

INSTITUTE of BUSINESS MANAGEMENT
College of Business Management
Logistics and Supply Chain Management Department

SUPPLY CHAIN MANAGEMENT
Comprehensive Examination Course Outline

Topics

Introduction to Supply Chain Management

- Introduction to Supply Chain Management
- Historical Evolution and Significance of SCM
- Key components of the supply chain
- SCM in various industries and sectors.
- Drivers of Supply Chain (effective vs efficiency)
- SCOR model
- Push vs Pull model
- Cycle view of Supply Chain

Supply Chain Integration and Coordination

- Understanding globalization in the supply chain Advantages and challenges of global supply chain Cultural and legal considerations in global SCM Case study: Global Supply Chain Strategies
- Explain the concept of globalization in supply chain management and its significance in today's interconnected economy.
- Identify and evaluate the advantages and challenges of managing global supply chains, focusing on factors like cost, efficiency, and risk.
- Recognize the cultural and legal considerations in global supply chain operations and apply this knowledge through case studies of successful global supply chain strategies.

Demand Management and Aggregate Planning

- Importance of demand forecasting in SCM
- Qualitative and quantitative forecasting methods (Moving average, Exponential smoothing, Holts Model, Winter's model and ARIMA)
- Data Collection and Analysis for demand forecasting
- Forecast accuracy and impact on SCM
- Practical demand forecasting exercises
- Collaborative forecasting to customer and supplier
- Managing demand variability and seasonality
- Aggregate Planning Strategies
- Fundamental Tradeoffs in Aggregate Planning

Role of Logistics in Supply Chain

- Incoterms
- Letter of credit
- Transportation Modes
- Factors Affecting Transportation Decisions
- Logistics as a critical supply chain component
- Functions of Logistics: transportation, warehousing, etc.
- Logistics cost and service trade-offs
- Role of Logistics in demand fulfillment

Managing Inventory in the Supply Chain Types and functions of inventory

- Economic Order Quantity (EOQ) model
- Safety stock and reorder point calculation
- Inventory control policies: JIT, MRP, and Kanban
- Inventory optimization strategies
- Multi-echelon inventory systems
- Vendor Managed Inventory (VMI) and consignment inventory
- Inventory accuracy and cycle counting

Distribution Network—Managing Fulfillment Operations

- Distribution center design and operations
- Factors influencing distribution networks design
- Design Options for a Distribution Network
- Order processing and fulfillment strategies
- Cross-docking and distribution optimization
- Technology in distribution management
- Factors influencing Supply Chain Network design
- Framework for Network Design Decisions

Transportation—Managing the Flow of the Supply Chain

- Role of transportation in SCM
- Modes of transportation: road, rail, air, and sea
- Transportation cost analysis and trade-offs
- Sustainable transportation in SCM
- Final project presentations and course reflections

Sourcing Materials and Services

- Supplier Assessment Factors
- Supplier Selection- Auctions and Negotiations
- Contracts
- Product Categorization by Value and Criticality
- Procurement vs. strategic sourcing
- Supplier selection and evaluation criteria
- Strategic sourcing process and decision-making

Supply Chain Risk Management

- Identifying supply chain risks and vulnerabilities
- Risk assessment and mitigation strategies
- Supply chain resilience and business continuity
- planning
- Case study: Managing supply chain disruptions

Supply Chain Performance Measurement and Financial Analysis

- Key performance indicators (KPIs) in SCM
- Balanced scorecard approach to SCM performance
- Financial analysis and cost management in SCM
- Measuring and improving supply chain efficiency

Supply Chain Technology-Managing Information

- Role of information technology in SCM
- Supply chain software and systems.
- Big Data and analytics in SCM
- Real-time tracking and visibility in the supply chain
- Review and evaluation (student centered)