory)

Exam Information

Exam Name	Lean Six Sigma Master Black Belt
Exam Code	CLMBB™
Exam Format	Multiple Choice Questions (MCQ), Scenario Based & Case Study Based
Duration	330 minutes
Number of Questions	150
Passing Score	75%
Mode of Exam	Test Center Based Testing / Online Testing
Language	English
Validity	Lifetime
Open Book	No

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Examination Domain & Weightage

Domain	Core Competencies Tested	Weightage
Enterprise Deployment Strategy & Governance	Deployment models, portfolio ownership, strategic alignment across business units	15%
Advanced Statistical Methods & Methodology Design	Advanced multivariate methods, advanced DOE/simulation, methodology standardization and validation	20%
Design for Six Sigma (DFSS) & Innovation Leadership	IDOV/DMADV frameworks, QFD, robust design, enterprise-scale innovation initiatives	15%
Training, Mentorship & Talent Development	Curriculum design, Black Belt certification standards, succession planning	15%
Organizational Change & Culture Transformation	Multi-year change leadership, stakeholder influence, culture diagnostics	15%
Executive Consulting & Business Strategy Alignment	Strategic portfolio design, executive advisory, ROI/value communication	10%
Program Governance, Auditing & Methodology Evolution	Project/methodology audits, governance standards, continuous methodology improvement	10%
Total		**100%**

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Topics to Prepare

The topics below represent the core areas candidates should focus on for each domain, reflecting the enterprise-level depth expected at the Master Black Belt level.

1. Enterprise Deployment Strategy & Governance

- **Deployment Models:** Centralized, decentralized, and hybrid Six Sigma deployment structures and when each fits.
- **Enterprise Portfolio Management:** Owning and prioritizing a multi-business-unit improvement portfolio.
- **Deployment Maturity Assessment:** Diagnosing an organization's Six Sigma maturity and designing a roadmap to advance it.

2. Advanced Statistical Methods & Methodology Design

- **Advanced Multivariate & Simulation Methods:** Techniques beyond standard Black Belt-level analysis for complex, high-dimensional problems.
- **Advanced DOE:** Designing and validating complex experimental designs for novel or ambiguous business problems.
- **Methodology Standardization:** Establishing and validating statistical standards, templates, and tools used across the Black Belt population.
- **Technical Authority Role:** Serving as the final reviewer for high-stakes or statistically ambiguous project conclusions.

3. Design for Six Sigma (DFSS) & Innovation Leadership

- **DFSS Frameworks:** IDOV (Identify, Design, Optimize, Validate) and DMADV (Define, Measure, Analyze, Design, Verify) at an enterprise scale.
- **Advanced Innovation Tools:** QFD, robust design, tolerance design, and TRIZ-adjacent innovation methods.
- **Enterprise Innovation Leadership:** Embedding DFSS thinking into new product, service, and business-model development.

4. Training, Mentorship & Talent Development

- **Curriculum Design:** Building Black Belt and Green Belt training programs, including case studies and assessments.
- **Certification Standards:** Setting and validating technical and leadership criteria for certifying Black Belts.
- **Succession Planning:** Building a sustainable pipeline of future Master Black Belts and technical leaders.

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5. Organizational Change & Culture Transformation

- **Multi-Year Change Leadership:** Planning and sustaining transformation initiatives that span years, not single projects.
- **Stakeholder Influence:** Building buy-in and alignment across senior leadership and cross-functional stakeholders.
- **Culture Diagnostics:** Identifying systemic and cultural barriers to continuous improvement adoption and addressing them directly.

6. Executive Consulting & Business Strategy Alignment

- **Strategic Portfolio Design:** Translating enterprise business strategy into a coherent, prioritized improvement agenda.
- **Executive Advisory Skills:** Communicating technical findings and strategic recommendations to C-suite stakeholders.
- **Value & ROI Communication:** Quantifying and articulating the enterprise-level financial and strategic impact of the program.

7. Program Governance, Auditing & Methodology Evolution

- **Project & Methodology Audits:** Reviewing Black Belt projects for technical rigor and methodology adherence.
- **Governance Structures:** Establishing review boards, quality gates, and standards for the enterprise program.
- **Methodology Evolution:** Evaluating new tools, industry benchmarks, and lessons learned to continuously refine the organization's methodology.

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