SMED Advanced Implementation 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

SMED Advanced Implementation in Manufacturing Training Course is designed to transform changeover efficiency, eliminate downtime waste, and accelerate production agility in modern manufacturing environments. In today's highly competitive Lean Manufacturing, Industry 4.0, and smart factory ecosystems, reducing setup times is no longer optional it is a strategic necessity. This course equips professionals with advanced SMED techniques, including internal-to-external conversion, quick-release mechanisms, standardized work, and digital changeover optimization to achieve single-digit minute exchange performance and improve Overall Equipment Effectiveness (OEE).

Manufacturers globally are under pressure to respond to high-mix low-volume production, just-in-time (JIT) systems, and continuous improvement (Kaizen) initiatives. This training integrates real-world case studies, advanced Lean tools, and proven operational frameworks to eliminate bottlenecks in changeover processes. Participants will gain mastery in lean setup reduction strategies, waste elimination (Muda), process standardization, and digital SMED transformation, enabling them to drive measurable productivity gains, reduce lead times, and enhance manufacturing flexibility across automotive, FMCG, pharmaceutical, and heavy engineering sectors.

Programme Curriculum

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Course Duration

5 days

Course Objectives

1. Master Advanced SMED methodology implementation in manufacturing systems
2. Reduce machine changeover time by 50–90% using Lean tools
3. Apply Lean Manufacturing and Kaizen principles for setup reduction
4. Identify and eliminate internal and external setup waste (Muda elimination)
5. Improve Overall Equipment Effectiveness (OEE optimization strategies)
6. Design standardized work procedures for fast changeovers
7. Implement quick changeover techniques in production lines
8. Integrate Industry 4.0 digital tools for SMED automation
9. Enhance production flexibility for high-mix low-volume manufacturing
10. Apply root cause analysis (RCA) for setup inefficiencies
11. Develop cross-functional team-based SMED execution models
12. Achieve continuous improvement in manufacturing cycle time reduction
13. Benchmark performance using world-class manufacturing (WCM) standards

Target Audience

1. Manufacturing Engineers & Process Engineers
2. Production Managers & Plant Managers
3. Lean Manufacturing & Continuous Improvement Specialists
4. Industrial Engineers & Operations Analysts
5. Maintenance & Reliability Engineers
6. Quality Assurance & Production Supervisors
7. Supply Chain & Operations Excellence Leaders
8. Automotive, FMCG, Pharma, and Heavy Industry Professionals

Course Modules

Module 1: Fundamentals of SMED & Lean Manufacturing Integration

- Evolution of SMED in Lean Manufacturing systems
- Internal vs External setup differentiation
- Role of SMED in waste reduction and efficiency
- Connection between SMED and Kaizen philosophy

- KPI alignment with manufacturing performance
- **Case Study:** Automotive assembly line reduced die changeover from 90 minutes to 18 minutes using SMED basics.

Module 2: Changeover Time Analysis & Data Collection Techniques

- Time study methods for setup operations
- Video analysis for process mapping
- Spaghetti diagrams for workflow visualization
- Bottleneck identification tools
- Baseline measurement for improvement tracking
- **Case Study:** FMCG packaging plant identified 35% hidden setup waste using time-motion analysis.

Module 3: Internal vs External Setup Optimization

- Converting internal to external setup tasks
- Pre-staging and preparation strategies
- Parallel operations implementation
- Tool and material readiness systems
- Setup task segmentation techniques
- **Case Study:** Beverage manufacturing unit reduced downtime by pre-staging tools externally.

Module 4: Quick Release Mechanisms & Fixture Standardization

- Use of quick clamps and zero-point systems
- Standardized tooling design principles
- Modular fixture development
- Error-proofing (Poka-Yoke) integration
- Safety considerations in rapid setups
- **Case Study:** Metal fabrication plant improved efficiency by 60% using quick-lock fixtures.

Module 5: Digital SMED & Smart Manufacturing Integration

- IoT-enabled setup monitoring systems
- Digital work instructions for changeovers
- Real-time performance dashboards
- AI-based predictive setup optimization
- MES integration for SMED tracking
- **Case Study:** Smart factory reduced setup variation using IoT-based monitoring system.

Module 6: Standard Work & Workforce Training for SMED

- Development of standard operating procedures (SOPs)
- Skill matrix development for operators
- Visual management systems
- Training within industry (TWI) methods
- Continuous skill improvement cycles
- **Case Study:** Pharmaceutical plant achieved consistent 40% setup time reduction through SOP standardization.

Module 7: Advanced Problem Solving & Root Cause Analysis in SMED

- 5 Whys and Fishbone analysis for setup delays
- Pareto analysis for downtime classification
- Failure mode analysis in changeovers
- Corrective and preventive actions (CAPA)
- Lean problem-solving workshops
- **Case Study:** Heavy engineering firm eliminated recurring setup delays through RCA implementation.

Module 8: SMED Implementation Strategy & Continuous Improvement Roadmap

- Step-by-step SMED rollout framework
- Change management in manufacturing environments
- Performance tracking and KPI dashboards
- Sustaining improvements through audits
- Linking SMED with World Class Manufacturing (WCM)
- **Case Study:** Electronics manufacturer achieved 70% OEE improvement after full SMED deployment.

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

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