

Course No. 1666

Lean Manufacturing & Operational Excellence Training Course

OPERATIONS & PRODUCTION MANAGEMENT
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Lean Manufacturing & Operational Excellence Training Course provides a practical and advanced framework for improving manufacturing performance through systematic waste reduction, process optimization, flow improvement, and continuous improvement. The program is designed to help organizations strengthen operational efficiency while maintaining quality, safety, reliability, customer value, and sustainable performance.

Lean manufacturing focuses on creating greater value with fewer unnecessary resources by identifying activities that do not contribute to customer or organizational value. However, successful lean implementation requires more than applying isolated improvement tools. It requires a structured understanding of processes, performance measures, operational constraints, workforce engagement, problem-solving, and management practices that support continuous improvement.

The course examines the core principles of lean manufacturing and their application across production and operational environments. Participants will explore value stream analysis, process mapping, waste identification, workplace organization, standardized work, flow management, pull systems, production leveling, visual management, and structured problem-solving. The program also addresses how lean principles can be integrated with quality, maintenance, supply chain, inventory, and operational performance management.

A strong focus is placed on operational excellence as an organizational discipline rather than a one-time improvement initiative. Participants will learn how to identify performance gaps, analyze root causes, prioritize improvement opportunities, establish meaningful performance indicators, and develop sustainable improvement practices. Particular attention is given to employee involvement, leadership support, process ownership, and the development of a culture focused on measurable performance improvement.

Through practical exercises, case studies, process analysis, and improvement workshops, participants will develop the ability to assess operational processes, identify waste and bottlenecks, improve process flow, reduce unnecessary activities, and develop lean improvement initiatives. The Lean Manufacturing & Operational Excellence Training Course is suitable for organizations seeking to improve productivity, quality, operational reliability, resource utilization, and overall manufacturing performance.

Objectives

- Analyze the fundamental principles of lean manufacturing and operational excellence and evaluate their relevance to organizational performance.
- Assess production processes and identify different forms of operational waste, inefficiency, and non-value-adding activities.
- Apply process mapping and value stream analysis techniques to identify opportunities for improving production flow.
- Develop practical approaches for reducing process delays, unnecessary movement, excess inventory, defects, waiting time, and other operational losses.
- Design workplace organization and visual management practices that support efficiency, consistency, and operational control.
- Apply standardized work principles to improve process stability, quality, productivity, and operational consistency.
- Evaluate production flow, capacity constraints, bottlenecks, and process imbalances affecting operational performance.
- Implement structured problem-solving and root cause analysis techniques to address recurring operational problems.
- Strengthen employee involvement and cross-functional collaboration in continuous improvement initiatives.
- Evaluate lean performance using appropriate productivity, quality, delivery, cost, and process efficiency indicators.
- Design continuous improvement initiatives aligned with operational priorities and measurable performance objectives.
- Develop a practical lean manufacturing and operational excellence improvement plan by the end of the course.

Who Should Attend

This training course is designed for production managers, operations managers, manufacturing managers, plant managers, production supervisors, operations supervisors, industrial engineers, process engineers, manufacturing engineers, quality professionals, maintenance professionals, and specialists responsible for productivity and operational improvement.

The program is particularly relevant to professionals working in manufacturing, oil and gas, petrochemicals, energy, engineering, industrial services, utilities, and other production-intensive environments. It is also suitable for professionals responsible for process improvement, operational performance, production planning, quality management, supply chain coordination, inventory management, and continuous improvement programs.

The course will also benefit senior executives, department heads, operational decision makers, and functional managers who are responsible for improving organizational efficiency and developing a culture of operational excellence. Managers from production, quality, maintenance, supply chain, procurement, logistics, and finance can benefit from the integrated perspective provided by lean manufacturing principles.

Learning Outcomes

- Explain the core principles of lean manufacturing and operational excellence and relate them to organizational performance.
- Identify and classify major forms of waste and non-value-adding activities within production and operational processes.
- Map production processes and value streams to identify delays, bottlenecks, unnecessary activities, and improvement opportunities.
- Evaluate process flow and identify practical opportunities to improve productivity and operational efficiency.
- Apply workplace organization and visual management techniques to strengthen operational control and process discipline.
- Develop standardized work approaches that improve process consistency, quality, productivity, and reliability.
- Analyze production constraints and bottlenecks that affect throughput and operational performance.
- Apply root cause analysis and structured problem-solving techniques to recurring production and process problems.
- Develop improvement initiatives that involve relevant employees and cross-functional teams.
- Establish meaningful performance indicators for monitoring lean and operational excellence initiatives.
- Evaluate the results of process improvement initiatives using measurable operational performance indicators.

- Prepare a practical lean manufacturing implementation plan with priorities, responsibilities, performance measures, and improvement actions.

Course Outline

DAY 01

Lean Manufacturing Principles & Operational Excellence

- Fundamentals and strategic principles of lean manufacturing
- Understanding customer value, value-adding activities, and non-value-adding activities
- The relationship between lean manufacturing, productivity, quality, cost, and operational excellence
- Identifying the major forms of operational waste in production environments

PRACTICAL APPLICATION

Analyze a production process and identify waste, inefficiencies, value-adding activities, and immediate improvement opportunities

DAY 02

Process Flow, Value Stream Analysis & Workplace Efficiency

- Process mapping and value stream analysis
- Identifying bottlenecks, delays, process imbalances, and unnecessary activities
- Improving material, information, and workflow through better process design
- Workplace organization, visual management, and operational discipline

PRACTICAL APPLICATION

Develop a value stream map and identify priority opportunities for improving process flow and reducing operational waste

DAY 03

Standardized Work, Quality & Problem-Solving

- Principles of standardized work and process stability
- Connecting lean manufacturing with quality management and defect prevention
- Root cause analysis and structured problem-solving
- Corrective actions, preventive measures, and elimination of recurring process problems

PRACTICAL APPLICATION

Analyze a recurring production problem, identify its root causes, and develop a standardized improvement solution

DAY 04

Lean Performance, Production Control & Continuous Improvement

- Production flow, pull systems, production leveling, and workflow coordination
- Inventory reduction and improving material availability through lean practices
- Performance measurement for productivity, quality, cost, delivery, and process efficiency
- Employee involvement, team-based improvement, and continuous improvement management

PRACTICAL APPLICATION

Develop a lean performance framework and identify improvement priorities based on production performance data

DAY 05

Operational Excellence Strategy & Lean Implementation

- Developing a sustainable operational excellence framework
- Prioritizing lean improvement initiatives and managing implementation
- Leadership responsibilities, employee engagement, and sustaining process improvements
- Measuring improvement results and establishing continuous performance reviews

DAY 05 — CONTINUED

FINAL WORKSHOP

Develop a comprehensive Lean Manufacturing & Operational Excellence implementation plan covering waste reduction, process flow, standardized work, performance indicators, improvement priorities, responsibilities, and implementation actions

Register or Request More Information

Course page: <https://quest-training.com/courses/lean-manufacturing-operational-excellence-training-course>

Website: <https://quest-training.com>

Email: info@quest-training.com

Phone: +905016771440