Strategic Materials Management Planning: Optimize Supply Chain

13 – 17 December 2026
Dubai (UAE)



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Why This Course

Materials management plays a vital role in keeping supply chains efficient, responsive, and cost-effective. When materials are not planned, controlled, stored, or moved properly, organizations can face stockouts, excess inventory, delayed production, higher logistics costs, poor warehouse utilization, and reduced customer satisfaction.

Effective materials management helps organizations balance demand, inventory, procurement, warehousing, logistics, and sustainability. It ensures that the right materials are available at the right time, in the right quantity, at the right cost, and in the right condition.

This intensive 1-week course provides a comprehensive overview of materials management planning with a strong focus on optimizing supply chain operations. Through practical exercises, case studies, forecasting activities, inventory control tools, and warehouse planning workshops, participants will learn how to improve materials flow, reduce costs, strengthen planning accuracy, and support better operational decision-making.

What You'll Learn and Practice

By joining this program, you will:

- Understand the principles and importance of materials management in supply chain operations.
- Explore the role of materials management in production, logistics, procurement, and customer service.
- Use key performance indicators to monitor materials management effectiveness.
- Apply inventory classification and ABC analysis.
- Understand inventory costing methods and their impact on decisions.
- Use Economic Order Quantity concepts to support ordering decisions.
- Apply Just-In-Time and lean inventory management principles.
- Develop demand forecasts to improve planning and reduce stockouts.
- Understand Sales and Operations Planning and Materials Requirements Planning.
- Apply capacity planning concepts to support materials flow.
- Optimize warehouse layout, storage systems, and material handling.
- Improve order picking, packing, and transportation coordination.
- Explore sustainable materials management, reverse logistics, waste reduction, and green supply chain practices.



The Program Flow

Day 1: Introduction to Materials Management

- Overview of materials management concepts.
- The role of materials management in supply chain performance.
- Linking materials planning with procurement, production, warehousing, logistics, and customer demand.
- Materials management systems and technologies.
- Key Performance Indicators in materials management.
- Common challenges in materials planning and control.
- Practical exercise: Assessing current materials management strengths and gaps.

Day 2: Inventory Control and Management

- Inventory classification and ABC analysis.
- Understanding fast-moving, slow-moving, critical, and obsolete inventory.
- Inventory costing methods and their management implications.
- Economic Order Quantity model and ordering decisions.
- Safety stock, reorder points, and service levels.
- Just-In-Time and lean inventory management.
- Workshop: Applying inventory control techniques to reduce cost and improve availability.

Day 3: Demand Forecasting and Planning

- Demand forecasting techniques.
- Understanding historical data, seasonality, trends, and forecast accuracy.
- Sales and Operations Planning.
- Materials Requirements Planning.
- Capacity planning and management.
- Connecting forecasts with procurement, production, inventory, and logistics decisions.
- Practical exercise: Creating a demand forecast and materials planning approach.

Day 4: Warehouse Management and Logistics

- Warehouse layout and design principles.
- Storage systems and material handling equipment.
- Improving warehouse space utilization and materials flow.
- Order picking and packing strategies.
- Reducing handling time, movement, errors, and delays.
- Transportation management in materials flow.
- Workshop: Designing an optimized warehouse layout to enhance operational efficiency.



Day 5: Sustainable Materials Management

- Green supply chain management.
- Sustainable sourcing, storage, movement, and disposal of materials.
- Reverse logistics and returns management.
- Waste reduction and recycling strategies.
- Technology applications in sustainable materials management.
- Measuring sustainability performance in materials operations.
- Final activity: Developing a comprehensive materials management strategy.

Individual Impact

- Strengthen your understanding of materials management and supply chain operations.
- Improve confidence in inventory control, forecasting, and materials planning.
- Build practical skills in warehouse layout, logistics, and materials flow optimization.
- Enhance your ability to use KPIs and data for better decisions.
- Gain tools to reduce stockouts, excess inventory, and operational waste.
- Develop a practical approach to sustainable materials management.

Work Impact

- Improve inventory availability while reducing unnecessary inventory costs.
- Strengthen demand planning and reduce stockouts or overstock situations.
- Improve warehouse efficiency, space utilization, and order fulfillment.
- Enhance coordination between procurement, production, warehousing, and logistics.
- Support better resource use, waste reduction, and sustainability practices.
- Improve overall supply chain responsiveness and operational performance.

Training Methodology

This program uses a practical and operations-focused approach to help participants apply materials management tools in real workplace settings. Learning methods include:

- Interactive discussions and guided facilitation.
- Supply chain and materials management case studies.
- ABC analysis and inventory control exercises.
- EOQ, reorder point, and safety stock calculations.
- Demand forecasting and planning workshops.
- S&OP and MRP scenario activities.
- Warehouse layout and logistics optimization exercises.
- Sustainability and reverse logistics case applications.
- Group work, peer feedback, and practical action planning.



Beyond the Course

Upon completion, participants will be equipped to manage materials more effectively across supply chain operations. They will return ready to:

- Develop a comprehensive materials management strategy.
- Implement inventory control techniques to reduce costs.
- Create more accurate demand forecasts to improve planning.
- Reduce stockouts, excess inventory, and operational delays.
- Design improved warehouse layouts and materials flow processes.
- Apply sustainable materials management practices that support efficiency and long-term value.

