Operational Excellence Frameworks in Manufacturing Training Course

Professional Development Training Course Outline

Category	Manufacturing	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Operational Excellence (OpEx) in manufacturing is a strategic approach focused on maximizing productivity, minimizing waste, and ensuring consistent quality through continuous improvement methodologies. In today's highly competitive Industry 4.0 manufacturing landscape, organizations are increasingly adopting Lean Manufacturing, Six Sigma, Total Productive Maintenance (TPM), Kaizen, and Smart Factory transformation frameworks to achieve sustainable performance improvement. Operational Excellence Frameworks in Manufacturing Training Course is designed to equip professionals with practical and data-driven skills to implement globally recognized operational excellence tools that drive measurable business impact.

Modern manufacturing demands a strong integration of digital transformation, lean automation, predictive analytics, and real-time process optimization. This course enables participants to build a culture of excellence by embedding lean thinking, process standardization, waste reduction (Muda elimination), and continuous improvement systems across production environments. By mastering these frameworks, organizations can achieve higher OEE (Overall Equipment Effectiveness), reduced downtime, improved supply chain efficiency, and enhanced customer satisfaction in a rapidly evolving global manufacturing ecosystem.

Programme Curriculum

Operational Excellence Frameworks in Manufacturing Training Course

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Course Duration

5 days

Course Objectives

1. Understand Operational Excellence (OpEx) frameworks in smart manufacturing
2. Apply Lean Manufacturing principles for waste elimination (7 Mudas)
3. Implement Six Sigma DMAIC methodology for defect reduction
4. Improve Overall Equipment Effectiveness (OEE) in production systems
5. Develop Kaizen continuous improvement culture
6. Optimize processes using Value Stream Mapping (VSM)
7. Apply Total Productive Maintenance (TPM) strategies
8. Enhance process standardization and workflow optimization
9. Integrate Industry 4.0 digital manufacturing tools
10. Use data-driven decision-making and analytics in operations
11. Reduce operational cost through cost optimization techniques
12. Improve supply chain agility and lean logistics
13. Build a sustainable high-performance manufacturing system

Target Audience

1. Manufacturing Managers
2. Production Supervisors
3. Industrial Engineers
4. Quality Assurance Professionals
5. Process Improvement Specialists
6. Plant Operations Leaders
7. Supply Chain Managers
8. Continuous Improvement Teams

Course Modules

Module 1: Foundations of Operational Excellence

- Introduction to OpEx principles and global benchmarks
- Evolution of manufacturing excellence systems
- Key performance indicators (KPIs) in manufacturing
- Role of leadership in OpEx culture

- Case Study: Toyota Production System success model

Module 2: Lean Manufacturing Systems

- 7 types of waste (Muda) identification
- Lean tools: 5S, Kanban, JIT
- Process flow optimization
- Lean workplace design
- Case Study: Nike lean supply chain transformation

Module 3: Six Sigma & DMAIC Methodology

- Define, Measure, Analyze, Improve, Control (DMAIC)
- Root cause analysis tools (5 Why, Fishbone)
- Statistical process control (SPC)
- Defect reduction strategies
- Case Study: Motorola Six Sigma breakthrough

Module 4: Total Productive Maintenance (TPM)

- Autonomous maintenance systems
- Planned maintenance strategies
- OEE improvement techniques
- Equipment lifecycle management
- Case Study: Toyota TPM implementation success

Module 5: Value Stream Mapping (VSM)

- Current vs future state mapping
- Bottleneck identification
- Lead time reduction strategies
- Process redesign techniques
- Case Study: Amazon fulfillment center optimization

Module 6: Kaizen & Continuous Improvement

- Kaizen philosophy and culture building
- Daily improvement systems
- Employee engagement techniques
- Problem-solving frameworks
- Case Study: Boeing continuous improvement system

Module 7: Industry 4.0 & Smart Manufacturing

- IoT in manufacturing operations
- Predictive analytics and AI integration
- Digital twin technology
- Automation and robotics in production
- Case Study: Siemens smart factory transformation

Module 8: Performance Management & KPIs

- OEE, TAT, and productivity metrics

- Balanced scorecard in manufacturing
- Real-time performance dashboards
- Cost reduction tracking systems
- Case Study: Unilever operational performance system

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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

Register Online Now

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