ADVANCED MODERN OPERATIONS MANAGEMENT



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Introduction

Operations decide how well a business converts its inputs into what customers pay for. Capacity, flow, quality, and cost all meet on the operations floor, and improvement in one area often costs performance in another. This Advanced Modern Operations Management Training Course gives operations managers, production leaders, and process improvement professionals a complete method for running and improving that system. Participants learn how to design processes, balance capacity against demand, apply lean and quality tools, plan production and resources, and measure performance with indicators that reveal real constraints. Furthermore, the course connects operational decisions to cost, service, and continuous improvement culture.

Advanced Modern Operations Management Course Objectives

- Apply operations strategy and the order-winners and qualifiers framework.
- Design processes using flow analysis, capacity planning, and layout principles.
- Balance capacity and demand with levelling, scheduling, and queue management.
- Apply lean tools: value stream mapping, 5S, standard work, and kanban.
- Use quality methods: PDCA, root cause analysis, and statistical process control.
- Plan production with master scheduling, MRP, and rough-cut capacity checks.
- Apply total productive maintenance and overall equipment effectiveness measurement.
- Manage constraints using theory of constraints and bottleneck management.
- Measure performance with OEE, cycle time, throughput, and cost per unit.
- Build continuous improvement routines with kaizen and A3 problem solving.

Course Methodology

- Facilitated sessions built on real process data, layouts, and production records.

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- Value stream mapping and capacity calculation exercises.
- Case workshops on bottlenecks, quality failures, and schedule instability.
- Simulation of a production planning and constraint management cycle.
- Group exercise on an operations improvement plan with measured baseline.

Who Should Take This Course

- Operations and production managers.
- Manufacturing and plant supervisors.
- Process and continuous improvement engineers.
- Planning and scheduling officers.
- Quality and maintenance staff linked to operations.
- Supply chain professionals coordinating with production.

Advanced Modern Operations Management Course Outlines

Day 1: Operations Strategy and Process Design

- Operations as a competitive weapon and the order-winners framework.
- Process types: project, jobbing, batch, line, and continuous.
- Flow analysis, process mapping, and cycle time calculation.
- Capacity planning and load versus capacity comparison.
- Layout principles: process, product, cellular, and fixed position.
- Make-or-buy and outsourcing decisions in operations.
- Operations performance objectives: quality, speed, dependability, flexibility, cost.

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Day 2: Capacity, Scheduling, and Flow Control

- Demand management and capacity levelling strategies.
- Master production scheduling and time fences.
- Sequencing rules and priority management.
- Queue theory basics and work-in-progress control.
- Drum-buffer-rope and theory of constraints application.
- Bottleneck identification and capacity exploitation.
- Setup reduction and changeover time improvement.

Day 3: Lean Operations and Continuous Improvement

- Lean principles and the eight wastes in operations.
- Value stream mapping: current state and future state.
- 5S, visual management, and standard work.
- Kanban, pull systems, and supermarket design.
- Kaizen events and A3 problem solving.
- Total productive maintenance and autonomous maintenance.
- Overall equipment effectiveness and its components.

Day 4: Quality Management and Process Control

- Cost of quality: prevention, appraisal, internal and external failure.
- PDCA cycle and structured problem solving.
- Root cause analysis: five whys, fishbone, and Pareto analysis.
- Statistical process control, control charts, and process capability.
- Root cause versus symptom correction in recurring defects.

- Supplier quality and incoming inspection strategy.
- Corrective and preventive action discipline.

Day 5: Performance, Technology, and Improvement Culture

- Operations KPIs: OEE, throughput, cycle time, yield, and cost per unit.
- Digital operations: MES, SCADA, and production analytics.
- Automation and digitalisation decisions guided by data.
- Resource planning, skills matrices, and shift design.
- Daily management, gemba walks, and leader standard work.
- Change management and employee engagement in improvement.
- Building a multi-year operations excellence roadmap.

Conclusion

By successfully completing the Advanced Modern Operations Management Training Course, participants will have acquired a thorough working knowledge of operations strategy, process and capacity design, scheduling and flow control, lean tools, quality management, maintenance practice, performance measurement, and continuous improvement routines. They will leave able to find the real constraint in their operation, improve flow and quality together, and hold gains with daily management discipline. Gentex Training Center delivers this programme with operations and improvement practitioners who run these systems in live environments.

LEARN BOLD. **LEAD BEYOND**
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FAQs for the Advanced Modern Operations Management course

Q1 What is the "Advanced Modern Operations Management" course about?

It is a five-day programme on running and improving operations. It covers operations strategy, process and capacity design, scheduling and flow control, lean tools, quality management, maintenance and OEE, performance measurement, and continuous improvement routines.

Q2 What are the key benefits of the "Advanced Modern Operations Management" course?

Participants identify and relieve the true bottleneck, improve flow and quality at the same time, and cut waste in movement, waiting, and rework. They also gain a daily management routine that holds improvements in place after the project ends.

Q3 What skills will I gain from the "Advanced Modern Operations Management" course?

You will gain operations strategy and process design, capacity planning and scheduling control, lean and quality improvement application, and operations performance measurement with continuous improvement leadership.

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Q4 What tools, methods, or standards are covered in the "Advanced Modern Operations Management" course?

The course works with the order-winners and qualifiers framework, process mapping and cycle time analysis, capacity and load comparison, process, product, cellular and fixed position layouts, master production scheduling with time fences, sequencing rules and queue theory basics, drum-buffer-rope and theory of constraints, setup reduction, value stream mapping, 5S and standard work, kanban and pull systems, kaizen and A3 problem solving, total productive maintenance and overall equipment effectiveness, PDCA, five whys, fishbone and Pareto analysis, statistical process control and process capability, corrective and preventive action systems, MES and SCADA reporting, and operations KPIs including throughput, yield and cost per unit.

Q5 How is the "Advanced Modern Operations Management" course applied in real-world practice?

Teams apply it when mapping a production flow, calculating capacity against demand, running a kaizen event on a bottleneck, reducing changeover time, investigating a recurring defect, and setting OEE targets for the plant. It also guides daily management boards and automation business cases.