Manufacturing KPIs & Performance Metrics 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

In today’s highly competitive and data-driven industrial landscape, Manufacturing KPIs (Key Performance Indicators) and performance metrics optimization are critical for achieving operational excellence, cost efficiency, and sustainable productivity. Organizations are increasingly leveraging real-time analytics, smart manufacturing systems, Industry 4.0 frameworks, and lean production strategies to monitor, evaluate, and improve factory performance. Manufacturing KPIs & Performance Metrics Training Course is designed to equip professionals with the knowledge and practical skills required to measure, interpret, and optimize manufacturing performance using globally recognized KPI frameworks.

The course provides a deep dive into production efficiency metrics, OEE (Overall Equipment Effectiveness), Six Sigma quality indicators, supply chain performance analytics, and predictive maintenance KPIs. Participants will gain hands-on experience in building KPI dashboards, analyzing operational data, and aligning manufacturing outputs with strategic business goals. By integrating digital transformation tools, ERP systems, and continuous improvement methodologies, this training ensures organizations can enhance productivity, reduce waste, and achieve operational agility in modern manufacturing environments.

Programme Curriculum

Manufacturing KPIs & Performance Metrics Training Course

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Course Duration

10 days

Course Objectives

1. Understand Manufacturing KPIs & Smart Factory Metrics
2. Apply OEE (Overall Equipment Effectiveness) optimization techniques
3. Analyze Lean Manufacturing performance indicators
4. Implement Industry 4.0 data-driven KPI systems
5. Evaluate production efficiency and throughput metrics
6. Measure defect rate, scrap rate, and quality KPIs (Six Sigma)
7. Optimize supply chain and logistics performance metrics
8. Develop real-time KPI dashboards using ERP/MES systems
9. Apply predictive maintenance and machine uptime analytics
10. Improve cost per unit and manufacturing cost efficiency
11. Enhance continuous improvement (Kaizen) performance tracking
12. Integrate digital transformation in manufacturing analytics
13. Align KPIs with strategic business performance goals

Target Audience

- Manufacturing Plant Managers
- Production Supervisors & Line Leaders
- Industrial Engineers & Process Engineers
- Quality Assurance & Quality Control Professionals
- Supply Chain & Logistics Managers
- Operations Managers
- Data Analysts in Manufacturing Sector
- ERP/MES System Administrators

Course Modules

Module 1: Introduction to Manufacturing KPIs

- KPI fundamentals and importance in manufacturing
- Types of performance metrics
- Strategic alignment of KPIs
- Operational vs tactical KPIs
- KPI hierarchy in organizations

- **Case Study:** KPI failure impact in a mid-sized automotive plant

Module 2: Overall Equipment Effectiveness (OEE)

- Availability, Performance, Quality breakdown
- OEE calculation methods
- Loss analysis techniques
- Benchmarking OEE standards
- OEE improvement strategies
- **Case Study:** OEE improvement in a packaging facility

Module 3: Lean Manufacturing Metrics

- Waste identification metrics (Muda, Mura, Muri)
- Value stream mapping indicators
- Cycle time and takt time analysis
- Kaizen performance tracking
- Lean KPI dashboards
- **Case Study:** Lean transformation in electronics assembly

Module 4: Production Efficiency Metrics

- Throughput measurement techniques
- Line balancing KPIs
- Productivity rate analysis
- Capacity utilization metrics
- Bottleneck identification
- **Case Study:** Efficiency optimization in textile manufacturing

Module 5: Quality Performance KPIs

- Defect rate tracking
- First-pass yield metrics
- Six Sigma quality indicators
- Rework and scrap analysis
- Customer complaint metrics
- **Case Study:** Quality improvement in food processing plant

Module 6: Supply Chain Performance Metrics

- Lead time analysis
- Inventory turnover ratio
- Supplier performance scorecards
- Delivery reliability metrics
- Logistics cost KPIs
- **Case Study:** Supply chain optimization in FMCG industry

Module 7: Maintenance & Reliability KPIs

- Mean Time Between Failure (MTBF)
- Mean Time To Repair (MTTR)
- Predictive maintenance indicators

- Downtime tracking systems
- Asset reliability index
- **Case Study:** Predictive maintenance in steel manufacturing

Module 8: Cost & Financial Manufacturing KPIs

- Cost per unit analysis
- Operational cost breakdown
- Waste reduction savings metrics
- ROI on production efficiency
- Budget variance tracking
- **Case Study:** Cost reduction in automotive assembly plant

Module 9: Digital Manufacturing Analytics

- Smart factory data systems
- IoT-enabled KPI tracking
- Real-time dashboards
- Cloud manufacturing analytics
- Big data in production monitoring
- **Case Study:** Digital factory transformation in electronics sector

Module 10: ERP & MES KPI Integration

- ERP manufacturing modules
- MES performance tracking
- Data synchronization methods
- KPI automation systems
- Reporting structures
- **Case Study:** ERP-driven KPI improvement in FMCG plant

Module 11: Continuous Improvement KPIs

- Kaizen tracking systems
- PDCA cycle metrics
- Process optimization indicators
- Employee improvement metrics
- Operational excellence KPIs
- **Case Study:** Continuous improvement in pharmaceutical manufacturing

Module 12: Workforce Productivity Metrics

- Labor efficiency ratios
- Skill utilization KPIs
- Training effectiveness metrics
- Attendance and productivity correlation
- Workforce performance dashboards
- **Case Study:** Productivity improvement in garment industry

Module 13: Environmental & Sustainability KPIs

- Energy consumption metrics

- Carbon footprint tracking
- Waste management KPIs
- Water usage efficiency
- Green manufacturing indicators
- **Case Study:** Sustainable manufacturing in chemical industry

Module 14: Advanced KPI Dashboard Design

- KPI visualization techniques
- Power BI / Tableau dashboards
- Real-time monitoring systems
- Data storytelling for decision-making
- KPI reporting automation
- **Case Study:** Executive dashboard in multinational factory

Module 15: Strategic KPI Alignment

- Business goal mapping
- Balanced scorecard approach
- KPI cascading strategy
- Performance governance systems
- KPI-driven decision-making
- **Case Study:** Strategic KPI alignment in global manufacturing firm

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

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