Advanced Lean Project Management in Manufacturing Training Course

Professional Development Training Course Outline

Category	Manufacturing	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Advanced Lean Project Management in Manufacturing Training Course is designed to equip professionals with methodologies to eliminate waste, optimize production flow, and accelerate operational excellence. This course integrates Lean Manufacturing Principles, Six Sigma tools, Agile Project Management, Kaizen culture, and Continuous Improvement strategies to deliver measurable improvements in cost reduction, productivity enhancement, and quality optimization across manufacturing environments. Participants will gain hands-on expertise in deploying value stream mapping, Just-in-Time (JIT), 5S systems, Kanban scheduling, and root cause analysis to transform traditional manufacturing systems into agile, data-driven, and lean enterprises.

In today’s highly competitive industrial landscape, organizations demand professionals capable of leading Lean transformation projects, digital manufacturing optimization, smart factory integration, and operational excellence initiatives. This training empowers learners with practical skills in Lean KPI tracking, project lifecycle management, waste elimination (Muda reduction), and performance analytics. By combining strategic project leadership with Lean thinking, this course ensures sustainable productivity gains, improved supply chain efficiency, and world-class manufacturing performance aligned with Industry 4.0 standards.

Programme Curriculum

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Course Duration

10 days

Course Objectives

1. Master Lean Manufacturing Project Management principles for industrial optimization
2. Apply Six Sigma DMAIC methodology for defect reduction and process improvement
3. Implement Value Stream Mapping (VSM) for workflow efficiency
4. Develop expertise in Kaizen Continuous Improvement Systems
5. Optimize production using Just-in-Time (JIT) inventory management
6. Design and execute Lean transformation projects in manufacturing plants
7. Reduce operational waste using Muda elimination techniques
8. Enhance productivity through 5S workplace organization systems
9. Apply Kanban scheduling systems for workflow automation
10. Strengthen decision-making using Lean KPI dashboards and analytics
11. Lead Agile manufacturing project execution frameworks
12. Integrate Smart Manufacturing and Industry 4.0 Lean strategies
13. Build capability in Root Cause Analysis (RCA) and problem-solving tools

Target Audience

1. Manufacturing Plant Managers
2. Production and Operations Engineers
3. Lean Six Sigma Professionals
4. Industrial Project Managers
5. Quality Assurance and Quality Control Managers
6. Supply Chain and Logistics Managers
7. Continuous Improvement Specialists
8. Engineering Graduates and Technical Professionals

Course Modules

Module 1: Introduction to Lean Manufacturing

- Lean philosophy and principles
- Waste identification (Muda, Mura, Muri)
- Lean vs traditional manufacturing
- Value creation concepts
- Lean transformation roadmap

- **Case Study:** Toyota Production System success model

Module 2: Lean Project Management Fundamentals

- Lean project lifecycle
- Project charter development
- Stakeholder mapping
- Lean leadership roles
- Project prioritization tools
- **Case Study:** Lean implementation in automotive assembly line

Module 3: Value Stream Mapping (VSM)

- Current vs future state mapping
- Process flow visualization
- Bottleneck identification
- Cycle time analysis
- Lead time reduction strategies
- **Case Study:** Electronics manufacturing process optimization

Module 4: 5S Workplace Organization

- Sort, Set, Shine, Standardize, Sustain
- Workplace efficiency design
- Safety integration
- Visual management systems
- Audit systems
- **Case Study:** 5S implementation in FMCG plant

Module 5: Kaizen Continuous Improvement

- Kaizen philosophy
- Daily improvement systems
- Employee engagement models
- PDCA cycle application
- Improvement tracking tools
- **Case Study:** Kaizen culture in Japanese manufacturing firm

Module 6: Just-in-Time (JIT) Systems

- Inventory minimization strategies
- Demand-driven production
- Supplier synchronization
- Pull system design
- Waste reduction in inventory
- **Case Study:** JIT success in automotive supply chain

Module 7: Kanban Systems

- Visual workflow management
- Kanban board design
- Work-in-progress control

- Digital Kanban tools
- Flow optimization
- **Case Study:** Kanban in semiconductor production line

Module 8: Six Sigma DMAIC

- Define, Measure, Analyze, Improve, Control
- Statistical process control
- Defect reduction tools
- Process capability analysis
- Quality improvement methods
- **Case Study:** Defect reduction in textile manufacturing

Module 9: Root Cause Analysis (RCA)

- 5 Whys technique
- Fishbone diagram
- Failure mode analysis
- Problem prioritization
- Corrective action planning
- **Case Study:** Machine breakdown analysis in factory

Module 10: Lean KPI & Performance Metrics

- OEE (Overall Equipment Effectiveness)
- Cycle time and takt time
- Productivity measurement
- Real-time dashboards
- Performance tracking systems
- **Case Study:** KPI optimization in food processing plant

Module 11: Agile Manufacturing Systems

- Agile vs Lean integration
- Flexible production systems
- Rapid response manufacturing
- Digital workflow systems
- Customer-driven production
- **Case Study:** Agile transformation in electronics industry

Module 12: Supply Chain Lean Optimization

- End-to-end supply chain mapping
- Demand forecasting
- Logistics waste reduction
- Supplier collaboration
- Inventory optimization
- **Case Study:** Retail supply chain lean transformation

Module 13: Industry 4.0 & Smart Manufacturing

- IoT in manufacturing

- Automation integration
- AI-driven production systems
- Digital twins
- Smart factory design
- **Case Study:** Smart factory implementation in Germany

Module 14: Lean Leadership & Change Management

- Leadership styles in Lean environments
- Change resistance management
- Team empowerment
- Communication strategies
- Lean culture building
- **Case Study:** Organizational Lean transformation in aerospace firm

Module 15: Lean Project Implementation & Simulation

- End-to-end project execution
- Simulation tools
- Risk management
- Continuous monitoring
- Final project delivery
- **Case Study:** Full Lean transformation simulation in manufacturing plant

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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