Advanced Materials Management and Resource Planning Training Course



21 - 25 Dec 2026

Cape town

4600 € (Per Person)

Ref: #PSC5363_282312

Course Introduction / Overview:

This comprehensive training course provides an in-depth exploration of the principles and practices of advanced materials management and resource planning. In today's competitive global market, the ability to efficiently manage materials, control inventory, and plan resources is paramount to organizational success, directly impacting profitability and customer satisfaction. This program is designed to move beyond foundational concepts, delving into strategic frameworks that integrate procurement, inventory control, and production planning into a cohesive, high-performance system. Participants will gain a sophisticated understanding of methodologies like Material Requirements Planning (MRP) and Enterprise Resource Planning (ERP), drawing on the pioneering work of experts like Joseph Orlicky, whose book "Material Requirements Planning" revolutionized the field. BIG BEN Training Center has structured this course to equip professionals with the analytical skills and strategic foresight needed to optimize supply chains, reduce operational costs, and enhance overall efficiency. By mastering these advanced techniques, attendees will be prepared to lead their organizations in developing resilient and agile materials management systems capable of navigating the complexities of modern commerce.

Target Audience / This training course is suitable for:

- Supply Chain Managers and Professionals.
- Procurement and Sourcing Specialists.
- Inventory Planners and Analysts.
- Operations and Production Managers.
- Logistics and Warehouse Supervisors.
- Materials Managers and Controllers.
- ERP System Consultants and Users.
- Finance professionals involved in inventory valuation and cost control.

Target Sectors and Industries:

- Manufacturing and Industrial Production.
- Retail and Consumer Goods.
- Pharmaceuticals and Healthcare.
- Automotive and Aerospace.
- Construction and Engineering.
- Logistics and Distribution Services.
- Governmental agencies and public sector organizations.
- Technology and Electronics.

Target Organizations Departments:

- Supply Chain Management.
- Procurement and Purchasing.
- Logistics and Distribution.
- Warehouse and Inventory Control.
- Operations and Production Planning.
- Finance and Accounting.
- Strategic Planning and Business Development.

Course Offerings:

By the end of this course, the participants will have able to:

- Develop and implement strategic materials management plans.
- Master advanced inventory control techniques such as JIT and ABC analysis.
- Apply sophisticated demand forecasting models for accurate resource planning.
- Optimize the procurement process through strategic sourcing and vendor management.
- Integrate Material Requirements Planning (MRP) with broader ERP systems.
- Analyze and improve warehouse operations and logistics efficiency.
- Develop risk mitigation strategies for supply chain disruptions.
- Utilize data analytics to drive decision-making in resource allocation.
- Implement performance metrics to measure and enhance supply chain effectiveness.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be highly interactive, practical, and engaging, ensuring that participants can immediately apply their learning in a professional context. We move beyond traditional lectures to create a dynamic learning environment that fosters critical thinking and collaborative problem-solving. The course heavily utilizes real-world case studies, allowing participants to analyze complex materials management and resource planning challenges faced by leading global organizations. Interactive group discussions, workshops, and simulation exercises will be central to the learning process, providing a platform for attendees to share experiences and develop practical solutions. Our expert instructors facilitate sessions that encourage active participation and provide personalized feedback. The program emphasizes a hands-on approach, where participants will work on practical projects related to inventory optimization, demand forecasting, and procurement strategy. This blended learning model ensures a comprehensive understanding of both the theoretical frameworks and the practical application of advanced materials management principles.

Course Agenda (Course Units):

Unit One Foundations of Strategic Materials Management

- The strategic role of materials management in the supply chain.
- Evolution from traditional inventory control to integrated resource planning.
- Core components of a materials management system.
- Introduction to Material Requirements Planning (MRP) and Manufacturing Resource Planning (MRP II).
- Understanding the link between materials management and financial performance.
- Key performance indicators (KPIs) for materials management.
- The impact of globalization on materials and resource planning.

Unit Two Advanced Inventory Planning and Control

- Inventory classification techniques including ABC and FSN analysis.
- Calculating safety stock and reorder points accurately.
- Economic Order Quantity (EOQ) model and its practical applications.
- Implementing Just-in-Time (JIT) and Lean inventory systems.
- Strategies for managing slow-moving and obsolete stock (SLOB).
- Inventory valuation methods (FIFO, LIFO, Weighted Average).
- Cycle counting and physical inventory best practices.

Unit Three Strategic Procurement and Supplier Management

- Developing a robust strategic sourcing and procurement plan.
- Techniques for effective supplier evaluation, selection, and development.
- Negotiation strategies for favorable terms and long-term partnerships.
- The role of technology in modern procurement (e-procurement).
- Managing supplier relationships and performance (SRM).
- Ethical and sustainable sourcing practices.
- Contract management and mitigating supplier-related risks.

Unit Four Demand Forecasting and Resource Planning

- Qualitative and quantitative demand forecasting techniques.
- Master Production Scheduling (MPS) and its role in planning.
- Capacity Requirements Planning (CRP) to balance load and capacity.
- Developing a comprehensive Bill of Materials (BOM).
- Integrating sales and operations planning (S&OP) for cohesive strategy.
- Leveraging software and systems for advanced planning and scheduling (APS).
- Managing demand variability and forecast accuracy.

Unit Five Logistics, Warehousing, and Supply Chain Integration

- Optimizing warehouse layout, design, and material flow.
- Modern materials handling systems and technologies.
- Transportation and distribution network design.
- The role of logistics in overall supply chain efficiency.
- Integrating ERP systems for seamless information flow.
- Supply chain risk management and building resilience.
- Future trends in materials management and digital supply chains.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

In an era of increasing supply chain volatility and digital transformation, how can traditional resource planning models evolve to incorporate principles of resilience and sustainability effectively?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a holistic and strategic perspective on materials management and resource planning, moving beyond the operational and tactical levels. While many programs focus narrowly on inventory control techniques or software usage, this training emphasizes the integration of materials management into the organization's core business strategy. We focus on developing the participant's ability to make high-level decisions that align procurement, inventory, and logistics with financial and corporate objectives. The curriculum is uniquely designed to bridge the gap between theoretical knowledge, such as the principles laid out by pioneers like Joseph Orlicky, and the complex, practical challenges of today's volatile global supply chains. Rather than just teaching formulas, we explore the 'why' behind the methods, fostering a deep understanding of how to adapt and innovate. The course content is enriched with contemporary topics such as supply chain resilience, sustainability, and digitalization, preparing participants not just for their current roles but for the future of the industry. The emphasis on case studies and strategic simulation ensures that learning is contextual, practical, and directly transferable to the workplace.