



LEAN SIX SIGMA MASTER BLACK SYLLABUS

Program Code: LSS-MBB / DTC-01

Duration: 120–160 hours (12–16 weeks blended or executive format)

Format: Online / On-site / Blended

Target Audience: Senior Black Belts, Managers, Consultants, and Operational Excellence Leaders.

Prerequisites: Lean Six Sigma Black Belt Certification and at least 5 years of project leadership experience.

1. Strategic Role of the Master Black Belt in Business Transformation

The Lean Six Sigma Master Black Belt (MBB) acts as a strategic architect of transformation, responsible for designing, leading, and sustaining organizational excellence programs.

MBBs mentor other belts,

govern process improvement systems, and translate data-driven insights into sustainable business impact.

They integrate Lean Six Sigma with strategic management, digital transformation, and cultural change initiatives.

2. Program Objectives

At the end of the Master Black Belt program, participants will be able to:

- Design and deploy Lean Six Sigma programs at the organizational level.
- Mentor and coach Green and Black Belts to achieve measurable impact.
- Integrate Lean Six Sigma with strategic business and digital transformation.
- Facilitate governance, KPI management, and executive communication.
- Deliver sustainable, enterprise-wide performance excellence.

3. Learning Outcomes

Participants will be able to:

- Lead enterprise-wide transformation initiatives using Lean Six Sigma governance models.
- Build and manage a Transformation Office and maturity roadmap.
- Coach leadership teams on strategic decision-making and problem-solving.



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- Apply advanced analytics and financial modeling for improvement programs.
- Demonstrate measurable results across multiple functions and business units.

4. Course Structure (Modules Overview)

Module	Content	Tools / Techniques
Module 1 – Strategic Deployment of Lean Six Sigma	Designing enterprise-level deployment plans, alignment with strategic goals, and executive sponsorship.	Hoshin Kanri, Balanced Scorecard, Deployment Matrix
Module 2 – Advanced Analytics and Business Intelligence	Statistical modeling, predictive analytics, and data-driven decision making.	Minitab, Power BI, Regression, DOE, Monte Carlo Simulation
Module 3 – Organizational Governance & Transformation Office	Creating and managing a governance system for continuous improvement, including dashboards and audits.	LSS Governance Model, Maturity Assessment, KPI Dashboard
Module 4 – Leadership & Executive Coaching	Executive presence, influence, facilitation, and coaching of senior management and project teams.	DISC, Coaching Frameworks, Emotional Intelligence
Module 5 – Risk, Compliance & Sustainability	Integrating Lean Six Sigma with corporate risk management, ESG, and sustainability initiatives.	FMEA, Risk Heat Map, Sustainability Indicators
Module 6 – Innovation & Digital Lean Transformation	Leveraging digital tools, automation, and AI to	RPA, Process Mining, Digital Kaizen, Value Stream Automation



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	optimize processes and improve data flow.	
Module 7 – Financial Performance and ROI Measurement	Financial validation of improvement projects and business impact quantification.	ROI Models, NPV, Cost-Benefit Analysis, Lean Accounting
Module 8 – Change Leadership & Cultural Transformation	Leading organizational culture shifts and managing resistance to change.	Kotter's 8 Steps, ADKAR, Stakeholder Engagement
Module 9 – Mentorship and Coaching Methodology	Building capability by mentoring and certifying other Belts.	Coaching Log, Development Plans, Evaluation Checklists
Module 10 – Business Intelligence & Process Automation	Integrating BI and automation tools into LSS reporting and governance.	Power BI, Tableau, KPI Dashboards
Module 11 – Capstone Strategic Deployment Portfolio	Creation of a strategic Lean Six Sigma deployment portfolio including governance plan, coaching record, and strategic project report.	Portfolio Templates, Maturity Audit, Executive Presentation
Module 12 – Oral Defense before Certification Board	Final board presentation and defense of strategic portfolio outcomes.	Presentation Decks, Executive Review, Coaching Panel

5. Teaching Methodology

- Executive blended learning format combining strategy, analytics, and leadership.
- Case-based workshops, strategic simulations, and peer coaching sessions.
- Mentorship-based evaluation emphasizing applied leadership and deployment skills.
- Continuous interaction with senior instructors and governance experts.
- Focus on strategic decision-making, influence, and sustainable transformation.



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6. Testing & Certification Requirements

Certification is awarded upon successful completion of the following requirements:

1. Strategic Deployment Portfolio – Development of an organizational transformation framework and project report.
2. Coaching Log – Demonstrating mentorship of at least three Green or Black Belt projects.
3. Oral Board Defense – Final presentation before a panel of Master Black Belts and executive assessors.
4. Minimum passing criteria – 80% achievement across all deliverables.

7. Instructor Qualifications

All instructors are Senior Master Black Belts with:

- Over 15 years of industry and consulting experience in Lean Six Sigma deployment.
- Expertise in strategic management, analytics, and leadership development.
- Certified credentials under ISO 17024 and ISO 18404 frameworks.

8. Reference Materials

- ISO 13053-1/2: Quantitative Methods in Process Improvement
- ISO 18404: Competencies for Key Personnel and Their Organizations in Relation to Six Sigma and Lean Implementation
- The Lean Six Sigma Master Black Belt Handbook – ASQ
- Lean Six Sigma Deployment Guide – DTC Edition
- Deming Executive Transformation Manual – DTC Edition

9. Evaluation Rubric

Evaluation Criteria	Description	Weight (%)
Strategic Leadership	Ability to design, lead, and sustain organizational transformation.	25
Coaching & Mentorship	Effectiveness in developing and guiding other Belts.	20



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Analytical & Financial Impact	Use of data analytics and measurable business results.	20
Governance & Deployment	Design and implementation of Lean Six Sigma governance systems.	15
Innovation & Sustainability	Integration of digital, innovative, and sustainable approaches.	10
Presentation & Executive Communication	Professionalism and clarity during the board defense.	10

10. Certification Award

Upon successful completion of the program, participants receive:
Certificate of Achievement – Lean Six Sigma Master Black Belt
Issued by Deming Training Center, recognizing mastery in Lean Six Sigma strategy, analytics, and leadership.