

LEAN MANUFACTURING FUNDAMENTALS

“Driving Operational Excellence Through Waste Reduction and Process Optimization”

Schedule

Date	Venue	Fees
09 – 13 Feb 2026	Dubai, UAE	USD 3495 per delegate

► Available delivery methods: Face-to-Face & Online Training

Introduction

In today’s highly competitive manufacturing environment, organizations must continually improve efficiency, reduce waste, and enhance value delivery to remain profitable. Lean Manufacturing offers a proven methodology for streamlining operations, improving quality, and maximizing customer satisfaction through systematic waste elimination.

This intensive 5-day course provides a solid foundation in Lean principles, tools, and techniques, enabling participants to identify non-value-added activities, optimize workflow, and foster a culture of continuous improvement. Through case studies, interactive sessions, and practical exercises, attendees will gain the knowledge and skills necessary to lead Lean initiatives within their organizations.

Objectives

- By the end of this course, participants will be able to:
- Understand the core principles and philosophy of Lean Manufacturing
 - Identify and eliminate the 8 types of waste in manufacturing environments
 - Apply key Lean tools such as 5S, Kaizen, Value Stream Mapping, and Kanban
 - Improve flow, reduce cycle time, and enhance productivity
 - Support the development of a continuous improvement culture on the shop floor

Why Attend

- Build a strong foundation in Lean tools and methodologies
- Drive operational efficiency and waste reduction
- Learn from industry-based case studies and proven Lean transformations
- Equip yourself to lead or support Lean implementation initiatives
- Receive practical tools and templates for Lean deployment

Target Audience

This program is designed for:

- Manufacturing supervisors and operations managers
- Process improvement professionals and Lean coordinators
- Quality and production engineers
- Industrial engineers and supply chain staff
- Anyone involved in manufacturing or operational excellence

Individual Benefits

Key competencies that will be developed include:

- Strong grasp of Lean Manufacturing principles
- Practical ability to map processes and identify inefficiencies
- Skill in applying 5S, Kaizen, and standardization tools
- Leadership in Lean team initiatives and improvement projects
- Enhanced problem-solving and root cause analysis techniques

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Reduced production waste and improved resource utilization
- Improved process reliability and operational control
- Faster turnaround times and improved customer satisfaction
- Better employee engagement through involvement in Lean projects
- A scalable foundation for continuous improvement culture

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Lean philosophy, principles, and value stream concepts
- Case Studies – Success stories of Lean transformation in global industries
- Workshops – Hands-on simulations and process improvement exercises
- Peer Exchange – Group discussions on Lean challenges and success strategies
- Tools – Value stream mapping templates, 5S checklists, and waste identification guides

Course Outline

DETAILED 5-DAY COURSE OUTLINE

Training Hours: 07:30 AM – 03:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Lean Foundations and Waste Elimination

- Module 1: Introduction to Lean Thinking (07:30 – 09:30) • History and evolution of Lean Manufacturing • Principles of Lean: value, value stream, flow, pull, perfection • Understanding value-added vs. non-value-added activities
- Module 2: Identifying the 8 Wastes (09:45 – 11:15) • Detailed exploration of the 8 types of waste (TIMWOODS) • Real-world examples of waste in manufacturing processes • Techniques to identify and classify waste
- Module 3: Creating a Lean Mindset (11:30 – 01:00) • The role of leadership and culture in Lean success • Engaging teams in continuous improvement • Overcoming resistance to Lean adoption
- Module 4: Lean Simulation Exercise (02:00 – 03:30) • Hands-on simulation of a wasteful process • Team analysis and recommendations • Group discussion and debrief

Day 2: 5S and Standard Work

- Module 1: Implementing 5S for Workplace Organization (07:30 – 09:30) • Overview of Sort, Set in Order, Shine, Standardize, Sustain • Benefits and visual management techniques • 5S audit methods and templates
- Module 2: Standard Work and Visual Controls (09:45 – 11:15) • Defining and documenting standard operating procedures • Balancing operator workloads and cycle times • Visual controls to enhance productivity and quality
- Module 3: Workplace Improvement Workshop (11:30 – 01:00) • 5S assessment of a mock or real workplace • Identification of opportunities for standardization • Group presentations and feedback
- Module 4: Kaizen Principles and Event Planning (02:00 – 03:30) • Philosophy of Kaizen and small-step improvements • Planning and executing a Kaizen blitz • Monitoring results and sustaining change

Day 3: Value Stream Mapping and Flow Optimization

- Module 1: Introduction to Value Stream Mapping (07:30 – 09:30) • Understanding the current and future state value streams • Mapping material and information flow • Identifying bottlenecks and delays
- Module 2: Improving Process Flow (09:45 – 11:15) • Principles of one-piece flow and takt time • Creating balanced and synchronized operations • Line layout improvements and cellular manufacturing
- Module 3: Pull Systems and Kanban (11:30 – 01:00) • Concepts of pull production and inventory control • Implementing and managing a Kanban system • Avoiding overproduction and managing replenishment
- Module 4: Waste Reduction Project Planning (02:00 – 03:30) • Selecting a pilot area for Lean implementation • Defining goals, metrics, and action plans • Team assignments and accountability

Day 4: Lean Tools and Quality Integration

- Module 1: Root Cause Analysis and Problem Solving (07:30 – 09:30) • The 5 Whys, Fishbone Diagram, and Pareto Analysis • Defining problems and tracing back to root causes • Preventive actions and corrective response
- Module 2: Mistake-Proofing (Poka-Yoke) (09:45 – 11:15) • Strategies for designing out human error • Examples of mistake-proofing devices and systems • Linking Poka-Yoke to quality and safety
- Module 3: Integrating Lean with Quality Tools (11:30 – 01:00) • Synergies between Lean, Six Sigma, and TQM • Quality at the source and error detection • Lean metrics and performance indicators
- Module 4: Mid-Course Progress Review (02:00 – 03:30) • Group reflections and learning checks • Challenges encountered and lessons learned • Q&A with the trainer

Day 5: Sustaining Lean and Driving Culture Change

- Module 1: Leadership Role in Lean (07:30 – 09:30) • Coaching teams and leading by example • Gemba walks and visual leadership • Building accountability at every level

- Module 2: Lean Implementation Roadmap (09:45 – 11:15) • Phases of Lean deployment • Setting targets and tracking progress • Common pitfalls and success enablers
- Module 3: Final Workshop – Lean Project Design (11:30 – 01:00) • Teams develop a Lean project proposal • Presentation of ideas and peer feedback • Trainer recommendations for rollout
- Module 4: Final Assessment and Course Wrap-Up (02:00 – 03:30) • Post-course evaluation and knowledge check • Review of personal action plans • Certification ceremony and feedback

Certification

Participants will receive a Certificate of Completion in Lean Manufacturing Fundamentals, verifying their ability to apply Lean principles, tools, and techniques to reduce waste, streamline operations, and drive sustainable performance improvements in manufacturing environments.

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