

# eBOM to mBOM Transformation with MPMLink 11.1

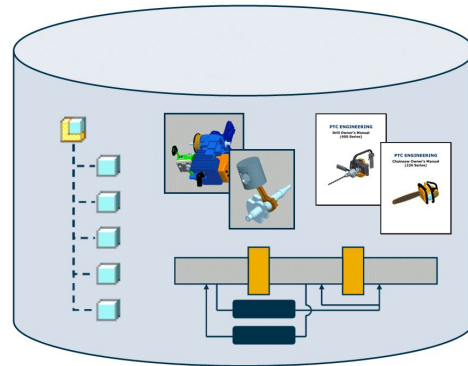
## Overview

Course Code TRN-5275-T

Course Length 8 Hours

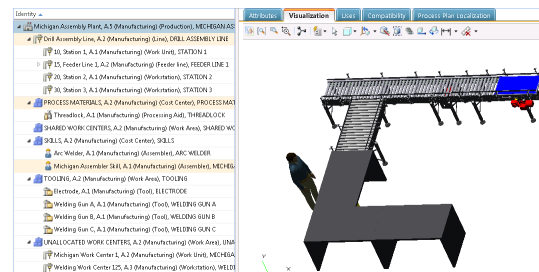
In this course, you will learn how to complete basic Windchill MPMLink functions. You will learn about MPMLink in the context of Manufacturing Process Management (MPM). You will also learn how to access and navigate the MPMLink environment, manage information, use MPMLink's visualization tools, and manage manufacturing changes attributed to product development. Other topics include how to use MPMLink to transform eBOMs to one or more mBOMs using Manufacturing Associative Part Structure Browser (MAPSB). At the end of each module, you will complete a set of review questions to reinforce critical topics from that module. At the end of the course, you will complete a course assessment in PTC University Proficiency intended to evaluate your understanding of the course as a whole.

This course has been developed using Windchill 11.1 M020.



## Course Objectives

- Navigate the MPMLink environment
- Examine MPMLink utilities
- Transform an eBOM into an mBOM
- Use manufacturing standards in the operations



## Prerequisites

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- Introduction to Windchill PDMLink 11.1 for Heavy Users

## Audience

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- This course is intended for manufacturing engineers and manufacturing personnel that develop the mBOM or process plans including NC programmers, tooling designers, quality engineers, and production personnel. People in related roles will also benefit from taking this course.
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## Agenda

### Day 1

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Module	1	Introduction to MPM and Windchill MPMLink
Module	2	Introduction to the Windchill MPMLink Environment
Module	3	MPMLink BOM Translation Tools and Concepts
Module	4	Transforming eBOM to mBOM
Module	5	Maintain and Conform mBOM

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## Course Content

### Module 1. Introduction to MPM and Windchill MPMLink

- i. Manufacturing Process Management Overview
- ii. Manufacturing Process Management Flow
- iii. Manufacturing Process Management Roles
- iv. Transforming an eBOM into an mBOM
- v. BOM Transformation Challenges
- vi. MPM Challenges and MPMLink
- vii. Concurrent Product and Process Development
- viii. Extend PLM to Manufacturing Process Management
- ix. Windchill MPMLink – End to End Process Planning

#### *Knowledge Check Questions*

### Module 2. Introduction to the Windchill MPMLink Environment

- i. Windchill MPMLink Environment
- ii. Windchill MPMLink Architecture
- iii. Key Concept - MPMLink Container Templates
- iv. Windchill MPMLink Object Types
- v. MPMLink Object Capabilities - Change and Configuration Management
- vi. MPMLink Object Capabilities - Life Cycle and Configuration Management
- vii. MPMLink Object Capabilities - Container and Access Control
- viii. Windchill MPMLink Product Structure Modeling
- ix. Windchill MPMLink Data Structure
- x. The Windchill MPMLink Utilities
- xi. Manufacturing Associative Part Structure Browser (MAPSB)
- xii. Accessing the MAPSB Browser
- xiii. The Manufacturing Resource Browser
- xiv. MPMLink Explorers
- xv. The Manufacturing Standards Explorer
- xvi. The Manufacturing Gantt Explorer
- xvii. MPMLink Preferences

#### *Knowledge Check Questions*

### Module 3. MPMLink BOM Translation Tools and Concepts

- i. MPMLink eBOM to mBOM
  - ii. Understanding the mBOM
  - iii. BOM Transformations and Challenges
  - iv. Understanding Views
  - v. Manufacturing Associative Part Structure Browser
  - vi. Manufacturing Associative Part Structure Browser Filters and Preferences
  - vii. Manufacturing Associative Part Structure Browser Task Tabs
  - viii. Manufacturing Associative Part Structure Browser Vertical Toolbar
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- ix. Equivalent Link
- x. Equivalent Link Example
- xi. Equivalent Link Context Example
- xii. Equivalent Link Features - View Network
- xiii. Equivalent Link Features - Iterating Parts with Links
- xiv. Equivalent Link Features - Updating Links
- xv. Equivalent Link Features - Revising a Downstream Part
- xvi. Equivalent Link Features - History
- xvii. Equivalent Link Additional Features
- xviii. MAPSB Equivalent Parts Tabs
- xix. Reference Link
- xx. Equivalent Occurrence Link
- xxi. Equivalent Occurrences Tab
- xxii. Status Indicator Values
- xxiii. View MPMLink Objects in the Visualization Panel
- xxiv. View MPMLink Objects in Creo View Explorer

#### *Knowledge Check Questions*

#### **Module 4. Transforming eBOM to mBOM**

- i. Associative eBOM-mBOM Best Practice
  - ii. Associative eBOM-mBOM Practice Overview
  - iii. Analyzing eBOM
  - iv. Examining the Product Structure in Windchill
  - v. Comparing Parts and Associated CAD Documents
  - vi. Viewing in Manufacturing Associative Part Structure Browser
  - vii. Visualization Tab in MAPSB
  - viii. Viewing eBOM Using Creo View
  - ix. Analyzing eBOM Using Creo View
  - x. Identifying an Entire eBOM Assembly
  - xi. Restructuring into mBOM
  - xii. Highlight and Review Parts in MAPSB
  - xiii. Creating an Equivalent Manufacturing Assembly
  - xiv. Creating a New Downstream Branch
  - xv. Creating a New Downstream Part
  - xvi. Viewing a Downstream Equivalent Assembly
  - xvii. Adding Manufacturing Parts in mBOM
  - xviii. Inserting New Parts in mBOM
  - xix. Copying and Pasting from eBOM to mBOM
  - xx. The Paste Option
  - xxi. Pasting as New Branch
  - xxii. Phantom Manufacturing Parts
  - xxiii. Pasting as New Part
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- xxiv. Viewing Partial mBOM in Visualization Tab
- xxv. Viewing Consumption Status
- xxvi. Viewing mBOM in Creo View
- xxvii. Edit Path Filters
- xxviii. Splitting BOM Quantities
- xxix. Adding Equivalence Links
- xxx. Cut and Paste Feature
- xxxi. Replace Feature
- xxxii. Duplicate Feature
- xxxiii. Synchronizing Structure Associativity
- xxxiv. Alternate BOMs and BOM Types
- xxxv. Creating Alternate BOMs
- xxxvi. Viewing Alternate BOMs
- xxxvii. Assigning Plant to Manufacturing Parts
- xxxviii. Identifying Discrepancies in BOMs

#### *Knowledge Check Questions*

### **Module 5. Maintain and Conform mBOM**

- i. Maintain and Conform mBOM Overview
  - ii. Updating and Maintaining mBOM
  - iii. Reviewing Equivalence Status Indicators
  - iv. Reviewing Equivalence Links
  - v. Analyzing Discrepancies
  - vi. Updating Equivalence Links
  - vii. Status Indicators
  - viii. Status Indicator Properties
  - ix. Compare to Upstream Report
  - x. Comparing eBOMs and mBOMs
  - xi. Comparison Report Results
  - xii. Select a Part in the eBOM Not Updated
  - xiii. Displaying BOM Differences in Associative Structure Browsers
  - xiv. Incorporating Updates from eBOM
  - xv. Ensuring BOM Conformity
  - xvi. Highlighting Discrepant Parts in eBOM
  - xvii. Copying and Pasting Discrepant Parts to mBOM
  - xviii. Associative eBOM-mBOM Practice Overview
  - xix. Releasing to Production
  - xx. Checking in the mBOM
  - xxi. Approving mBOM Using a Promotion Request
  - xxii. Releasing mBOM
  - xxiii. Releasing mBOM to ERP Systems
  - xxiv. Associative eBOM-mBOM Productivity Tips
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- xxv. Releasing to Production Systems - Step 2
  - xxvi. Releasing to Production Systems - Step 3
  - xxvii. Extend BOM Equivalence from One Plant to Another or Multiple
  - xxviii. Other Options available for Resolving Part Discrepancies with BOM Conformity
  - xxix. Best Practices: Occurrence Management
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