Bill of Materials (BOM) Management in ERP Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

The Bill of Materials (BOM) is unequivocally the single source of truth for all product-related data in manufacturing. Effective BOM Management within an Enterprise Resource Planning (ERP) system is no longer a mere administrative task, but a critical driver of operational efficiency, cost control, and successful Product Lifecycle Management (PLM). Bill of Materials (BOM) Management in ERP Training Course is designed to transition professionals from a basic understanding of component listing to mastering advanced, multi-level BOM structuring and data governance best practices. We will explore how to harmonize Engineering BOMs (EBOMs) and Manufacturing BOMs (MBOMs), leverage revision control and change management, and utilize the ERP platform for accurate Material Requirements Planning (MRP) and precise cost estimation. Mastery of these skills is vital for navigating complex global supply chains and achieving a lean manufacturing posture.

This intensive program provides a hands-on training methodology to equip participants with immediately applicable skills in a contemporary ERP environment. By focusing on practical application and industry case studies, we cover essential topics like configurable BOMs for mass customization, ensuring data integrity, and integrating the BOM with core business functions like inventory management and procurement. Graduates will be prepared to implement and maintain a robust BOM strategy that minimizes errors, accelerates time-to-market, and fosters cross-functional collaboration between engineering, production, and finance.

Programme Curriculum

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Course Duration

5 days

Course Objectives

Upon completion of this course, participants will be able to:

1. Master ERP BOM functionality for accurate product structuring.
2. Differentiate and manage EBOM and MBOM synchronization processes.
3. Implement robust BOM change management and revision control.
4. Apply principles of data governance to ensure BOM data integrity.
5. Structure complex multi-level BOMs for sub-assembly planning.
6. Utilize configurable BOMs for effective mass customization.
7. Integrate the BOM with Material Requirements Planning (MRP II) logic.
8. Perform precise cost estimation and variance analysis using BOM data.
9. Streamline procurement and inventory management via accurate BOMs.
10. Optimize the Bill of Materials for lean manufacturing and waste reduction.
11. Troubleshoot and resolve common BOM inaccuracies and production errors.
12. Facilitate cross-functional team collaboration using a centralized ERP BOM.
13. Implement digital transformation strategies for BOM lifecycle management.

Target Audience

1. **Manufacturing Engineers** and Technicians
2. **Supply Chain** and **Procurement Specialists**
3. **ERP Implementation** and Support Consultants
4. **Production Planning** and Scheduling Managers
5. **Product Lifecycle Management (PLM)** Professionals
6. **Cost Accountants** and Financial Analysts
7. **Master Data Management (MDM)** Specialists
8. **Quality Assurance** and Control Managers

Course Modules

Module 1: BOM Fundamentals and ERP Integration

- Defining the Bill of Materials.
- Understanding the role of BOM as the Single Source of Truth in ERP.
- Exploring Different BOM Types.
- Integration with core ERP modules.
- Case Study: Migrating a legacy spreadsheet BOM system into an SAP/Oracle ERP structure for a mid-sized electronics manufacturer.

Module 2: Structuring and Hierarchy Management

- Developing effective Multi-Level BOMs for complex assemblies/sub-assemblies.
- Establishing a robust Part Numbering and material master data system.
- Utilizing ERP features for graphical BOM display
- Managing component relationships.
- Case Study: Structuring the multi-level BOM for an automobile engine, demonstrating hierarchy for sub-assemblies like the cylinder head and block components.

Module 3: Engineering vs. Manufacturing BOMs (EBOM & MBOM)

- Key differences between EBOM and MBOM
- Processes for seamless BOM transformation and synchronization in ERP.
- Managing production details.
- The impact of MBOM on Shop Floor Control and efficiency.
- Case Study: The transition from an EBOM in a CAD system to the MBOM in the ERP for a custom machinery manufacturer, including the addition of process-specific items.

Module 4: Change and Revision Control

- Implementing Engineering Change Management workflows in the ERP.
- Maintaining BOM Revision Control and effective version tracking.
- Handling effectivity dates for phased product rollouts and component changes.
- Strategies for minimizing downtime during production BOM updates.
- Case Study: Managing a critical component obsolescence issue across three different product versions, utilizing ERP revision and effectivity date control to prevent production errors.

Module 5: Configurable BOMs and Product Variants

- Introduction to Configurable BOMs and Variant Configuration.
- Setting up Rules, Dependencies, and Constraints for build-to-order products.
- Utilizing the ERP's product configurator for sales order integration.
- Minimizing BOM complexity through master template and optional components.
- Case Study: Creating a configurable BOM for a line of custom office furniture, allowing sales to quote complex variations without engineering intervention.

Module 6: Costing and Financial Impact

- Accurate Material Costing using the BOM.
- Performing Roll-up Costing to determine finished product cost.
- Analyzing Production Variances and their root cause in the BOM/Routing.
- Integrating BOM with ERP's Financial Accounting and Budgeting modules.

- Case Study: Calculating the cost of a new product introduction (NPI) and identifying the cost-saving potential of substituting a high-cost raw material using BOM cost roll-up.

Module 7: BOM and Material Requirements Planning (MRP)

- Understanding the BOM's role as input for MRP and capacity planning.
- Executing an MRP run and analyzing its output for planned orders.
- Managing lead times, scrap factors, and yield rates in the BOM for accurate planning.
- Utilizing BOM data for Forecasting and Safety Stock calculation.
- Case Study: Resolving a persistent material shortage issue by correcting BOM-related lead times and scrap factors in the ERP's MRP configuration.

Module 8: Data Governance and Best Practices

- Establishing BOM Data Governance policies and organizational roles.
- Ensuring Data Quality and integrity through validation and auditing.
- Best practices for BOM creation, maintenance, and distribution.
- Leveraging ERP workflows for digital collaboration and approval cycles.
- Case Study: Implementing a cross-functional BOM review process to eliminate historical data entry errors and improve first-pass quality in a medical device firm.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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