

Distribution Management: MKT 525

Time: TBD

Instructor: TBD

This course will meet 3 hours for twice a week

Office: TBD

Office Hours: TBD

Phone: TBD

E-mail: TBD

Classroom: TBD

Textbook: David Simchi-Levi, Philip Kaminsky & Edith Simchi-Levi (2003), *Designing & Managing the Supply Chain*, McGraw-Hill Irwin.

Course Description: The course objective is to develop an in-depth understanding of integrative managerial issues and challenges related to developing and implementing a firm's logistics and supply chain management strategy. Attention is directed to the logistical mission confronted by varied types of business organizations. Logistics is positioned as a value-added process that achieves time demand stimulation and operations fulfillment. Emphasis will be placed on challenges related to providing logistical support for procurement, manufacturing, and market-distribution. The topics studied will span supply chain strategy, value-added services, forecasting and collaborative planning, order management, transportation, inventory, and warehousing. The course will also emphasize facility network design and integrated performance measurement.

Course Objectives:

1. Develop and understanding of the importance of logistics in the formation of business strategy and the conduct of supply chain management.
2. Develop an in-depth understanding of logistics operating areas and their interrelationships.
3. Strengthen integrative management analytical and problem-solving skills.

Evaluation:

Mid-term exam	25%
Final exam	25%
Homework assignment	15%
Term project	25%
Preparation & Participation (all classes)	10%

Exams: Mid-term and final exams are essay based.

Homework assignment: The homework will cover inventory management.

Term project: Metalworks case. This will involve the use of network optimization software. Students will be expected to write a managerial style consulting report. Additional details will be

provided at a later date. Students are to work in teams of two.

Grading:

97 and Above, A+ (4.0)

94 to 96, A (4.0)

90 to 93, A- (3.7)

87 to 89, B+ (3.3)

84 to 86, B (3.0)

80 to 83, B- (2.7)

**DISTRIBUTION MANAGEMENT SCHEDULE
(tentative and subject to change)**

Week 1, Class 1, Date: TBD

Chapter 1: *Introduction to Supply Chain Management* and
Chapter 2: *Logistics Network Configuration*

Week 1, Class 2, Date TBD

Special topic: Introduction to Customer Service & Order Processing and
Chapter 3: *Inventory Management & Risk Pooling*

Week 2, Class 3, Date TBD

Chapter 3, continued

Week 2, Class 4, Date TBD

Chapter 3, continued

Week 3, Class 5, Date TBD

Chapter 3, continued and
Homework assignment due

Week 3, Class 6, Date TBD

Mid-term Exam 1 and
Chapter 4: *The Value of Information*

Week 4, Class 7, Date TBD

Chapter 5: *Supply Chain Integration* and
Special topic: Transportation Management

Week 4, Class 8, Date TBD

Chapter 6: *Strategic Alliances*

Week 5, Class 9, Date TBD

*Special topic: Collaboration (CPFR) and
Chapter 7: Procurement & Outsourcing Strategies*

Week 5, Class 10, Date TBD

Mid-term Exam 2 and
Special topic: Introduction to Warehousing

Week 6, Class 11, Date TBD

Chapter 8: *International Issues in Supply Chain Management*,
Chapter 9: *Coordinated Product & Supply Chain Management* and
Chapter 10: *Customer Value and Supply Chain Management*

Week 6, Class 12, Date TBD

Guest speaker / site visit

Week 7, Class 13, Date TBD

Chapter 11: *Information Technology for Supply Chain Management* and
Chapter 12: *Decision Support Systems for Supply Chain Management*

Week 7, Class 14, Date TBD

Course review

Week 8, Class 15, Date TBD

Final exam

DETAILED TOPIC LISTING (Distribution Management)

Chapter 1: Introduction to Supply Chain Management

Chapter 2: Logistics Network Configuration

- Definitions
 - Logistics versus supply chain management
 - Supply chain management orientation managerial model
- The importance of logistics to the national and global economies
- Managing uncertainty
- Key issues in supply chain management and logistics
 - Integrated logistics
 - Order processing; inventory management; transportation; network configuration; warehousing
 - The logistics objective
 - Facilitators

- Supply contracts; distribution strategies; outsourcing; product design; information technology
- The unified theory of logistics
 - Cost to service trade-offs; optimal service level decision-making
- Basics of logistics network configuration

Special Topic: Introduction to Customer Service & Order Processing

- Measures and definitions of service metrics
 - Inventory availability metrics: in-stock rate, fill rate, orders shipped complete
 - Operational performance: order cycle length; order cycle consistency; on-time delivery; flexibility
 - Service reliability: damage rates; misshipments
- Detailed order processing example
 - Cycles, subcycles
 - Order-to-delivery cycle; order-to-cash cycle; cash-to-cash cycle
 - Performance metrics

Chapter 3: Inventory Management & Risk Pooling

- Economic order quantity
 - The impact of trade promotions in a supply chain
- Inventory carrying cost
- Managing uncertainty
 - Order policies under conditions of variability in demand and lead-time
 - Inventory positions
 - Periodic versus perpetual order policies
 - The role of fixed order cost
- Risk pooling
- Echelon systems
 - Centralized versus decentralized echelon decision-making
 - Order policies under conditions of variability in demand and lead-time

Chapter 4: The Value of Information

- The bullwhip effect
 - Definition
 - Causes and remedies

Chapter 5: Supply Chain Integration

- Push versus pull systems
- The impact of the internet on supply chain strategies

Special Topic: Introduction to Transportation Management

- Federal government involvement in transportation
- Major federal transportation agencies
- The 1980 deregulation cusp

- Transportation issues
 - Modes: truck, rail, water, pipeline, air
 - Legal types: common, contract, exempt, private
 - Non-operating intermediaries
- Transportation economics
 - Factors affecting rates
 - Rates and pricing
 - FOB systems

Chapter 6: Strategic Alliances

- Strategic alliances
- Third-party logistics
- Retail-supplier partnerships
- Distributor integration

Special Topic: Collaborative Planning, Forecasting & Replenishment (CPFR)

- Definition
- CPFR implementation
 - Nine-step implementation
 - Why CPFR? – in general and with customers
 - CPFR supply chain integration

Chapter 7: Procurement & Outsourcing Strategies

- Basic of purchasing
- Outsourcing risks and benefits
- E-procurement

Special Topic: Introduction to Warehousing

- Economic benefits to warehousing
 - Breaking bulk, assortments, postponement (geographic, form, packaging), stockpiling, reverse logistics
- Service benefits to warehousing
- Warehouse ownership
 - Private versus public
- Network design
 - The number of warehouses and transportation costs, inventory carrying cost, warehousing cost
 - Cost-to-cost tradeoffs
 - Least total cost network design

Chapter 8: International Issues in Supply Chain Management

- Risks and advantages of international supply chains
- Products and control
- Regional differences in logistics

Chapter 9: Coordinated Product & Supply Chain Management

- Design for logistics
 - Concurrent versus parallel processing; standardization
 - The push-pull boundary
- Mass customization

Chapter 10: Customer Value and Supply Chain Management

- Dimensions of customer service (review)
- Value-added services
- Pricing issues
 - Determining prices
 - Customized pricing
 - Menu pricing
 - The impact of price on logistics
 - The impact of logistics on price
- The SCOR model

Chapter 11: Information Technology for Supply Chain Management

Chapter 12: Decision Support Systems for Supply Chain Management

- Goals of supply chain technology
- Information technology infrastructure
- Decision support systems and ERP
- Analytic systems

Course Review

- Summary of major topics