



TOMS 5314 SUPPLY CHAIN MANAGEMENT

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A. COURSE OVERVIEW

Supply Chain Management is about the management of material and information flows in multi-stage production-distribution networks. Driven by fierce global competition and enabled by advanced information technology, many companies have taken initiatives to reduce costs and at the same time increase responsiveness to changes in the marketplace. This course will provide students with the knowledge and the tools necessary to develop, implement, and sustain strategies for managing supply chain issues.

The critical themes of supply chain management are emphasized in this first level course specifically designed for MBA class to be delivered as 0.25 credit course. These include organizational, strategic and operational aspects of managing Supply Chain from domestic and international perspectives; Outsourcing strategies, supplier relationship and information sharing, supplier networks, contracting and procurement management, logistic integration, role of information technology, and supply chain performance and metrics. As such, we will emphasize on limited topics in the course keeping in mind that at the end of the course you would have developed the abilities to

1. recognize and solve an supply chain problem;
2. present and discuss intelligently a supply chain management issue with staff and management;
3. identify necessary skill set that would be required to solve a complex supply chain problem;
4. see the impact of decisions and actions of supply chain area on other functions of the organization.

Calendar Description: Organizational, strategic and operational aspects of managing supply chain from domestic and international perspectives. Outsourcing strategies, supplier relationship and information sharing, supplier networks, contracting and procurement management, logistic integration, role of information technology, and supply chain performance and metrics.

[Precludes additional credit for BUSI 5601 (no longer offered)]

Prerequisite(s): BUSI 5801.

B. LEARNING OBJECTIVES AND LEARNING OUTCOMES

Upon completion of this course, students should:

- (a) have developed an understanding of the Supply Chain drivers and their interrelationships with other function of a company such as marketing and manufacturing;
- (b) have become familiar with a variety of supply chain management problems, so as to recognize a supply chain issue and to solve a complex supply chain problem;
- (c) have gained an understanding to perceive the impact of decisions and actions of supply chain area on other functions of the organization; and be
- (d) able to recognize the change management implications when executing supplier collaborative strategies.

C. COURSE ORGANIZATION

The format of the course consists of a mixture of lectures, exposing the relevant material, case discussions on supply chain approaches and applications, and in-class problem solving. Students are required to read the assigned reading materials prior to the respective class. For some cases and/or selected readings, a written report will be required (due two hours before the beginning of the class by email), will be marked and will contribute to the overall course evaluation. Learning will also be enhanced through a set of review problems that will be assigned to practice some of the quantitative approaches discussed in class. The answers to these problems are not to be handed in, but should assist you in preparing for quizzes/exams as well as in-class problem solving and discussion.

D. COURSE PREREQUISITE

BUSI 5801; The School of Business enforces prerequisites.

E. COURSE MATERIAL

REFERENCE TEXTBOOKS

D. Simchi-Levi, P. Kaminsky, and E. Simchi-Levi, *Designing and Managing the Supply Chain*, 3rd Ed., McGraw-Hill Irwin.

W. Stevenson and M. Hojati, *Operations Management*, 4th Ed., McGraw-Hill Ryerson.

Note: Only specific chapters or its parts from the reference books are required. These chapters are available for purchase and can be downloaded in the form of a course pack.

The link is <https://create.mheducation.com/shop/#/catalog/details/?isbn=9781308386973>

They are provided to supplement some of the technical concepts that will be briefly discussed in class. One copy each of the main text book is on reserve in the Library.

CLASS NOTES

Any supplementary lecture notes and readings will be available on CuLearn.

CASE STUDIES

We will use six (6) case studies in the course. The cases are as follows:

- 1) Meditech Surgical (Chapter 1)
- 2) Sport Obermeyer (Chapter 2)
- 3) Barilla SpA (A) (Chapter 5)
- 4) Dell Inc: Improving the flexibility of desktop PC supply chain (Chapter 6)
- 5) Zara (Chapter 9)
- 6) Walmart Changes Tactics to meet International tastes (Chapter 10)

Students are required to read the specific chapter and the associated case material prior to the respective class. For some cases a written report will be required (due three hours before the beginning of the class), and will contribute to the overall course evaluation. Learning will also be enhanced through a set of review problems that will be assigned to practice some of the approaches discussed in class. The answers to these problems are not to be handed in, but should assist you in preparing for quizzes/exams as well as in-class problem solving and discussion.

SOFTWARE

Microsoft Excel software learnt elsewhere can be used if required to solve practice problems presented in the course.

OTHER SOURCES

Source One: Books

1. S. Cohen, Strategic Supply Chain Management, 2nd Ed., McGraw-Hill Irwin, 2013.
2. J. Kros, Health Care Management & Supply Chain Management, NOOK Book, 2013.
3. S. Chopra, Supply Chain Management, 5th Ed., Prentice Hall, 2012.
4. R. Jacobs, Operations & Supply Chain Management: The Core, 3rd Ed., McGraw-Hill, 2012.
5. M. Hugos, Essentials of Supply Chain Management, 3rd Ed., Wiley, 2011.
6. R. M. Monczka, Purchasing & Supply Chain Management, Cengage Learning, 2011.
7. J. Coyle, Supply Chain Management: A Logistic Perspective, 9th Ed., Cengage Learning, 2011.
8. J. Mangan, Global Logistics & Supply Chain Management, 2nd Ed., Wiley, 2011.
9. D. Blanchard, Supply Chain Management Best Practices, 2nd Ed., Wiley, 2010.
10. S. Chopra and P. Meindl, Supply Chain Management, 3rd Ed., Pearson- Prentice Hall, 2007.
11. J.T. Mentzer, M.B. Matthew, S.P. Theodore, Handbook of Global Supply Chain Management (Ed.), Sage Publications, 2007.
12. S. Cohen and J. Roussel, Strategic Supply Chain Management, McGraw-Hill Irwin, 2005.
13. R.S. Russell, and B.W. Taylor III, Operations Management, Prentice Hall, 2003.

14. N. Gaither and G. Frazier, Production and Operations Management, South Western College, 1999.

Source Two: Top rated peer-reviewed journals on Supply Chain Management available with the Carleton Library.

1. Supply Chain Management Review
2. Journal of Supply Chain Management
3. Journal of Operations Management
4. Production and Operations Management - POMS
5. International Journal of Logistics Management
6. Journal of Business Logistics
7. International Journal of Physical Distribution and Logistics Management
8. Journal of Transport Economics and Policy
9. Supply Chain Management: An International Journal
10. International Journal of Operations & Production Management

Source Three: Magazine, Newsletters and Reports:

1. Trans Reporter Magazine: This monthly magazine offers its readers an all-inclusive view of the logistics and supply chain industry.
2. Logistics Insight Asia Magazine: It provides extensive coverage for everything that involves supply chain planning: materials, products, information and finances from suppliers to manufacturers to consumers.
3. Logistics Management Magazine: It provides extensive coverage for everything that involves supply chain planning. It reaches the largest number of logistics professionals in the industry.
4. Supply Chain Brain: Excellent news and resources on all aspects of logistics.
5. Manufacturing and Logistics IT News Magazine: It is the leading specialist IT solutions magazine and web-site covering all aspects of end-to-end supply chains within a wide range of vertical markets. This magazine also provides an insight into how technological developments enable all kinds of businesses to operate effectively and efficiently.
6. Inbound Logistics Magazine: This magazine became the informational change agent for reinventing supply chain processes.
7. Supply Chain Digest: This digest covers the information, news and gives full insight about the logistics and supply chain industry.
8. Supply Management magazine is the premier publication for procurement and supply chain professionals globally. This website provides daily news and opinion and exclusive content, in addition to access to magazine articles dating back more than 15 years. There is also a dedicated jobs website– jobs.supplymanagement.com – with the latest vacancies.
9. Supply Chain Digest: It is the industry's most valuable supply chain management and logistics publication. Supply Chain Digest is a weekly, on-line newsletter with lively information, news and commentary that summarizes and synthesizes important information for busy supply chain and logistics professionals.

10. Council of Supply Chain Management Professionals (CSCMP) State of Logistics Report: CSCMP releases the annual "State of Logistics Report®" presented by Penske Logistics every year in June. Delivered by author Rosalyn Wilson, with additional commentary by a panel of industry leaders, representing various areas within the supply chain, the annual "State of Logistics Report®" is widely used by supply chain management and logistics professionals and organizations as the premier benchmark for US logistics activity.
11. The World Bank - Logistics Performance Index (LPI): The LPI is an interactive benchmarking tool created to help countries identify the challenges and opportunities they face in their performance on trade logistics and what they can do to improve their performance.

F. COURSE EVALUATION

Course Design

The course will consist of seminars, class discussions, case assignments for write ups, an in-class exam and a final group work. The grading scheme is as follows:

Individual work

1. Class Participation	10%
2. Three Case Write-ups/ Reports	21%
3. In-class Exam [2.5 Hrs.]	39%

Group Work

1. Final Exam – Take home	
a. Abstract	5%
b. Final submission	25%
Total	100%

Class Participation – Contribution to Class Discussions (10%)

The general guidelines are: Read all the required readings and participate in class discussions as actively and constructively as possible. We will grade each student's participation in class discussions. Best five marks out of six classes will be counted. The continuum of the instructors' evaluation ranges from 0 to 2. That is, the minimum possible mark for participation in each class discussion is 0, the maximum is 2. Therefore, the total highest mark for participation in class discussions throughout the course is 10, the lowest is 0.

Instructor will evaluate your participation in class discussion by applying the following criteria:

1. Did the student participate in today's class discussion?
2. Was there evidence that the student's participation in the discussion was based on his or her knowledge of the required readings? Did the student really read ALL readings assigned for a given class or was the student's discussion based only on his or her past experience and/or common sense? (For classes in which readings/cases are required)
3. Was the student's discussion appropriate and to the point? Did the student contribute to class learning? (e.g., by asking thoughtful questions, helping to understand complicated ideas or

concepts, offering constructive criticism of another's ideas, suggesting reasonable alternatives, being willing to try out new ideas, pursuing the logic advanced by others, etc.)?

Class discussions provide an opportunity to manifest your creative abilities.

Individual Case Write-ups (21%)

There will be six (6) cases discussed in this course. Individually, you will be required to hand in write-ups for any three (3) of these cases. Each case is worth 7% of final grade. To assist you in completing this assignment a set of questions for each case that we expect to see answered in your write up are given at the end of the case. These questions will also form the basis of our discussion in class. When handing in the case write-up DO NOT just repeat case facts. Rather, you need to analyze the material given in the case when answering the case questions. Case write-ups should be precise and to the point not exceeding typed four (4) pages double spaces.

Make sure that you give the rationale behind all your recommendations. Finally clarity of writing is an important part of communication. Marks will be taken off if the case submission is not well written.

It should be noted that the case write-ups are due (by email only two hours) before that specific case is discussed in the class.

What skills you will develop:

- 1) Ability to understand client needs and scope.
- 2) Apply quantitative and qualitative concepts taught in this course
- 3) Ability to collect relevant information, analyze it, and present it effectively.
- 4) Ability to develop a professional report

Tips for Case Analysis - Approach

Cases are brief descriptions of a situation in which an organization finds itself at a point in time. Basically a case study is only a story, a description of events usually in a chronological order. These events provide one source of information you will need to answer questions posed. Other source is the lecture material and research articles discussed in the class. The main purpose of the case assignment is to identify the problem(s)/opportunities facing the organization and to utilize theories and ideas you have learned in this course to make decisions on how to solve those problems. You may feel uncomfortable making such decisions even after you have done a thorough analysis of all the information in the case. Some of what you consider to be key pieces of information may be missing, but this is part of normal reality. Management decisions are never made on the basis of complete information.

Cases will also be discussed in class. You may be called upon to discuss some aspect of a case during the case discussion. You should come to class prepared to discuss any and all aspects of the problem(s)/opportunities in the case and of the decisions you make.

The following steps are a suggested framework. You can modify them as necessary:

- Preview the Case - You may read rapidly or skim through the case, taking notes and jotting down the important ideas. Discover the parameters of the problem and keep in mind the questions that have been asked

- Read the Case – Once you have previewed the case, read it in detail. While reading in detail, you should be looking for major problems, variables, constraints, limitations, alternatives. Keep in mind the relevant literature which may help in solving the case. Note down the relevant points
- Identify the causes for the problem and the type of relationship between the problem and the causes.
- Identify alternative solutions and try to determine what is the best solution
- Give a recommended solution and a plan for implementation (action plan). The action plan should attempt to solve both present and future problems. Undesirable solutions that may occur in the future should also be addressed during this stage. Try to answer what, who when and why. For example, what should be done, when it should be done, who should do it and why should it be done. Give clear rationale for the recommendation.
- Conduct risk analysis. In other words what things could go wrong if your client/organization implements your recommendations, and how organization can prepare for least damage incase unwanted situation occurs. What are suggestions you can give to the firm for smooth implementation of your recommendations.
- Writing should be well organized, logical, clear and free of any grammatical or spelling mistakes. You must support statements with facts.

Individual In-Class Midterm Exam (39%)

There will be one (1) in-class exam to be attempted individually in this course after the first five sessions are over. The goal of the exam is to test individual's knowledge acquired during the course. The exam [2.5 Hrs.] is worth 39% of final grade. Format of the exam will be discussed in the class. Location will be informed in the fourth session. All questions on the exam are compulsory.

Questions will be asked from the material covered prior to the last class including cases, class notes and readings. Exam may include a mini-case which you would be expected to analyze and make recommendations. We strongly recommend that you periodically review the required readings, case assignments, practice problems, and the notes you make during class discussions.

Final Exam (30%)

The Final Exam shall be a Take Home Exam. Group work and details to be announced in class [Session 2]. Groups with three members (maximum) each will be randomized and decided by the faculty. Format of the exam will be discussed in the class. The abstract due 8-June-16 (5% of final grade) is the first component where you decide the topic and area for analysis.

Team Approach

An interactive learning environment provides the maximum potential to explore and truly grasp the material of the course. To facilitate interactive discussion teams will be formed.

It will be necessary for the teams to meet outside of class to discuss the case analyses. In addition, during class, teams may be given topics for discussion and/or small tasks to accomplish

Good group dynamics are essential. You are strongly advised to speak to the instructor about group problems as soon as they arise, rather than waiting until it is too late. Instructor will do his/her best to help mediate group problems as needed.

Note: The Sprott School of Business encourages group assignments in the School for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. In this context, you may find the resources at http://sprott.carleton.ca/academic_programs/groupwork useful.

G. CONDUCT

Professional conduct is built upon the idea of mutual respect. Such conduct entails (but is not necessarily limited to):

Attending the class - Each class benefits from the attendance and participation of all participants.

Class attendance is mandatory. The participation grade will be affected by absences. If any circumstances prevent attendance to the class, the participant is responsible for all materials discussed, handouts distributed, assignments covered, and announcements made.

Arriving on time - Late arrivals are disruptive and show disrespect to those who are on time. Late arrivals are not allowed.

Minimizing disruptions - You should not leave and re-enter the class. All cell phones and electronic communication devices must be turned off during class. You should avoid engaging in side conversations after class has begun.

Focusing on the class - While you may take notes on laptops, do not use laptop computers or hand-held devices for other tasks while in class. Activities such as net-surfing and answering email are very impolite and disruptive both to neighbors and the class.

Being prepared for class - Participants must be ready to discuss any assigned readings and to answer any assigned questions.

Respect - Participants should act respectfully toward all class participants.

Class participation grading reflects student adherence to these principles; participants gain participation credit when they contribute with valuable insights and lose credit if they fail to adhere to any of the above guidelines.

G. PLAGIARISM

The University's Senate defines plagiarism in the regulations on instructional offences as: "to use and pass off as one's own idea or product work of another without expressly giving credit to another."

Borrowing someone else's answers, unauthorized possession of tests or answers to tests, or possession of material designed to help answering exam questions, are also subject to university policy regarding instructional offences. For more information on Carleton University's Academic Integrity Policy, consult: http://www.carleton.ca/studentaffairs/academic_integrity

The photocopying of substantial portions of a textbook (e.g. more than 1 chapter or 15% of the total page count) without the publisher's permission is another misuse of intellectual property, and

is also a violation of Canadian copyright law. Access Canada's website provides guidelines on legitimate copying.

You may also find useful information at: <http://library.wlu.ca/access/guidelines.htm>

H. CHANGES TO THE SYLLABUS

Every effort has been made to make the course outline as complete as possible, but there may be occasions when changes are required. The instructor will announce any deviations from the course outline in class and the change will be posted on the course web page.

I. MBA Academic year

Important Dates and Deadlines can be found at: <http://sprott.carleton.co/students/mba/dates-deadlines/>

J. IMPORTANT ADDITIONAL INFORMATION

Drop Course Policy: The deadline for academic withdrawal is the last day of classes (each term).

Deferred Final Examination: Students unable to write a final examination because of illness or other circumstances beyond their control must contact the instructor in writing to request a deferred exam. Permission may be granted when the absence is supported by a medical certificate and or appropriate document/s to support the reason for the deferral. Deferred exams are not granted for students who have made travel arrangements that conflict with examination schedule.

Person with Disabilities: Students with disabilities requiring academic accommodations in this course are encouraged to contact a coordinator at the Paul Menton Centre for Students with Disabilities to complete the necessary letters of accommodation. After registering with the PMC, make an appointment to meet and discuss your needs with me at least two weeks prior to the exam. This is necessary in order to ensure sufficient time to make the necessary arrangements. Please refer to <http://www.carleton.ca/pmc/> for all PMC information.

Religious Observance: Students requesting academic accommodation on the basis of religious observance should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory academic event. Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

Pregnancy: Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete *a letter of accommodation*. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

K. Course Sharing Websites

Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

L. Academic Integrity

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another’s ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated. Penalties may include expulsion; suspension from all studies at Carleton; suspension from full-time studies; a refusal of permission to continue or to register in a specific degree program; academic probation; and a grade of Failure in the course, amongst others.

Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <http://www2.carleton.ca/sasc/advisingcentre/academic-integrity/>.

Tentative Schedule

<i>Session</i>	<i>Topics</i>	<i>Readings</i>
S-1 (4–May)	<p>In class attendance Overview of the course</p> <p>Chapter 1 - Introduction to Supply Chain Management</p> <p><i>Case study - Meditech Surgicals (Chapter 1)</i> <i>Case Questions:</i> Q1 How would you fix Meditech’s problems in introducing new products? In manufacturing ALL products?</p> <p><i>Learning Outcome:</i></p> <ul style="list-style-type: none"> o Defining SCM for manufacturing and Services o Strategic importance of SCM o The Development chain o Key issues in SC Management 	<ul style="list-style-type: none"> o Chapter-1 & 2 o Handout available o Case studies o Practice Problems
	<p>Chapter 2 - Inventory Management and Risk Pooling</p> <p><i>Case study - Sport Obermeyer (Chapter 2)</i> <i>Case Questions:</i> Q1 How should Wally think (both short-term and long-term) about sourcing in Hong Kong versus China? What kind of sourcing policy do you recommend?</p> <p><i>Learning Outcome</i></p> <ul style="list-style-type: none"> o Different type of inventory and their role o Trade-off between costs and service o Economic Order Quantity o Service level optimization o ABC Inventory method 	

	<ul style="list-style-type: none"> o Risk pooling o Centralized versus Decentralized systems 	
S-2 (11-May)	<p>In-class attendance</p> <p>Chapter 3 – Forecasting Demand</p> <p><i>Learning Outcome - Forecasting Demand</i></p> <ul style="list-style-type: none"> o Five basic demand patterns o Judgmental forecasting methods o Market research methods o Linear regression forecasting models o Time-series forecasting methods o Forecasting errors and performance o Choosing appropriate forecasting technique <hr/> <p>Chapter 5 -The Value of Information</p> <p><i>Case study - Barilla SpA (A) (Chapter 5)</i></p> <p><i>Case Questions:</i></p> <p>Q1 In the environment in which Barilla operated in 1990, do you believe JITD would be feasible? Effective? If so, which customers would you target next? How would you convince them that JITD program was worth trying? If not, what alternatives would you suggest to combat some of the difficulties that Barilla’s operating system faces?</p> <p><i>Learning Outcome:</i></p> <ul style="list-style-type: none"> o The Bullwhip Effect o Information sharing o Information for Coordination o Information and Lead Time Reduction o Information and various trade-offs 	<ul style="list-style-type: none"> o Chapter-2 & 5 o Case study o Handout available o Practice Problems
S-3 (18 May)	<p>In-class attendance</p> <p>Chapter 6 - Supply Chain Integration</p> <p><i>Case study - Dell: Improving the flexibility of desktop PC supply chain (Chapter 6)</i></p> <p><i>Case Questions:</i></p> <p>Q1 How good is the methodology employed by the BPI team to determine the optimum manufacturing option for Dell? Are there more effective approaches?</p> <p><i>Learning Outcome:</i></p> <ul style="list-style-type: none"> o Push, Pull, and Push-Pull systems o Impact of lead-time o Demand-driven strategies 	<ul style="list-style-type: none"> o Chapter- 6 o Case study o Handout available o Practice Problems

Session	Topics	Readings
S-4 (25-May)	<p>In-class attendance</p> <p>Chapter 9 - Procurement and Outsourcing Strategies</p> <p><i>Case study – ZARA (Chapter 9)</i></p> <p><i>Case Questions:</i></p> <p>Q1 Discuss the impact of the product life cycle on the buy/make framework.</p> <p>Q2 Consider a consumer product manufacturer such as P&G. Analyze whether the company should outsource the production of products such as shampoos. Is your recommendation consistent with P&G strategy? If not, explain the reason for the difference between your strategy and what is done by P&G.</p> <p><i>Learning Outcome:</i></p> <ul style="list-style-type: none"> o Outsourcing: Benefits and risks o Make/Buy decision o Procurement strategies 	<ul style="list-style-type: none"> o Chapter-9 o Case study o Handout available o Practice Problems
S-5 (1-June)	<p>In-class attendance</p> <p>Chapter 10 - Global Logistics and Risk Management</p> <p><i>Case study - Walmart Changes Tactics to meet International tastes (Chapter 10)</i></p> <p><i>Case Questions:</i></p> <p>Q1 Why would it be beneficial for Wal-Mart to have suppliers in different countries?</p> <p>Q2 What are the sources of risk faced by the global supply chain and how can the firm mitigate the various risks?</p> <p><i>Learning Outcome:</i></p> <ul style="list-style-type: none"> o Global market forces o Risk sources and their characteristics o Managing global risks o Issues in Int'l SCM o Regional differences in logistics 	<ul style="list-style-type: none"> o Chapter-10 o Handout available o Practice Problems
<p>S-6 In-Class Midterm Examination on Friday, 3-June, 2016 [11:30 - 2:30 PM] Location AP-132 (3-June) [Material covered: Chapters 1, 2, 3, 5, 6, 9, 10]</p>		
S-7 (8-June)	<p>In-class attendance</p> <p>Group-work (5%)</p>	<ul style="list-style-type: none"> o Group submission – abstract