# **Module 1: Discrete Manufacturing Basics Review**

This chapter provides a general overview of Discrete Manufacturing Basics in Microsoft Dynamics AX 2012.

#### Lessons

- Multisite Review
- Core Concepts in Production
- Bill of Materials (BOM)
- Calendars and Resources
- Operations and Routes
- Life Cycle, Parameters, and Production Orders
- Scheduling
- Resource Scheduling
- Master Planning and Planned Production Orders
- This chapter provides a general overview of Discrete Manufacturing Basics in Microsoft Dynamics AX 2012.

After completing this chapter, students will be able to:

- Review multisite functionality for the Production control module
- List the Production control module's core conceptual elements
- Review the Bill of material (BOM)
- Review calendars and resources
- Review operations and routes
- Describe production life cycle, parameters, and production orders
- Review definitions of operations and job scheduling
- Review how master planning interacts with the Production control module

# **Module 2: Inventory Dimensions in Production**

This module describes the general setup and use of inventory dimensions in production. In particular it covers the storage and tracking dimensions used in production to define warehouses, locations, pallets, batches, serial numbers and site.

#### Lessons

- Product Dimensions
- Storage Dimensions
- Tracking Dimensions
- Set up Storage and Tracking Dimension Groups
- Allocating Batch and Serial Numbers
- Production Order Reservations
- Trace Batch and Serial Numbers

After completing this chapter, students will be able to:

• Describe product, storage and tracking dimensions

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- Explain how to set up and work with dimensions groups
- Describe using serial or batch numbers to track and control manufactured items
- Use inventory reservations in production
- Describe inventory marking
- Describe the inventory trace function

#### **Module 3: Subcontractor Work**

This module describes how to set up and work with BOM lines, purchase orders, production orders, and operations when subcontractors are used in the production process.

#### Lessons

- BOM Line Types
- Purchase Orders
- Production orders
- Operations

# Lab: 3.1: Create Resource with Resource Type VendorLab: 3.2: Purchase Items for BOM from SubcontractorLab: 3.2: Use a Subcontractor to Produce an Item in the BOM

After completing this chapter, students will be able to:

- Describe working with the Bill of Materials (BOM) line type Vendor when using subcontractors
- Describe how to generate purchase orders to a supplier when on-hand inventory is insufficient
- Describe how to create a vendor production order
- Create resources for the vendor

# **Module 4: Advanced Production Scheduling**

This module provides more detail about the advanced optional production scheduling settings, including properties, efficiencies, capabilities and route groups.

#### Lessons

- Production Groups
- Production Pools
- Resource capabilities
- Properties
- Route Groups
- Priority Scheduling
- Splitting a Production Order

# Lab: 4.1: Configure a Production Pool and Assign a Production Order

After completing this chapter, students will be able to:

- Define production groups to establish a relationship between production orders and ledger accounts.
- Describe how to use production pools to monitor production orders in specific categories.

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- Describe properties-set up on the working time template-which guide production orders to run under special times and conditions.
- Attach a property to a resource.
- Review the benefits of properties.
- Describe how resource capabilities are set up and used to schedule production on alternative resources.
- Create route groups and attach them to operations on a route.
- Use the various scheduling methods.
- Discuss the difference between operations and job scheduling.
- Split a production order.

# **Module 5: Scrap and Waste**

This chapter explains the request for quotation process. Steps for creating, following-up, and processing a request for quotation reply are reviewed. Additionally, reports and inquiries for request for quotations are reviewed.

#### Lessons

- BOM Scrap
- Resource Scrap
- Route Scrap
- Costing Of Scrap/Waste
- Request for Quotation Replies
- Transfer Accepted Request for Quotation Replies
- Request for Quotation Reports and Inquiries

# Lab: 5.1: Add BOM Scrap and Run CalculationsLab: 5.2: Set Scrap Percentages on a Route

After completing this chapter, students will be able to:

- Set the Bill of Material (BOM) scrap percentages.
- Set the scrap percentage on a Resource.
- Set the scrap percentage for each operation in production routes.
- Describe the costing of scrap.

# **Module 6: General Ledger and the Production**

This module provides an overview of the different settings that can be used to determine how product costs are posted to the general ledger.

#### Lessons

- Production Life Cycle Review
- Ledger Settings
- Production Journals
- Posting Profile in Production Groups

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- Production Cost Overview
- End Production Orders

#### Lab: 6.1: End a Production Order

After completing this chapter, students will be able to:

- Review steps in the production order life cycle
- Describe production order ledger setting options
- Define default ledger settings in production parameters
- Describe production journals and how consumption is reported to the general ledger
- Assign ledger settings for production groups
- Analyze actual versus estimated costs for production orders and current production activities
- Describe End and cost account production orders

### **Module 7: Implementing the Production Series**

This module is an overview of how the Production module is implemented. It places the implementation in context and among other things reviews the sequential setup of BOMs, resources, routes, operations and Routes.

#### Lessons

- Setup and Interconnectivity
- Implementing Production Checklist
- Setting up Production Parameters
- Modifying Data Types
- Setting up Product and BOM Tables
- Setting up Resources
- Setting up Operations and Routes