Principles of Distribution and Logistics (PDL)

Session 1: Operations Management Foundations

Describe how today's business trends are driving operations management
Define the science of operations management
Identify the decisions made by operations managers
Explain how operations management is important to both manufacturing and service functions
Discuss the role of operations management in the organization
Describe operations management's role in supply chain management
Provide examples of how operations management is a competitive weapon
Identify career opportunities in the field of operations management
Perform a distribution and logistics self-assessment review

Session 2: Introduction to Distribution and Logistics

Define distribution management
Demonstrate the components of the supply and distribution channel
Detail a channel design tree structure
Describe the various types of channel intermediaries
Identify the need for distribution channels
Detail the roles performed by the distribution function
Define logistics management
Describe the functions of logistics management
Explain the components of logistics operations
Understand the concept and practice of reverse logistics
Detail the components of an effective logistics strategy
Explore the guidelines for creating a logistics strategy
Understand the role of the logistics function in supply chain management

Advanced Topics

The organization of logistics
The distribution sorting process
Value-added role of logistics
Reverse logistics financial worksheet

Session 3: Channel Network Design

Define the activities involved in channel network design
Explain the reasons for supply and distribution channels
Detail critical channel network design considerations
Understand channel network design factors

Outline levels of channel network dependency
Work with the channel configuration attribute matrix
Describe several different channel network design options
Compare distribution network design option performance
Deploy a framework for channel network design
Discuss the micro decisions influencing distribution channel design
Use the factor-rating method for channel network design
Use the center-of-gravity method for channel network design
Detail channel demand and capacity.

Advanced Topics

Global channel facilities
Delivery network facilitators
Location break-even analysis

Session 4: Inventory Management

Define the inventory management function
Identify the functions of inventory
Outline he strategic inventory management process
Understand the characteristics of inventory in the distribution channel
Trace channel inventory and demand flows
Identify the components of inventory replenishment
Describe replenishment ordering techniques
Understand the order point model
Calculate order point safety stock
Determine the replenishment order quantity
Identify the components of inventory carrying cost
Calculate the EOQ
Work with minimum/maximum inventory controls
Detail the replenishment planning process

Advance Topics

The periodic review system
Normal distribution diagram
Measuring inventory performance
Calculation order points with supplier lead time uncertainty
Cycle counting processing

Session 5: Distribution Requirements Planning (DRP)

Describe distribution channel dependencies
Detail “Push” system functions
Detail “Pull” system functions
Decide what to choose: reorder points or DRP?
Define distribution requirements planning (DRP)
Explore time phasing – the heart of DRP
Understand the DRP planning grid

Calculate the projected available balance (PAB) and the DRP grid
Calculate net requirements and the DRP grid
Review the DRP planned order generation
Perform PAB and net requirements recalculation
Explore DRP and the bill of distribution (BOD)
Outline the DRP planning process
Perform a full DRP calculation

Advanced Topics

Fair share allocation
Using safety stock in DRP
Using DRP for logistics capacity planning
Developing a warehouse capacity plan
Exploring distribution resources planning (DRP II)

Session 6: Mid-Term Exam

Session 7: Warehouse Management

Define warehouse management
Detail warehouse functions – material handling, product storage, order management, and information transfer
Describe the different types of warehouse – private, public, contract, and intransit
Explore the basic objectives of warehousing
Review warehousing strategic decision components
Use of third party logistics (3PL) service providers in warehousing strategy
Detail the warehouse operational management process
Discuss the importance of warehouse work standards
Describe the warehouse receiving flow
Examine the functions of warehouse stocking activities
Illustrating the components of successful warehouse inventory transaction management
Outline the order picking and shipping flow
Emphasize the importance of warehouse performance measurements

Advanced Topics

Specialized warehousing services
Warehouse strategy steps
Developing warehouse time standards
Annual physical inventory and cycle counting
Approaches to measuring logistics performance

Session 8: Packaging and Material Handling

Define warehouse design and layout objectives
Determine warehouse size and capacity
Describe basic warehouse layouts

Understand warehouse layout development
Detail warehouse design layout principles
List the key principles of materials handling
Classify the types of storage systems
Outline large-item or large-volume product storage
Review small-item or low-volume product storage
Review automated storage systems
Discuss stocking inventory in warehouse locations
Describe dock materials handling equipment
Describe mobile materials handling equipment
Define the role of packaging and unitization
List the key drivers of warehouse automation
Detail the components of warehouse automation

Advanced Topics

Cube utilization and accessibility
The cross-docking warehouse
Advanced dock door management
Warehouse space calculation
Shipping containers
Environmental impact of packaging

Session 9: Transportation Management

Define transportation management
Understand the fundamental principles of transportation
Detail the principles of transportation operations
Describe transportation participants
Outline the load transport aspects of transportation services
Outline the product storage aspects of transportation services
Explain the relationship of transportation to other business functions
Classify the modes of transportation: motor railroad, air, water, pipelines, and intermodal
Describe the types of transportation carriers
Define the functions and impact on transportation of third-party logistics (3PLs)
Outline the various forms of logistics outsourcing models
Detail the challenges facing today's transportation industry

Advanced Topics

Private fleet management
Choosing a logistics service provider (LSP)
Advantages and risks of a logistics service provider (LSP)

Session 10: Transportation Operations

Describe the principles of transportation operations
Review the role of transportation administration
Detail the types of transportation risk

Outline the components of the transportation management process
Classify the elements of transportation cost
Review the detail components of transportation cost
Understanding transportation rates and pricing
Explain domestic transportation terms of sale
Detail the steps in transportation mode selection
Detail the steps in transportation carrier selection
Review transportation routing and scheduling functions
Review transportation documentation and post-shipment processing
Outline transportation performance management
Define transportation management technologies

Advanced Topics

Transportation risk mitigation - methodology
Transportation rates and pricing
Transportation rate negotiation
Transportation contract estimating
International terms of sale

Session 11: Final Exam