

Sample Syllabus CIS 8060 **Supply Chain Management**

Prerequisites: MBA 8125 or MBA 8155 or IB 8690

Articles, Books and Other Resources:

1. Simchi-Levi, David, Kamisnky, Philip, and Simchi-Levi, Edith, *Designing and Managing the Supply Chain: Concepts, Strategies and Case Studies*, 3rd Edition, Irwin/McGraw Hill, 2008..
2. Resources made available through the course website

Course Description

Students develop the ability to conceptualize, design, and implement supply chains aligned with product, market, and customer characteristics. Business competition is now between supply networks rather than individual corporations. Managing the flow of products, information, and revenue across supply chains differentiates the ability of supply networks to fulfill customer needs. Students develop the ability to evaluate how information flows can substitute for the stock of physical resources, such as inventory, and why such systems succeed or fail. They assess how internet technologies, dynamic markets, and globalization are impacting supply chain strategies and practices, including logistics, digital coordination of decisions and resources, inventory and risk management, procurement and supply contracting, product and process design, and revenue management.

Learning Objectives

At the completion of this course, the student should be able to examine the design and performance of supply networks and processes in different business contexts. Students develop capabilities in logistics, digital coordination for supply chain integration, inventory management, risk pooling, procurement, product and process design, and international supply chain management. Specifically, the student will learn to:

1. Conceptualize supply chain designs, which are aligned with business models for manufacturing and service companies
2. Configure logistics networks and assess their performance impacts on efficiency and service levels
3. Manage inventory efficiently and pool inventory risks across time, products, channels, and geography.
4. Design supply chain contracts for effective governance of supply chain relationships.

5. Diagnose information integration problems across the supply chain and their consequent impacts in deploying physical and financial resources
6. Evaluate alternate information sharing and lead time compression strategies, and supply chain coordination structures, and their organizational and performance implications.
7. Align supply chain integration strategy with the uncertainty conditions of supply and demand.
8. Optimally position the push-pull boundary to leverage economies of scale and economies of scope.
9. Evaluate distribution strategies to balance responsiveness and efficiency.
10. Evaluate strategic alliances for logistics and retailer-supplier relationships, such as vendor managed inventory.
11. Design implementation processes for partnerships, such as vendor managed inventory, that involve information sharing and shared governance of processes and infrastructure.
12. Evaluate outsourcing decisions by applying the buy-make framework.
13. Manage the benefits and risks of outsourcing.
14. Design e-procurement strategies for a firm's procurement portfolio of products and services.
15. Evaluate how the logistics process can be constrained by product design, and the implications of constraint reduction on logistics performance and market responsiveness.
16. Determine when and how a supplier should be integrated into the new product development process.
17. Determine the IT infrastructure requirements and IT integration strategy for supply chain management.
18. Determine the decision support system requirements for supply chain management.
19. Evaluate the risks and advantages of international supply chains.
20. Evaluate the implications of regional differences in logistics while designing international supply chains.

Evaluation and Grades

Grades will be determined using the following evaluation scheme:

<i>Evaluation Component</i>	<i>Comments</i>	<i>Points</i>
Case Briefs	<p><i>Represents group work</i> Each group will submit written case briefs for four cases as indicated in the schedule. Each case brief is worth 8%. Case briefs must be submitted at the start of the class period when the case will be discussed. Submit case briefs electronically to the instructor with the grading template attached to the front of the brief. Case grading template available from course web site (specifies evaluation criteria).</p>	32
Group Case Presentations	<p>Each group will present two of their four case analyses. The presentation should specify: (a) the core issue(s) being investigated, (b) analysis and (c) recommendations. Each presentation is worth 4%. Prior to class, please email final presentations to the instructor.</p>	8
Exams	<p><i>Represents individual work.</i> Two exams @ 22.5% each.</p>	45
Participation	<p><i>Individual work.</i> Based on quantity and quality of in-class discussion of cases and questions.</p>	15

Grading

Final grades for the course will be based on a normal 100% scale and will be determined by adding up the points earned. The overall grading scale for the course is as follows:

<i>Letter grade</i>	<i>Quality Pts Earned</i>	<i>Range</i>	<i>Meaning</i>
A+	4.3	98-100	Stellar performance, the best possible.
A	4.0	94-97	Excellent; hard to improve upon
A-	3.7	89-93	Very professional
B+	3.3	87-88	Above normal professional expectations
B	3.0	83-86	Expected professional performance
B-	2.7	79-82	Slightly below what would be professionally expected
C+	2.3	77-78	Significant flaws or multiple minor flaws, but generally acceptable
C	2.0	73-76	Significant flaws that require professional rework to be acceptable
C-	1.7	69-72	Several significant and minor flaws that border on unacceptable professional work
D	1.0	60's	Unacceptable; salvageable only with significant effort to remedy the nature and multitude of flaws
F	0.0	< 60	Reject; well below minimal expectations

"W" and "WF" will be accorded as per university policies to students that qualify for such grades. The last date to withdraw from classes may be found on the GSU web site.

Case Analysis and Discussion Guidelines

In-class Discussion

On the days when a case discussion is scheduled, preparation of the case is essential. The case method of teaching is only effective when participants have analyzed the case and are prepared to contribute to the class discussion. Individuals will be "cold called" in order to open the case discussion.

For each case analysis, you should:

- Identify the core problems and issues being faced by the organization (or the core opportunities that are potentially exploitable),
- Use the case data, both quantitative and qualitative, to analyze identified issues

- Based on your analysis, make specific recommendation on the course of action that should be pursued by the organization.

Both the **quantity** of comments (i.e. how many times a student speaks) and, more importantly, the **quality** of the comments are important. The quality of your comments is assessed using the following criteria:

- Does the comment represent a solid analysis of a case or just a reiteration of case facts?
- Does the comment address the question currently on the floor, or is it way off the mark?
- Does the comment demonstrate an ability to listen to and build from what others have said?
- Is the point made concisely, or is it buried in a long, rambling, diatribe?
- Does the comment move the discussion to an important area or does it just rephrase what has been said?
- If "cold called," was the individual prepared?
- Does the comment reflect constructive disagreement?
- Does the comment represent regard, respect and acknowledgment of other's contributions?

The following participatory patterns will be viewed negatively:

- Lack of involvement - silence, detachment or disinterest
- Leading our discussion into unrelated topics
- Spending undue amount of time on minor points
- Long, rambling comments.
- Being absent or unprepared, or passing on a cold call

Preparing Your Case Brief

Briefs are due at the beginning of class. **Each group** will turn in **four written case briefs**. These briefs should be short synopsis-- **not to exceed two pages, single-spaced (typed)**; the smallest typeface allowed is 11-point with 1-inch margins all around. You can also include a **1-2 page Appendix** that includes supporting tables, charts, and figures. The grading of the briefs will be based upon the **quality of your analysis**. Merely restating case facts will not help your grade and, in fact, will use up valuable space in your brief. In writing your briefs, assume that you are a consultant to the company who is being paid to analyze the company's situation and make a set of recommendations.

General Course Policies

- Prerequisites are enforced. Students failing to complete a prerequisites with a grade of "C" or higher will be administratively withdrawn from the course in which they are in violation with a loss of tuition fees, unless they have been granted an exception.

- Students are expected to attend all classes and group meetings, except when precluded by emergencies, religious holidays or bona fide extenuating circumstances.
- Students who, for non-academic reasons beyond their control, are unable to meet the full requirements of the course should notify the instructor. Incompletes may be given if a student has ONE AND ONLY ONE outstanding assignment.
- A “W” grade will be assigned if a student withdraws before mid-semester while maintaining a passing grade. Withdrawals after the mid-semester date will result in a grade of “WF”. Refer to GSU catalog or Registrar’s office for details.
- Spirited class participation is encouraged and informed discussion in class is expected. This requires completing readings and assignments **before** class.
- Unless specifically stated by the instructor, all exams and assignments are to be completed by the student alone.
- Collaboration between students is permitted to prepare for in-class discussion of cases and questions.
- **Within group collaboration is allowed on case briefs.** Collaboration between project groups on case briefs will be considered cheating.
- Copy work from the Internet without a proper reference will be considered plagiarism and subject to disciplinary action as delineated in the Student Handbook.
- Any non-authorized collaboration will be considered cheating and the student(s) involved will have an Academic Dishonesty charge completed by the instructor and placed on file in the Dean’s office and the CIS Department. All instructors regardless of the type of assignment will apply this Academic Dishonesty policy equally to all students. See excerpt from the Student Handbook below:

Academic Honesty

(Abstracted from GSU’s *Student Handbook* Student Code of Conduct “Policy on Academic Honesty and Procedures for Resolving Matters of Academic Honesty” - <http://www.gsu.edu/~wwwcam/academichonesty.html>)

As members of the academic community, students are expected to recognize and uphold standards of intellectual and academic integrity. The University assumes as a basic and minimum standard of conduct in academic matters that students be honest and that they submit for credit only the products of their own efforts. Both the ideals of scholarship and the need for fairness require that all dishonest work be rejected as a basis for academic credit. They also require that students refrain from any and all forms of dishonorable or unethical conduct related to their academic work.

Students are expected to discuss with faculty the expectations regarding course assignments and standards of conduct. Here are some examples and definitions that clarify the standards by which academic honesty and academically honorable conduct are judged at GSU.

Plagiarism. Plagiarism is presenting another person’s work as one’s own. Plagiarism includes any paraphrasing or summarizing of the works of another person without acknowledgment, including the submitting of another student’s work as one’s own.

Plagiarism frequently involves a failure to acknowledge in the text, notes, or footnotes the quotation of the paragraphs, sentences, or even a few phrases written or spoken by someone else. The submission of research or completed papers or projects by someone else is plagiarism, as is the unacknowledged use of research sources gathered by someone else when that use is specifically forbidden by the faculty member. Failure to indicate the extent and nature of one's reliance on other sources is also a form of plagiarism. Failure to indicate the extent and nature of one's reliance on other sources is also a form of plagiarism. Any work, in whole or part, taken from the internet or other computer based resource without properly referencing the source (for example, the URL) is considered plagiarism. A complete reference is required in order that all parties may locate and view the original source. Finally, there may be forms of plagiarism that are unique to an individual discipline or course, examples of which should be provided in advance by the faculty member. The student is responsible for understanding the legitimate use of sources, the appropriate ways of acknowledging academic, scholarly or creative indebtedness, and the consequences of violating this responsibility.

Cheating on Examinations. Cheating on examinations involves giving or receiving unauthorized help before, during, or after an examination. Examples of unauthorized help include the use of notes, texts, or "crib sheets" during an examination (unless specifically approved by the faculty member), or sharing information with another student during an examination (unless specifically approved by the faculty member). Other examples include intentionally allowing another student to view one's own examination and collaboration before or after an examination if such collaboration is specifically forbidden by the faculty member.

Unauthorized Collaboration. Submission for academic credit of a work product, or a part thereof, represented as its being one's own effort, which has been developed in substantial collaboration with assistance from another person or source, or computer honesty. It is also a violation of academic honesty knowingly to provide such assistance. Collaborative work specifically authorized by a faculty member is allowed.

Additional Course Policies

Collegiality, Classroom Conduct & Disruption

You are responsible to contribute towards a collegial classroom environment. You are encouraged, and expected, to raise questions, share experiences and express your views, based on expressed reasoning. Please do not engage in any conduct that disrupts the class and concentration of students or the instructor. **For example, all cell phones, pagers, and other similar buzzing and ringing devices, must be turned off for the duration of the class.** You are welcome to make calls and check messages during class breaks.

Submission Timeline for Assignments

No assignment will be accepted after the classroom discussion takes place. The classroom discussion would provide an unfair advantage to those who wrote the assignments later.

Group Work and Managing Group Problems

Case analysis represents group work. Most groups work well together, but sometimes group dynamics turn dysfunctional. I am willing to work with you to come up with a solution to solve problems that emerge in your specific group setting. Please note that I am willing to **meet concurrently with all members of a group facing a problem** so that we can discuss the problem openly and work together to come up with an acceptable solution. In the spirit of collegial and collective problem resolution, I will not meet with group members individually in such situations.

Week	Topics	Readings	Exercises/ Assignments
1	<p>Course overview</p> <ul style="list-style-type: none"> • Learning Process • Lectures, discussion and participation • Preparing for class • Analysis of cases • In-class discussion of cases and questions • Case briefs • Exams • Field trip • Industry expert panel/speakers <p>Introduction to SCM</p> <ul style="list-style-type: none"> • What is SCM? • Development chain • Global optimization • Managing uncertainty and risk • Evolution of SCM • Complexity of SCM • Why SCM? • Key Issues in SCM 	Chapter 1, textbook; p. 1-18	
2	<p>Introduction to SCM</p> <p>Application of concepts from chapter 1</p>	Chapter 1, p. 18-25	<p>In-class discussion</p> <p>Midtech Surgical (case at the end of chapter 1; please prepare to discuss the four questions on page</p>

Week	Topics	Readings	Exercises/ Assignments
	<p>Inventory Management & Risk Pooling</p> <ul style="list-style-type: none"> • Introduction and forms of inventory • Single stage inventory control • Economic lot size model • Effect of demand uncertainty • Single period models • Initial inventory • Multiple order opportunities • Periodic review policy • Continuous review policy 	<p>Chapter 2 - Sections 2.1 and 2.2; textbook; p. 27-48.</p>	<p>21; not one of four cases for case brief submission by groups.)</p> <p>In-class analysis exercise</p> <p>The Inventory Spreadsheet (Appendix C)</p> <p>Please bring the CD with the accompanying spreadsheet to class. We will examine the five worksheets and evaluate changes that occur when parameter values are modified.</p>
3	<p>Inventory Management & Risk Pooling</p> <ul style="list-style-type: none"> • Risk pooling • Centralized versus decentralized systems • Managing inventory in the supply chain • Practical issues 	<p>Chapter 2 - Sections 2.3, 2.4, 2.5, 2.6, 2.7; textbook; p. 49-63.</p>	<p>In-class discussion</p> <p>Questions 2, 3, 4, 8, 9, 10, 11, 13; p. 60-61</p>

Week	Topics	Readings	Exercises/ Assignments
	<ul style="list-style-type: none"> • Approaches to forecast future demand 		<p>In-class simulation exercise - Risk Pooling (Appendix B)</p> <p>Please bring the CD with the Risk Pooling Game to class. We will conduct multiple simulation runs to examine the risk pooling concept and its performance consequences.</p>
4	Inventory Management & Risk Pooling	Chapter 2; textbook, p. 63-76.	<p>Sport Obermeyer Case Brief Due (Group assignment)</p> <p>Sport Obermeyer Case Presentations & Discussion. Groups 1 and 2 will present their analysis. Each of the presenting groups should develop a few PowerPoint slides to assist them in their presentation.</p>
	<p>Network Planning</p> <ul style="list-style-type: none"> • Network design • Inventory positioning and logistics coordination • Resource allocation 	Chapter 3, p. 77-109	<p>In-class discussion</p> <p>Questions 4 and 5; p. 109.</p>

Week	Topics	Readings	Exercises/ Assignments
5	<p>Supply Contracts</p> <ul style="list-style-type: none"> • Strategic components • Contracts for make-to-stock supply chain • Contracts for make-to-order supply chain • Contracts with asymmetric information • Contracts for nonstrategic components 	Chapter 4, p. 123-142	<p>In-class discussion</p> <p>Questions 3,4, 6, 7</p>
6	<p>The Value of Information</p> <ul style="list-style-type: none"> • The bullwhip effect • Supply chain coordination structures • Information sharing & incentives • Information and supply chain trade-offs • Centralized and decentralized decision-making and performance impacts • Learning organization principles and applications to the beer game • Structure-process-event dependencies and system dynamics in the beer game 	Chapter 5, p. 123-142, p. 143-156, p. 161-172	<p>In-class question discussion</p> <p>Question 2, 3</p> <p>In-class simulation exercise - The Beer Game (Appendix A)</p> <p>Please bring the CD with the Beer Game to class. We will conduct multiple simulation runs to examine the value of information in supply chains.</p>

Week	Topics	Readings	Exercises/ Assignments
6	The Value of Information		<p>Barilla Case Brief Due (Group assignment)</p> <p>Barilla Case Presentations & Discussion.</p> <p>Groups 3 and 4 will present their analysis. Each of the presenting groups should develop a few PowerPoint slides to assist their presentation. Each presentation should last for about 15 minutes.</p>
7	Exam I	Based on material covered up to this point in the semester.	
7	<p>Supply Chain Integration</p> <ul style="list-style-type: none"> • Functional Products • Innovative products • Efficient supply chains • Responsive supply chains • Agile supply chains 	Chapter 6, p. 188-203	
GSU Calendar	Last date to withdraw and possibly receive a "W" for full semester classes		
8	Spring Break – No Class	Spring Break – No Class	Spring Break – No Class

Week	Topics	Readings	Exercises/ Assignments
9	Exam I discussion	Exam I returned and discussed in class.	
9	Supply Chain Integration <ul style="list-style-type: none"> • Push, pull, and push-pull systems • Demand-driven strategies • Impact of lead time • Impact of the Internet on supply chain strategies 		In-class discussion Questions 5, 7 Dell Inc: Improving the Flexibility of the Desktop PC Supply Chain (case at the start of chapter 6; not one of four cases for case brief submission by groups.) The Great Inventory Correction (case at the end of chapter 6; please prepare to discuss the five questions on p. 207; not one of four cases for case brief submission by groups.)
10	Distribution Strategies <ul style="list-style-type: none"> • Direct shipment distribution • Intermediate inventory storage point strategies • Transshipment 	Chapter 7, 209-241.	Amazon.com's European Distribution Strategy Case Brief Due (Group assignment) Amazon.com Presentations/ Discussion. Groups 1 and 2 will present their analysis. Each of the presenting groups should develop a few PowerPoint slides to assist their presentation. Each presentation should last for about 15 minutes.
11	Strategic Alliances <ul style="list-style-type: none"> • Framework for strategic alliances • Third-party logistics • Retailer-Supplier Partnerships 	Chapter 8, p. 243-265.	In-class discussion

Week	Topics	Readings	Exercises/ Assignments
	<ul style="list-style-type: none"> Distributor integration 		<p>Question 4 (p. 203)</p> <p>How Kimberly-Clark Keeps Client Costco in Diapers (<u>not one of four cases for case brief submission by groups.</u>)</p> <p>Audi Duplication Services, Inc. (ADS) (case at the end of chapter 8; please prepare to discuss the five questions on page 265; <u>not one of four cases for case brief submission by groups.</u>)</p>
12	<p>Procurement and Outsourcing Strategies</p> <ul style="list-style-type: none"> Outsourcing benefits and risks A Framework for Buy/Make Decisions Procurement strategies E-Procurement 	Chapter 9, p. 267-294.	<p>The Bidding Game (Appendix D)</p> <p>In-class case discussion</p> <p>Zara (case at the start of chapter 9; please prepare to discuss the questions on page 294; <u>not one of four cases for case brief submission by groups.</u>)</p>
13	<p>Procurement and Outsourcing Strategies</p>		<p>Solectron Case Brief Due (Group assignment)</p> <p>Solectron, Presentations & Discussion.</p> <p>Groups 3 and 4 will present their analysis. Each of the presenting groups should develop a few PowerPoint slides to assist their presentation. Each presentation should last for about 15 minutes.</p>

Week	Topics	Readings	Exercises/ Assignments
13	Global Logistics and Risk Management <ul style="list-style-type: none"> • Types of global forces • Risk management • Issues in international supply chains 	Chapter 10, p. 309-329	In-class discussion Wal-Mart Changes Tactics (case at the start of chapter 10; please prepare to discuss question 6, p. 320; <u>not one of four cases for case brief submission by groups.</u>)
14	Coordinated Product and Supply Chain Design <ul style="list-style-type: none"> • Design for logistics • Supplier integration into new product development • Mass customization 	Chapter 11, p. 207-230	In-class discussion Questions 4, 8 Hewlett-Packard Company: Printer Design for Universality (case at the start of chapter 11; please prepare to discuss questions on p. 363; <u>not one of four cases for case brief submission by groups.</u>)
15	Information Technology <ul style="list-style-type: none"> • Business Processes • Supply Chain IT Innovations • Technology standards • RFID • SOA 	Chapter 14-15, p. 405-419; 428-433; 435-455.	In-class discussion
16	Final Exam		