

Course No. 1664

Advanced Production & Operations Management Training Course

OPERATIONS & PRODUCTION MANAGEMENT
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Advanced Production & Operations Management Training Course provides a comprehensive and practical framework for managing complex production and operational environments with greater efficiency, consistency, flexibility, and performance visibility. The course is designed for professionals who need to connect operational strategy with day-to-day production requirements, resource utilization, process performance, quality, cost control, and continuous improvement.

Effective production and operations management requires more than maintaining output levels. Organizations must balance demand, capacity, materials, workforce, equipment, schedules, quality requirements, operating costs, and customer expectations while responding to changing business conditions. This advanced training course provides participants with structured approaches for analyzing operational performance, identifying constraints, improving workflows, and making informed production decisions.

The program explores advanced principles of operations management, production planning and control, capacity management, workflow optimization, inventory coordination, production scheduling, performance measurement, quality management, and operational risk management. Participants will examine how operational data and performance indicators can be used to identify inefficiencies, improve resource allocation, and support more reliable production outcomes.

A strong focus is placed on operational excellence and continuous improvement. Participants will examine process mapping, bottleneck identification, waste reduction, productivity improvement, root-cause analysis, performance management, and structured problem-solving techniques. The course also considers the relationship between production operations, supply chain activities, maintenance, procurement, quality, finance, and other supporting functions.

Through practical exercises, operational case studies, performance analysis, and simulation-based activities, participants will develop the ability to evaluate production systems, improve operational workflows, establish meaningful performance indicators, strengthen production planning, and develop improvement initiatives. The Advanced Production & Operations Management Training Course is designed to support organizations seeking stronger operational discipline, improved productivity, better resource utilization, and sustainable performance improvement.

Objectives

- Analyze advanced production and operations management principles and evaluate their application within complex operational environments.
- Assess current production processes, workflows, resources, and operational constraints to identify improvement opportunities.
- Develop integrated production planning approaches that align demand, capacity, materials, workforce, equipment, and delivery requirements.
- Evaluate production capacity and identify bottlenecks that may restrict operational performance and output.
- Apply structured scheduling techniques to improve production flow, resource utilization, and operational responsiveness.
- Analyze inventory requirements and coordinate material availability with production planning and operational priorities.
- Design practical performance measurement frameworks using productivity, efficiency, quality, cost, delivery, and utilization indicators.
- Apply process improvement and root-cause analysis techniques to address recurring production and operational problems.
- Improve coordination between production, maintenance, quality, procurement, logistics, finance, and other supporting functions.
- Evaluate operational risks and develop appropriate mitigation measures to strengthen production continuity and resilience.
- Strengthen continuous improvement practices by establishing structured improvement priorities and monitoring implementation progress.
- Develop an advanced production and operations improvement action plan based on organizational priorities by the end of the course.

Who Should Attend

This training course is designed for operations managers, production managers, manufacturing managers, plant managers, operations supervisors, production supervisors, production planners, operations planners, industrial engineers, manufacturing engineers, process engineers, and professionals responsible for operational performance and production efficiency.

The program is particularly relevant to professionals working in manufacturing, oil and gas, petrochemicals, energy, engineering, construction, industrial services, utilities, logistics, and other organizations where production and operational performance are critical. It is also suitable for professionals involved in production planning and control, capacity management, inventory coordination, process improvement, quality management, operational risk, and performance analysis.

The course will also benefit senior executives, department heads, operational decision makers, supply chain managers, maintenance managers, quality managers, procurement managers, and finance professionals who need a stronger understanding of the operational factors affecting productivity, cost, delivery performance, resource utilization, and organizational competitiveness.

Learning Outcomes

- Evaluate the overall effectiveness of production and operational systems using structured performance analysis.
- Identify process constraints, bottlenecks, inefficiencies, and sources of operational waste.
- Develop production plans that balance demand, capacity, materials, workforce, equipment, and delivery requirements.
- Apply practical production scheduling methods to improve workflow and resource utilization.
- Assess capacity requirements and determine appropriate responses to production constraints.
- Analyze inventory and material requirements to support reliable production continuity.
- Establish relevant operational performance indicators for productivity, efficiency, quality, cost, and delivery.
- Apply root-cause analysis and structured problem-solving methods to recurring production issues.
- Evaluate the interaction between production, maintenance, quality, procurement, logistics, and supply chain functions.
- Develop operational risk responses that support continuity and resilience.
- Apply continuous improvement principles to production and operations management activities.
- Prepare a practical operational improvement plan with priorities, responsibilities, performance measures, and implementation actions.

Course Outline

DAY 01

Advanced Production & Operations Management Principles

- Strategic role of production and operations management in organizational performance
- Operating models, process structures, production systems, and workflow design
- Operational productivity, efficiency, effectiveness, and resource utilization
- Identifying operational constraints, process inefficiencies, and performance gaps

PRACTICAL APPLICATION

Analyze an end-to-end production system and identify key operational constraints, performance gaps, and improvement opportunities

DAY 02

Production Planning, Capacity & Scheduling

- Principles of production planning and production control
- Demand analysis, production requirements, and operational planning horizons
- Capacity planning, resource balancing, and bottleneck management
- Production scheduling, sequencing, workflow coordination, and priority management

PRACTICAL APPLICATION

Develop an integrated production plan and schedule based on demand, available capacity, materials, workforce, and equipment constraints

DAY 03

Process Optimization, Inventory & Operational Efficiency

- Process mapping, workflow analysis, and identification of non-value-adding activities
- Inventory planning, material availability, and coordination with production requirements
- Waste reduction, process optimization, and productivity improvement
- Root-cause analysis and structured problem-solving for production issues

DAY 03 — CONTINUED

PRACTICAL APPLICATION

Map a production process, identify bottlenecks and waste, and develop targeted process improvement measures

DAY 04**Performance Management, Quality & Operational Risk**

- Production and operations performance measurement frameworks
- Key performance indicators for productivity, efficiency, quality, cost, delivery, and equipment utilization
- Quality management and integration of quality requirements into production processes
- Operational risk identification, disruption management, and production continuity

PRACTICAL APPLICATION

Develop an operational performance dashboard and use performance data to identify risks, priorities, and corrective actions

DAY 05**Operational Excellence, Continuous Improvement & Implementation**

- Continuous improvement approaches for production and operations management
- Integrating production with maintenance, procurement, logistics, quality, and supply chain functions
- Operational decision-making, management reporting, and performance review
- Developing sustainable operational improvement programs and implementation priorities

FINAL WORKSHOP

Develop an advanced production and operations management improvement plan covering process optimization, capacity, scheduling, resources, performance indicators, operational risks, and continuous improvement actions



Register or Request More Information

Course page: <https://quest-training.com/courses/advanced-production-operations-management-training-course>

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