



# Warehouse/Distribution Center Layout

Improve the performance of your warehouse and distribution facilities.

## Course Description

Do you work with problems involving the use of material handling equipment in plants, warehouses, and other commercial enterprises? All techniques presented are field-proven and derived from successful implementation. Case exercises are adapted from real situations and projects.

## How You Will Benefit

- Improve throughput with systematic layout planning
- Reduce handling costs in storage and order picking
- Group materials for efficient handling and storage
- Plan for expansions and new facilities
- Improve the performance of warehouse and distribution facilities
- Increase layout planning productivity and effectiveness
- Offer practical approaches to storage, order picking, packing, material movement, and physical control
- Streamline material flow in warehouses/distribution centers

## What Is Covered

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|---|--|---|
| <ul style="list-style-type: none"> <li>■ Typical approaches to layout planning</li> <li>■ Three fundamentals of layout planning</li> <li>■ Systematic layout planning</li> <li>■ Profiling and inventory analysis</li> <li>■ Handling and storing equipment</li> <li>■ Case exercises in methods selection</li> </ul> | <ul style="list-style-type: none"> <li>■ Flow of materials analysis</li> <li>■ Estimating space requirements</li> <li>■ Case exercise in warehouse layout and materials handling</li> <li>■ Evaluation of alternative plans—costs and intangibles</li> </ul> | <ul style="list-style-type: none"> <li>■ Detailed layouts</li> <li>■ Case problem in distribution center planning</li> <li>■ Organizing your layout project</li> <li>■ Planning, design, and procurement</li> </ul> |
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<b>DATE</b>	October 27-29, 2015
<b>LOCATION</b>	Atlanta, GA
<b>REGISTER</b>	<a href="http://pe.gatech.edu/scl-wd">pe.gatech.edu/scl-wd</a>

<b>Course Fees</b>	
Standard Course Price	\$2,500
SCL and GT Alumni/Organization Discount Price*	\$2,250
Certificate Price Per Course†	\$2,075
<b>Multi-Team Members Discounts</b>	<b>Call 404-385-8663</b>

\*SCL Alumni is defined as someone who has previously taken a course offered by GT SCL or is an alumni of the GT EML or MSSCE programs. Members of APICS, AST&L, CSCMP, GTMI, INFORMS, NLDC, Military (Active and Retired), the Atlanta Supply Chain Leadership Council, and WERC receive the "Organization Discount" for each course. Visit [scl.gatech.edu/orgdiscount](http://scl.gatech.edu/orgdiscount)

†To receive the "Certificate Program Course Price" for this course, you must prepay in one payment for all courses required to earn a certificate.

## Earn a Distribution Operations Analysis and Design Certificate

Complete this course and earn 2.1 CEUs toward your certificate.

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## Course Topics

- **Case Exercise in Layout Planning**
  - Six-step simplified planning procedure, charts, and diagrams
- **Systematic Layout Planning (SLP)**
  - Four phases of every layout project
  - Systematic planning procedures, gathering and projecting data
- **Profiling and Inventory Analysis**
  - Activity, order, and inventory profiles
  - Zoning and picking methods
  - Matching your methods to inventory levels and flows
  - Storage capacity calculations
- **Handling and Storing Equipment (Simple and Complex)**
  - Unit load handling, storage, case, and item picking
- **Case Exercises in Methods Selection (storage, handling, order-picking)**
- **Layouts and Flow Patterns**
  - Commodity, activity, and other storage zones
  - Basic flow patterns and their benefits
  - Charting your operations and defining your activity-areas
- **Flow of Materials Analysis**
  - Ways to measure and visualize material flow
  - Quantified flow diagram and flow analysis
  - Combining flow and other-than flow relationships
- **Case Exercise in Establishing and Estimating Space Requirements**
  - Shorter and longer range space projections
  - Balancing space required to space available
- **Case Exercise in Warehouse Layout and Materials Handling**
  - Adjusting for physical features of the facility
  - Rack and aisle orientations
- **Material Handling Methods**
- **Evaluation of Alternative Plans – Costs and Intangibles**
- **Detailed Layouts**
  - Rack storage and dock areas, shelving arrangements, and slotting
  - Application of SLP to equipment layout
- **Case Problem in Distribution Center Planning**
  - Developing a preliminary arrangement and improving the plan
  - Integrating storage and handling methods
  - Responding to changing and unforeseen requirements
- **Organizing Your Layout Project**
  - Recap of phases, steps, and planning documents
  - Working forms and templates for your next project

## Distribution Operations Analysis and Design (DOAD) Certificate

### Who Should Receive a Certificate?

Supply chain and logistics professionals and managers across the entire supply chain (procurement, manufacturer, distribution, transportation, warehousing, and retail) who are interested in expanding their knowledge base and are committed to professional advancement.

### How the DOAD Certificate Program Works

Take four courses in four years to receive your certificate. Required courses include Engineering the Warehouse, Lean Warehousing, and Warehouse/Distribution Center Layout.

\*Participants may choose either Material Handling 101 or Strategic Planning of Supply Chain Facilities for their elective.

## Who Should Attend

- Industrial engineers and systems analysts
- Warehouse supervisors and team leaders
- Warehouse/distribution center managers
- Logistics and supply chain planners
- Planning teams for new or expanded facilities
- Leaders of supply chain and lean initiatives

## How You Benefit

- Learn from internationally recognized experts with real-world experience
- Network with other logistics professionals
- Demonstrate mastery of specific skills to current and future employers
- Gain a competitive edge with practical applications and knowledge
- Increase problem identification and problem solving skills
- Build leadership skills through course work and projects
- Gain immediate ROI through an application-based strategy



**H. Lee Hales, Instructor**, is president of Richard Muther & Associates. Hales has authored and co-authored several books on industrial planning, including: *Systematic Planning of Industrial Facilities* (with Richard Muther) and *Computer-aided Facilities Planning*. As an internationally recognized planner of manufacturing and distribution facilities, he has assisted on a wide range of global projects. His clients include: The Container Store, Fastenal, General Motors, Coca-Cola, Delta Air Lines, and many others.