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Learning Style: Virtual Classroom

Technology:

Difficulty: Beginner

Course Duration: 3 Days

Continuous Improvement Mastery Through PDCA, Lean & TPM in Action

About This Course:

Throughout the course, you'll engage with the PDCA Cycle, learning not just the theory behind it, but how to apply each step — Plan, Do, Check, and Act — to solve problems, eliminate waste, and streamline operations. We'll delve into Lean

principles, such as Value Stream Mapping, 5S, and Kaizen, teaching you how to identify and eliminate inefficiencies, reduce downtime, and enhance productivity across the organization. Additionally, you'll explore Total Productive Maintenance (TPM), a system focused on maximizing equipment effectiveness and reliability, and discover the transformative power of Visual Factory concepts to improve communication, transparency, and team accountability.

Course Objectives:

- Introduction to Continuous Improvement
- PDCA Cycle – In-Depth Breakdown
- Lean Manufacturing Fundamentals
- Total Productive Maintenance (TPM)
- Lean Tools for Waste Reduction
- Standardizing and Sustaining Improvements

Audience:

- This course is perfect for professionals looking to deepen their understanding of Lean Manufacturing, Total Productive Maintenance, and Continuous Improvement. Whether you're a manager, team leader, or process improvement professional, this course will provide you with the knowledge and confidence to implement these strategies and drive lasting change in your organization.

Prerequsites:

- None

Course Outline:

Introduction to Continuous Improvement

- Continuous Improvement Overview
- PDCA Cycle and Its Importance
- Lean Manufacturing Overview
- Key Lean Concepts: Waste (Muda), Flow (Muri), and Variability (Mura)

PDCA Cycle – In-Depth Breakdown

- Plan: Problem Identification and Solution Planning
    - CTQ for Objective and Subjective Metrics
    - What Why How Drills
    - Root Cause Tree (RCT)
    - Fault Tree Analysis (FTA)
    - 5 Why Exercises
    - Pareto Analysis
    - XY Matrix
    - DFMEA & PFMEA
    - A3 Problem Solving
- Do: Small-Scale Implementation
    - Risk Identification
    - Interrelationship Digraphs
- Check: Measurement and Evaluation
    - Control Charts SPC
    - Measurement Systems Analysis (MSA)
    - Precision vs Accuracy
    - Scatter Diagrams for Correlation and Causation
- Act: Standardizing and Scaling Improvements
    - Building Product/Process Vision (Technique)
    - Kano Analysis

Lean Manufacturing Fundamentals

- Value Stream Mapping (VSM)
- 5S Methodology
- Kaizen Principles
- Kanban Systems
    - Types of Kanban Systems
    - Kanban Boards and Cards
    - Understanding WIP Limits
- The Role of Lean in Eliminating Waste

Total Productive Maintenance (TPM)

- Introduction to TPM
- The 8 Pillars of TPM
- Autonomous Maintenance
- Overall Equipment Effectiveness (OEE)
- Reducing Downtime through TPM

Lean Tools for Waste Reduction

- Value Stream Mapping (VSM) for Waste Identification
- Poka-Yoke (Error-Proofing)
- Kaizen for Continuous Improvement

Standardizing and Sustaining Improvements

- Developing Standardized Work Procedures
- Monitoring and Sustaining Lean Gains
- Avoiding Backsliding: Audits and Metrics