



TOMS - 5314 SUPPLY CHAIN MANAGEMENT

WINTER 2015

Instructor:

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A. COURSE OVERVIEW

Operations management encompasses the body of knowledge concerning management of the day-to-day operations of any type of company. It may be defined as the design, operation, and improvement of the systems that create the firm's products and services. As Ritzman et al. puts it 'In essence, operations management is really about creating customer value through the effective and efficient management of processes, including product, service, and product design'.

Logistics and Supply Chain Management

Foundations and core principles of logistics and supply chain management from domestic and global perspectives, with emphasis on organizational, strategic and operational issues. Context of logistics and supply chain, logistics and supply chain operations, SC designs.

The critical themes of **logistics and supply chain management** are emphasized in this course: 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.

This is a **first level course** in the area of **supply chain management** specifically designed for MBA class to be delivered as 0.25 credit course. 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 i) to recognize and solve an supply chain problem; ii) to present and discuss intelligently a supply chain management issue with staff and management; iii) to identify necessary skill set that would be required to solve a complex supply chain problem; iv) to see the impact of decisions and actions of supply chain area on other functions of the organization.

The Supply Chain Management area is very broad and, again, given the short time for the course we will be able to deal with limited topics. In particular, the following topics, some in depth while others at conceptual level, will be covered:

- Supply Chain Management Overview
 - Defining SCM for manufacturing and Services
 - Strategic importance of SCM
 - The Development chain
 - Key issues in SC Management
- Inventory Management
 - Different type of inventory and their role
 - Trade-off between costs involved
 - Trade-off between costs and service
 - Economic Order Quantity
 - Service level optimization
 - ABC Inventory method
 - Risk pooling
 - Centralized versus Decentralized systems
- Forecasting Demand
 - Five basic demand patterns
 - Judgmental forecasting methods
 - Market research methods
 - Linear regression forecasting models
 - Time-series forecasting methods
 - Forecasting errors and performance
 - Choosing appropriate forecasting technique
- The Value of Information
 - The Bullwhip Effect
 - Information sharing
 - Information for Coordination
 - Information and Lead Time Reduction
 - Information and various trade-offs
- Supply Chain Integration
 - Push, Pull, and Push-Pull systems
 - Impact of lead-time
 - Demand-driven strategies
- Procurement and Outsourcing Strategies
 - Outsourcing: Benefits and risks
 - Make/Buy decision
 - Procurement strategies
- Global Logistics and Risk Management
 - Global market forces
 - Risk sources and their characteristics
 - Managing global risks
 - Issues in Int'l SCM
 - Regional differences in logistics

Exam Date

There will be a Final Exam in the exam week, the date and format will be announced later in the class.

Drop Course Policy

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

B. COURSE ORGANIZATION

The format of the course consists of a mixture of lectures, exposing the relevant material, case discussions on specific applications of management science approaches, 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 at the beginning of the class), 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.

C. COURSE MATERIAL

REQUIRED TEXTBOOK

There is a required textbook which has been customized using few chapters of the book:

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

The Forecasting chapter has been picked up from the book:

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

Here is the message from McGraw Hill- how to buy this customized book. (I think the cost is between \$60-70 and NOT \$200)

Hi again Dear Vinod,

Please see the link below;

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

The title is now an active produce.

Best regards,

Alyssa



In addition, there is one Harvard case you may have to buy. List and source will be provided. The course will primarily run through the customized text book, case studies and research articles that are either latest in the field or classical.

SOME LSCM & OM REFERENCE BOOKS

On Logistics and Supply Chain Management:

- S. Chopra, Supply Chain Management, 5th Ed., Prentice Hall, 2012.
- M. Hugos, Essentials of Supply Chain Management, 3rd Ed., Wiley, 2011.
- S. Cohen, Strategic Supply Chain Management, 2nd Ed., McGraw-Hill Irwin, 2013.
- J. Coyle, Supply Chain Management: A Logistic Perspective, 9th Ed., Cengage Learning, 2011.
- D. Blanchard, Supply Chain Management Best Practices, 2nd Ed., Wiley, 2010.
- J. Mangan, Global Logistics & Supply Chain Management, 2nd Ed., Wiley, 2011.
- R. Jacobs, Operations & Supply Chain Management, 13th Ed., McGraw-Hill, 2010.
- R. Jacobs, Operations & Supply Chain Management: The Core, 3rd Ed., McGraw-Hill, 2012.
- J. Kros, Health Care Management & Supply Chain Management, NOOK Book, 2013.
- S. Pryke, Construction Supply Chain Management, Wiley, 2009.
- R. M. Monczka, Purchasing & Supply Chain Management, Cengage Learning, 2011.
- D. Simchi-Levi, P. Kaminsky, and E. Simchi-Levi, Designing and Managing the Supply Chain, 3rd Ed., McGraw-Hill Irwin, 2008.
- J. T. Mentzer, M. B. Matthew, S. P. Theodore, Handbook of Global Supply Chain Management (Ed.), Sage Publications, 2007.
- S. Cohen and J. Roussel, Strategic Supply Chain Management, McGraw-Hill Irwin, 2005.
- S. Chopra and P. Meindl, Supply Chain Management, 3rd Ed., Pearson- Prentice Hall, 2007.

On Quality and Operations Management:

- W. J. Stevenson, Operations Management, Irwin/McGraw-Hill.
- N. Gaither and G. Frazier, Production and Operations Management, South Western College.
- R. S. Russell, and B.W. Taylor III, Operations Management, Multimedia version, Prentice Hall.
- J. Heizer and B. Render, Principles of Operations Management, Prentice Hall.
- J. R. Evans and W.M. Lindsay, The Management and Control of Quality, Thomson South Western Publishers.
- J. R. Meredith and S. J. Mantel, Jr., Project Management: A Managerial Approach, John Wiley & Sons.
- D. P. Hobbs, Lean Manufacturing Implementation, J. Ross Publishers.
- T. Burton, The Lean Extended Enterprise, J. Ross Publishers.

- W. J. Stevenson and M. Hojati, Operations Management, McGraw-Hill Ryerson.
- R. B. Chase, N.J. Aquilano and F.R. Jacobs, Operations Management for Competitive Advantage

SOME ARTICLES

- Butter and Linse, “Rethinking Procurement in the Era of Globalization”, MIT Sloan Management Review, Fall 2008.
- Venkatesan, “Strategic Sourcing: To Make or Not to Make”, Harvard Business Review, Nov.-Dec. 1992.
- Lee and Billington, “Managing Supply Chain Inventory: Pitfalls and Opportunities”, MIT Sloan Management Review, Spring 1992.
- Lee, Padmanabhan and Whang, “The Bullwhip Effect in Supply Chains”, MIT Sloan Management Review, Spring 1997.
- Gary, “Metrics That Speak to the C-Suite”, Harvard Business School Publishing Corporation, 2005.
- Bhatnagar and Viswanathan, “Re-engineering Global Supply Chains: Alliances Between Manufacturing Firms and Global Logistics Service Providers”, International Journal of Physical Distribution & Logistics, Vol. 30, No. 1, pp. 13-34, 2000.
- Braithwaite, “The Supply Chain Risks of Global Sourcing”, Supply Chain Strategy and Trends-Globalisation, October 2003.
- Kleindorfer and Wassenhove, “Managing Risk in Global Supply Chains”, The Alliance on Globalization by Gatignon and Kimberly (eds.), Cambridge University Press, 2004.
- Chopra and Sodhi, “Managing Risk to Avoid Supply-Chain Breakdown”, MIT Sloan Management Review, Vol. 46, No. 1, Fall 2004.
- New, “The Transparent Supply Chain”, Harvard Business Review, October 2010.
- Whybark, Melnyk, and Davis, “Disaster Relief Supply Chain Management: New Realities, Management Challenges, Emerging Opportunities”, Design Line, May 2010.
- Juttner, Peck and Christopher, “Supply Chain Risk Management: Outlining an Agenda for Future Research”, International Journal of Logistics: Research and Applications, Vol. 6, No. 4, pp. 197-210, 2003.
- Tabbara, “Emergency Relief Logistics: Evaluation of Disaster Response Models”, Oxford Brookes University, 2008.
- Wassenhove, Martinez, and Stapleton, “An Analysis of the Relief Supply Chain in the Aftermath of the Haiti Earthquake”, Insead Humanitarian research Group, Social Innovation Centre, Insead, 2010.

CASE STUDIES

We will use 5 out of these 9 case studies in this course, I have identified them with yellow marker below.

- 1. Meditech Surgicals (Ch 1)

- 2. Sport Obermeyer (Ch 2)
- 3. Barilla SpA (A) (Ch 5)
- 4. Dell Inc: Improving the flexibility of desktop PC supply chain (Ch 6)
- 5. Zara (Ch 9)
- 6. Solectron: From contract manufacturer to global supply chain integrator (Ch 9)
- 7. Supply Chain Design at Jaguar: Bringing ‘Nirvana’ to Halewood (INSEAD, 2001)
- 8. UNICEF Plumpy’Nut Supply Chain (UNC Kenan-Flagler Business School)
- 9. MIA, Philippines (Harvard/UWO)

USE OF SOFTWARE

Microsoft Excel software learnt elsewhere can be used if required.

D. COURSE EVALUATION

Course Design

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

Class Participation	10%	Individual work
Case Presentations	10%	Group work
2 Case Write-ups	30%	Group work
Final Examination	50%	Individual work

The due dates of the above mile-stones will be announced in the class.

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 (other than the assigned role of case presenter or case discussant- as there are separate marks assigned for that)?
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?

4. Did the student contribute to class learning?

Class discussions provide an opportunity to manifest your creative abilities.

Class Presentations (10%)

There will be 5 groups in the class, in general each comprising of 5 students (could be 6 dependent upon the total class enrolment). These five groups will be making presentations on the five Cases (one group responsible for one case as presenter- see at the bottom of the Tentative Schedule). All members in the group will be responsible for a part of the presentation. Each of the remaining four groups MUST ask at least one question or make comment to contribute in the discussion. Marks will be based on the group performance.

Case Write-ups (30%)

There will be 5 cases discussed in this course. You will be required to hand in write-ups for any 2 of these cases. Each case is worth 15% 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 5 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) before that specific case is discussed in the class. When one group-rep submits the case, make sure that the submission email is copied to all group members.

Further tips for Case Analysis are appended to the course outline.

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
- 5) Presentation Skills
- 6) Team Work and Collaboration

Missed participation in the Case Write-up

Such situation should be discussed with the instructor who may shift weight of this item on to the weight of Final Exam.

Final Examination (50%)

Format of the exam will be discussed in the class. Structure of the exam and examples will be discussed in the class.

The goal of the final exam is to test individual's knowledge acquired during the course. Examination will consist of short essay questions, qualitative and quantitative. Questions will be asked from the material covered in the 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.

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.

Case 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.

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.

The Spratt 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. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

E. 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.

F. 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>

G. 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.

Tentative Class Schedule

Session	Topic(s)	Required Readings from Text & Cases
1	-Overview of the course -Introduction to Supply Chain Management	Ch 1
2	-Inventory Management and Risk Pooling -Case Presentation & Discussion	Ch 2 Case 1: Meditech Surgical (find in Ch 1)
3	-Forecasting -The Value of Information -Case Presentation & Discussion	Last Chapter in the text book Ch 2 and 5 Case 2: Dell Inc. (find in Ch 6)
4	-Supply Chain Integration -Case Presentation & Discussion	Ch 6 Case 3: ZARA (find in Ch 9)
5	-Procurement and Outsourcing Strategies -Case Presentation & Discussion	Ch 9 Case 4: Solectron (find in Ch 9)
6	-Global Logistics and Risk Management -Case Presentation & Discussion	Ch 10 Case 5: MIA, Phillipines

Case Presentors: Case 1 – Group 5; Case 2 – Group 4; Case 3 – Group 3; Case 4 – Group 2; Case 5 – Group 1.

Note: Class schedule could vary dependent on the progress we make in the course. Every student (not only presenter) is expected to read all required readings prior to the class.

@ Vinod Kumar 2014, 2015.