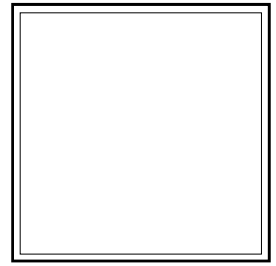


# **Fundamentals of Inventory Management and Control**

**Third Edition**





# Fundamentals of Inventory Management and Control

Third Edition

Max Muller

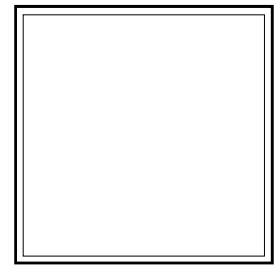
Gary Langenwalter

© 2004, 1998 American Management Association International. All rights reserved. This material may not be reproduced, stored in a retrieval system, or transmitted in whole or in part, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

ISBN: 0-7612-1350-3

Printed in the United States of America.

10 9 8 7 6 5 4 3 2



# Contents

<b>About This Course</b>	<b>ix</b>
<b>How to Take This Course</b>	<b>xi</b>
<b>Pre-Test</b>	<b>xiii</b>
<b>1. Inventory as Both a Tangible and an Intangible Object</b>	<b>1</b>
Learning Objectives	
Introduction	
The Tangible Nature of Inventory	
The Purpose of Inventory	
Types of Inventory	
Inventory Costs	
Tracking the Paper Life	
Electronic Data Interchange	
Recap	
Review Questions	
<b>2. Inventory as Money</b>	<b>17</b>
Learning Objectives	
Introduction	
Accounting for Inventories	
How Inventory Is Valued	
Inventory on the Balance Sheet	
Inventory on the Income Statement	
Ratio Analyses and What They Mean	
Obsolete Stock	
Why You Have Been Told Not to Dispose of It	
Problems with Convincing Decision-Makers That “It’s Gotta Go”	

Arguments in Favor of Disposing of Dead Stock  
 Methods of Disposal  
 Ordering Cost and Purchasing  
 Recap  
 Review Questions  
 Answers

### **3. Physical Location and Control of Inventory** **39**

Learning Objectives  
 Introduction  
 Common Locator Systems  
   Memory Systems  
   Fixed Location Systems  
   Zoning Systems  
   Random Location Systems  
   Combination Systems  
 Item Placement Theories  
   Inventory Stratification  
   Family Grouping  
   Special Considerations  
 Location Addresses and SKU Identifiers  
   Significance  
   Keys to Effectively Tying Together SKUs and Location Addresses  
 Recap  
 Review Questions

### **4. The Basics of Bar Coding** **73**

Learning Objectives  
 Introduction  
 Elements of a Bar Code Symbol  
   Structure of a Generic Bar Code Symbol  
 Symbologies  
   Discrete and Continuous Symbologies  
   Symbology Summary  
   Popular Symbologies Found in the Inventory World  
 Scanning Basics  
 Printing Basics  
 Bar Code Applications  
 Examples of Using Bar Codes  
   Receiving/Shipping  
   Tracking Multiple Activities at the Same Time in a Manufacturing Setting  
   Using Barcodes as Part of a Maintenance Program  
   Bar Coding, Physical Inventory, and Cycle Counting  
 Recap  
 Review Questions

---

<b>5. Planning and Replenishment Concepts</b>	<b>95</b>
Learning Objectives	
Introduction	
Inventory Types	
Three Approaches to Replenishing Inventory	
Lean/JIT	
ERP/MRP II	
Reorder Point/EOQ	
Recap	
Review Questions	
<b>6. Why Inventory Systems Fail and How to Fix Them</b>	<b>131</b>
Learning Objectives	
Introduction	
Inventory System Failures—Example Case	
Metrics	
Inventory Record Accuracy	
Fill Rates	
Tools with Which to Uncover System Dysfunctions	
Run Charts	
Flow Charts	
Variance Reports	
Cycle Counting	
Cycle Count Methodologies	
Control Group Cycle Counting Method	
Location Audit Cycle Counting Method	
Random Selection Cycle Counting Method	
Diminishing Population Cycle Counting Method	
Product Categories Cycle Counting Method	
A-B-C Analysis Cycle Counting Method	
When to Count	
Who Should Count	
Recap	
Review Questions	
<b>Appendix A—Inventory</b>	<b>167</b>
<b>Appendix A—Formulas</b>	<b>175</b>
<b>Appendix B</b>	<b>183</b>
<b>Bibliography</b>	<b>185</b>
<b>Glossary</b>	<b>189</b>
<b>Post-Test</b>	<b>197</b>
<b>Index</b>	<b>203</b>

