

Southeast Missouri State University

Department of Accounting and Management Information Systems

Course No.: QM558

Title of Course: Principles of Supply Chain Management

Revision: Spring 2010

I. Catalog Description and Credit Hours of Course:

The design, planning, execution, control, and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand, and measuring performance globally (3)

II. Prerequisites: QM358 with a minimum grade of 'C' and either MK346 or MK478 with a minimum grade of 'C'. Graduate students who successfully completed equivalent courses at another institution may seek prerequisite approval from the instructor.

III. Purposes or Objective of the Course:

Harrison College of Business Assurance of Learning Goals:

1. Proficiency in oral/written communication
2. Knowledge of the fundamentals of accounting, finance, business law, MIS, marketing, management, and economics
3. Application of critical thinking skills to business problems and ethical dilemmas
4. Awareness and understanding of other cultures in a global and diverse environment
5. Effective use of technology

Upon completion of this course a student will have developed:

- A. appreciation for the importance of supply chain strategy as opposed to individual business strategies.
- B. analytical & problem solving skills in the area of supply chain management with particular emphasis on purchasing, logistics, and security
- C. an understanding of the key supply chain drivers and metrics
- D. linear programming skills for designing global supply chain networks and distribution networks
- E. appreciation for planning demand and supply in a supply chain with special emphasis on aggregate planning and managing economies of scale in a supply chain
- F. ability to plan and design transportation networks
- G. a degree of competency in making appropriate purchasing decisions in a supply chain
- H. a general understanding of the importance of supply chain security and the role of information technology in a supply chain

IV. Course Content or Outline:

A.	Understanding the supply chain	3 hours
	1. Course requirements	
	2. Process view of a supply chain	
	3. Importance of supply chain flows and examples	
B.	Supply chain performance	3 hours
	1. Competitive and supply chain strategies	
	2. Achieving strategic fit	
C.	Supply chain drivers and metrics	4 hours
	1. A framework for structuring drivers	
	2. Facilities, inventory, transportation, and information	
	3. Obstacles to achieving strategic fit	
D.	Supply Chain design	6 hours
	1. The role of distribution in the supply chain	
	2. Factors influencing distribution network design	
	3. Design options for a distribution network	
	4. Designing global supply chain networks	
E.	Aggregate planning in supply chains	5 hours
	1. Aggregate planning problem	
	2. Aggregate planning strategies	
	3. Aggregate planning using linear programming	
F.	Managing economies of scale in the supply chain	6 hours
	1. The role of cycle inventory in the supply chain	
	2. Economies of scale to exploit fixed costs	
	3. Economies of scale to exploit quantity discounts	
	4. Managing multi echelon cycle inventory	
G.	Purchasing (Sourcing) decisions in a supply chain	6 hours
	1. The role of sourcing in a supply chain	
	2. Supplier scoring and assessment	
	3. Supplier selection and contracts	
	4. Design collaboration	
	5. The procurement process	
	6. Sourcing planning and analysis	

H.	Transportation in the supply chain	6 hours
	1. The role of transportation in a supply chain	
	2. Factors affecting transportation decisions	
	3. Modes of transportation and their performance characteristics	
	4. Design options for a transportation network	
	5. Tradeoffs in transportation design	
	6. Routing and scheduling in transportation	
I.	Coordination in a supply chain	3 hours
	1. Importance of information symmetry and information technology in a supply chain	
	2. Lack of supply chain coordination and the Bullwhip effect	
	3. Effect of lack of coordination on performance	
	4. Obstacles to coordination in the supply chain	
	5. Managerial levers to achieve coordination	
J.	Supply Chain security	3 hours
	1. Current trends in supply chain security	
	2. Significance of supply chain security in the 21 st century	
	3. Achieving supply chain security and the necessary tradeoffs	
		Total <u>45 hours</u>

V. Textbook(s) and/or Other Required Materials or Equipment:

A. Textbook

Chopra, S. and Meindl, P. (2009). Supply Chain management (4th ed.). Prentice Hall.

B. Periodicals

1. *Decision Sciences*
2. *Harvard Business Review*
3. *Journal of Operations Management*
4. *Operations Management Review*
5. *Production & Inventory Management Journal*
6. *Production & Operations Management Journal*
7. *International Journal of Production Research*
8. *International Journal of Production Economics*

VI. Basis for Student Evaluation:

Categories and weights will be determined by the instructor and communicated to students on the class syllabus. The following is offered as a guideline:

- A. regularly scheduled examinations (30-35%)
- B. final examination (15-25%)
- C. homework or quizzes (15-25%)
- D. class participation (0-5%)
- E. computer exercises (0-5%)
- F. oral presentation of group project (0-5%)
- G. case studies may be assigned (0-10%)

For graduate students (additional): Preparation and class presentation of an instructor-approved topic relevant to supply chain management (10%).

VII. Grading Scale

<u>Undergraduate Student</u>		<u>Graduate Student</u>	
90% - 100%	= A	90% - 100%	= A
80% - 89%	= B	80% - 89%	= B
70% - 79%	= C	70% - 79%	= C
60% - 69%	= D	Less than 70%	= F
Less than 60%	= F		

VIII. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:
<http://www6.semo.edu/judaffairs/code.html>

IX. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.