Advanced Lean Manufacturing Practitioner 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 Manufacturing Practitioner Training Course is designed to equip professionals with skills in Lean Six Sigma, Operational Excellence, Continuous Improvement, and Smart Manufacturing Systems. This course integrates globally recognized methodologies such as Kaizen, 5S, Value Stream Mapping (VSM), Just-In-Time (JIT), Total Productive Maintenance (TPM), and Digital Lean Transformation to help organizations eliminate waste, optimize productivity, and enhance end-to-end supply chain efficiency. Participants will gain hands-on expertise in implementing lean tools, process automation, and data-driven manufacturing strategies aligned with Industry 4.0 standards.

In today's highly competitive industrial environment, organizations demand professionals who can drive cost reduction, process optimization, defect elimination, and productivity acceleration. This training focuses on developing advanced-level practitioners capable of leading lean transformation projects, smart factory implementation, and operational excellence initiatives across manufacturing sectors such as automotive, FMCG, pharmaceuticals, oil & gas, and heavy engineering. By combining practical simulations, case-based learning, and real-world applications, this program ensures mastery in lean leadership, performance optimization, and digital manufacturing excellence.

Programme Curriculum

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Course Duration

10 days

Course Objectives

1. Master Lean Manufacturing Principles & Operational Excellence Frameworks
2. Implement Lean Six Sigma DMAIC Methodology for Process Improvement
3. Develop expertise in Value Stream Mapping (VSM) & Waste Elimination Strategies
4. Apply Kaizen Continuous Improvement Culture in Manufacturing Systems
5. Optimize production using Just-In-Time (JIT) & Pull System Techniques
6. Enhance efficiency through Total Productive Maintenance (TPM) Implementation
7. Integrate Industry 4.0 Smart Manufacturing Technologies
8. Reduce defects using Root Cause Analysis (RCA) & 5 Whys Technique
9. Improve workflow with 5S Workplace Organization System
10. Build capability in Lean Supply Chain & Inventory Optimization
11. Strengthen decision-making using Data-Driven Manufacturing Analytics
12. Lead Lean Transformation & Change Management Initiatives
13. Achieve excellence in Cost Reduction & Productivity Enhancement Strategies

Target Audience

1. Manufacturing Engineers & Production Supervisors
2. Industrial & Mechanical Engineers
3. Quality Assurance & Quality Control Professionals
4. Operations & Plant Managers
5. Supply Chain & Logistics Managers
6. Lean Six Sigma Green/Black Belt Aspirants
7. Process Improvement & Continuous Improvement Teams
8. Engineering Graduates seeking **Lean Manufacturing Careers**

Course Modules

Module 1: Fundamentals of Lean Manufacturing

- Lean philosophy and evolution
- Types of manufacturing waste (Muda, Mura, Muri)
- Lean vs Traditional systems
- Customer value identification

- Process efficiency basics
- **Case Study:** Toyota Production System transformation reducing waste by 40%

Module 2: Value Stream Mapping (VSM)

- Current state mapping techniques
- Future state design
- Bottleneck identification
- Lead time reduction strategies
- Process flow optimization
- **Case Study:** FMCG plant reduced cycle time by 30% using VSM

Module 3: 5S Workplace Organization

- Sort, Set in Order, Shine
- Standardize and Sustain principles
- Workplace efficiency improvement
- Visual management systems
- Safety integration
- **Case Study:** Automotive plant improved productivity by 25% after 5S

Module 4: Kaizen Continuous Improvement

- Kaizen philosophy and culture
- Small incremental improvements
- Employee involvement systems
- Kaizen event execution
- Performance tracking tools
- **Case Study:** Electronics factory achieved 20% defect reduction

Module 5: Lean Six Sigma DMAIC

- Define, Measure, Analyze
- Improve and Control phases
- Statistical process control basics
- Data-driven decision-making
- Quality improvement projects
- **Case Study:** Pharma company reduced rejection rate by 35%

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

- Demand-driven production
- Inventory minimization
- Supplier synchronization
- Kanban systems
- Production scheduling optimization
- **Case Study:** Retail supply chain reduced inventory costs by 28%

Module 7: Total Productive Maintenance (TPM)

- Autonomous maintenance
- Planned maintenance systems

- Equipment efficiency (OEE)
- Breakdown reduction techniques
- Operator involvement
- **Case Study:** Steel plant improved machine uptime by 22%

Module 8: Root Cause Analysis (RCA)

- 5 Whys methodology
- Fishbone diagram analysis
- Defect tracking systems
- Corrective action planning
- Problem-solving frameworks
- **Case Study:** Automotive defect elimination improved quality by 30%

Module 9: Lean Supply Chain Management

- Demand forecasting techniques
- Supplier integration models
- Logistics optimization
- Inventory control systems
- Lean procurement strategies
- **Case Study:** FMCG supply chain reduced delays by 25%

Module 10: Process Mapping & Standard Work

- Workflow documentation
- Standard operating procedures
- Cycle time reduction
- Process standardization
- Work instruction design
- **Case Study:** Assembly line improved throughput by 18%

Module 11: Continuous Flow Manufacturing

- Flow balancing techniques
- Batch size reduction
- Cellular manufacturing
- Bottleneck elimination
- Production line balancing
- **Case Study:** Electronics firm improved flow efficiency by 27%

Module 12: Lean Leadership & Change Management

- Leadership in lean culture
- Employee engagement strategies
- Resistance management
- Communication frameworks
- Transformation leadership
- **Case Study:** Manufacturing plant achieved full lean adoption in 1 year

Module 13: Industry 4.0 Integration

- Smart factory systems
- IoT in manufacturing
- Automation & robotics
- Digital twin technology
- Predictive analytics
- **Case Study:** Automotive industry reduced downtime by 35%

Module 14: Cost Reduction & Productivity Optimization

- Cost analysis techniques
- Waste elimination models
- Resource optimization
- Efficiency benchmarking
- Profitability improvement
- **Case Study:** Chemical plant reduced operating costs by 20%

Module 15: Advanced Lean Project Implementation

- Lean project planning
- KPI development
- Performance measurement
- Implementation roadmap
- Sustainability strategies
- **Case Study:** Multi-site manufacturer achieved enterprise-wide lean transformation

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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