

## SCM 2160 : SUPPLY CHAIN & OPERATIONS MANAGEMENT Section: A04

<b>Faculty:</b>	Farhan Islam Office: Drake Centre Room 374 Email: <a href="mailto:farhan.islam@umanitoba.ca">farhan.islam@umanitoba.ca</a>
<b>Lecture Time:</b>	Monday and Wednesday 10:00 am – 11:15 am
<b>Lecture Room:</b>	Drake Centre 117
<b>Office Hours:</b>	Friday 10:30 am – 12:00 pm (January 6 – March 15,2018) TBA (March 16 – April 6, 2018) (Email in advance about your visit)

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### COURSE OVERVIEW

This course covers the basic concepts of production systems, and operation and control of such systems; that is, operations management. Operations management concerns the management of the direct resources and value-added activities that transform inputs (e.g., material, labour, capital, energy, and skills) into outputs (goods and services). Operations managers make decisions, both strategic and tactical, in a number of contexts (e.g., capacity, facilities, technology, sourcing, the workforce, quality, planning and control, and organization). Operations management initially focused almost exclusively on manufacturing-related issues. Examples from a wide variety of service organizations have been included to provide a contemporary view of operations management.

### COURSE OBJECTIVES

The objective of this course is to introduce you to the fundamental concepts of operations management from a general management perspective. Although you may not be involved in the direct management of operations in current or future employment, it will be useful to understand the problems and complexity faced by operations managers.

At the conclusion of this course, you should appreciate that operations management is not simply a set of well-understood "nuts-and-bolts" techniques. Rather, it is primarily a management discipline that is strategically important for survival in today's more competitive environment.

### COURSE MATERIALS

- Ritzman, L.P., Krajewski, L.J., Malhotra, M.K., and Klassen, R.D. (2016), Foundations of Operations Management, 4th Canadian Edition: Pearson Canada Inc.
- Package of cases and reading.

## METHODS OF INSTRUCTION

The first primary method of instruction will be the analysis and discussion of case studies. This requires active student participation. Each case presents an operations management situation in which a decision must be made in light of a number of tradeoffs and alternatives. Class time will be devoted to discussing the situation, the managerial and technical implications of various options, and action to be taken to implement preferred options. There is no right answer to a case but there are definitely approaches that address the issues and recognize the tradeoffs involved.

The second primary method of instruction will be the analysis and discussion of theory using the course textbook. This requires reading the assigned textbook chapters before class. Each chapter provides essential information every student needs to know about operations and supply-related activities in business. Class time will be devoted to discussing and applying the theories in class group exercises.

Other activities will include discussions and presentations of a site visit.

## COURSE DELIVERABLES & EVALUATION

Students will be evaluated as follows:

<b>Performance Evaluation</b>	<b>Weight (%)</b>
Participation: Attendance & Contribution	10 %
Group Case Analysis Reports	10 %
Group Presentation	10 %
Two Term Tests (15 % each)	30 %
Final	40 %
<b>Total</b>	<b>100 %</b>

The following table shows the *tentative* grade cut-offs:

<b>Cumulative Marks</b>	<b>Grade</b>	<b>Performance</b>
$92 \leq x \leq 100$	A+	Excellent
$82 \leq x < 92$	A	Very Good
$77 \leq x < 82$	B+	Good
$71 \leq x < 77$	B	Satisfactory
$67 \leq x < 71$	C+	Marginal
$61 \leq x < 67$	C	Unsatisfactory
$50 \leq x < 61$	D	Unsatisfactory
$< 50$	F	Unsatisfactory

These tentative cut-offs are subject to adjustment up or down depending on the relative performance of the current class. The grades may also be compared with other instructors to maintain overall fairness.

## **1. Participation: Attendance & Contribution (10 %)**

**Attendance** in all sessions of this course is **mandatory** and merits 10 % of the participation mark for each class. If you miss a class, you will not receive any participation credit for that class; **there is no way to “make up” for a missed day.** A grade of zero will be assigned to those classes. In addition, **if you plan to be absent, you should inform me by email before the class. If you are absent in more than five LECTURE or CASE DISCUSSION sessions, you will lose the whole 10% participation mark.**

Preparation for and contribution to classes are vital parts of the development of your managerial skills. These include: identifying, analyzing and solving problems; communicating ideas; using basic concepts and tools; and developing a managerial point of view. You are expected to develop to the point where you can contribute freely, confidently, and positively to class discussions.

Therefore, you should arrive at each class session having carefully read the assigned readings and case studies so that you can make active and informed contributions to class discussions. Generally, you may choose your moments. However, I may sometimes call on you for your contribution or I may include your name in a list of people from whom I expect to hear. **It is your responsibility to advise me and get assistance if you are unable to contribute in any of the sessions.**

Examples of positive contribution include, but are not limited to, being involved in a discussion of assigned material, arguing your point of view during a case discussion, asking a relevant question, suggesting an alternate viewpoint, redirecting our attention to something else in need of discussion, or being actively involved in in-class exercises and other activities. You do not have to have the "right answer".

Your class contribution grade will be based on a daily assessment of your performance. Both the quantity and quality of your class contribution will be assessed. I evaluate your participation for each session **on a scale of 1 to 5, where “5” indicates an extensive contribution and “1” indicates mere attendance and no contribution.**

## **2. Group Case Analysis Report (10 %)**

Each group should submit a Case Analysis Report before the case discussion sessions (**by 10:00 am**). The reports must aim at answering the “Questions for Consideration” (see page 14-15) for each case. They also should not be more than 3 pages (typed, single-spaced lines, font: Times New Roman 12, 1” margins) and the electronic copies should be uploaded on UM Learn/Dropbox/Case Analysis Report#. The submitted files should be named as “Group”+ “Group #” + “ - ” + “Case Report” – “Report #”. For example, the Group 2’s third case report submission should be named as “Group 2- Case Report 3”.

These reports will be graded on a scale from 1 to 3 where “1” indicates weak analysis and “3” indicates strong analysis. These reports merit 10% of your final grade. To be graded as “strong analysis”, the reports should meet all the content/formatting requirements mentioned above. **Late submissions will not be accepted.** If the report is more than 3 pages, only the analysis on the first three pages will be graded. All group members will share the same grade, unless I notice evidence of slacking/free riding by a group member(s).

### **3. Group Presentation (10%)**

Each study group should visit one operations facility (manufacturing or service) in Winnipeg area. The group members are responsible for making all arrangements for the

visit (including choosing a site and lining up contacts). At the end of the semester, **each group should provide a 12 -minute presentation of the site visit. Groups should email me their final presentations the day before their presentation.**

The presentations will be evaluated based on a rubric which will be discussed in class. All group members will share the same grade, with three exceptions: (1) they fail to be present for their own or other groups’ presentations, (2) they do not submit their release forms, and

(3) if I notice evidence of slacking/free riding by a group member(s).

**If you miss your own group’s presentation, you will lose half of the Group Presentation credit (e.g., if your group gets 10/10 on group presentation, your mark will be 5/10).**

**If you miss other groups’ presentation sessions, you will lose 1 score for every session you miss (e.g., if your group presentation mark is 9/10 and you miss one presentation session other than yours, your presentation mark will be 8/10).**

**Before the site visit, you will be asked to sign a release form concerning these site visits. If you prefer not to sign the form, that would be ok, but you should not attend the site visit. If you attend the site visit without submitting your signed release form, you will lose 1 score on your group presentation mark.**

### **4. Two Term Tests (30 %)**

These are two short exams, with a score of 10% each. Each one will cover the reading assignments for a number of sessions but not the content of any cases. The nature of the exam questions will be discussed in class, as we approach the test sessions.

### **5. Final Exam (40 %)**

The examination will be designed to test your knowledge of the assigned readings, cases, and text material. The exam will consist of reasonably open-questions (e.g., case scenario, long answer, short answer, multiple-choice), designed to allow you to demonstrate what you know,

rather than feeding back memorized facts. I will not be directly testing details of the cases we discuss in class, but I will assume you have a basic understanding of each case. As we approach exam time, I will provide more detail about the nature of the exam. Also, please note that the following statement from the University of Manitoba,

Undergraduate Calendar, Academic Schedule: “Students are reminded that they must remain available until all examination and test obligations have been fulfilled.”

**Final Grades.** Final grades will depend on the total marks accumulated during the semester and on the overall performance of the class.

## **OTHER INFORMATION AND REQUIREMENTS**

**Class seating and name/number cards:** Please choose a permanent seat at the beginning of our second session. As well, **bring your name card to each session**. I need to learn your names quickly; these arrangements help me to do so.

**Deferments:** **No make-up term tests and no extensions for group case reports, and group presentations** will be provided. If you have a valid reason

(medical or other as specified in Asper’s Policy on Accommodations for Missed

Undergraduate Term Examinations) for missing the term tests or the presentation, your score will be adjusted to the final exam.

**Course materials:** The lecture notes will be posted on UM Learn. Please check UM Learn regularly for course material, updates, and news.

**Preparation for course sessions:** You are expected to be fully engaged in the entire learning process. This means devoting time and energy to preparation before class,

attending group meetings, listening to others during class discussions, and engaging in class discussions. **Using the notes/information from others who have experienced the course material (including cases) in a previous semester or other venues is a violation of Academic Integrity.**

**Other:** Detailed note-taking during class can often be distracting for others and counter-productive to your own learning. Be selective in taking notes during class. At the end of each class, or at the end of the day, it is a good idea to consolidate what you have learned.

Using your computer during class for personal activities such as reading/writing emails or letters, surfing the Web, playing games, etc. is distracting and counter-productive. I expect you to keep your laptop closed unless you are using it in connection with the class.

Please turn off and put your cell phones away before the class starts, and do not bring your lunch to class. Drinks are fine.

## ACADEMIC INTEGRITY

It is critical to the reputation of the Asper School of Business and of our degrees, that everyone associated with our faculty behave with the highest academic integrity. As the faculty that helps create business and government leaders, we have a special obligation to ensure that our ethical standards are beyond reproach. Any dishonesty in our academic transactions violates this trust. Section 8 of the University Policies, found in The University of Manitoba Calendar, addresses the issue of academic dishonesty. Specifically, acts of academic dishonesty include, but are not limited to:

- using the exact words of a published or unpublished author without quotation marks and without referencing the source of these words
- duplicating a table, graph or diagram, in whole or in part, without referencing the source
- paraphrasing the conceptual framework, research design, interpretation, or any other ideas of another person, whether written or verbal (e.g., personal communications, ideas from a verbal presentation) without referencing the source
- copying the answers of another student in any test, examination, or take-home assignment
- providing answers to another student in any test, examination, or take-home assignment
- taking any unauthorized materials into an examination or term test (crib notes)
- impersonating another student or allowing another person to impersonate oneself for the purpose of submitting academic work or writing any test or examination
- stealing or mutilating library materials
- accessing test prior to the time and date of the sitting
- changing name or answer(s) on a test after that test has been graded and returned
- submitting the same paper or portions thereof for more than one assignment, without discussions with the instructors involved

### Group Projects and Group Work

Many courses in the Asper School of Business require group projects. Students should be aware that group projects are subject to the same rules regarding academic dishonesty. Because of the unique nature of group projects, all group members should exercise special care to ensure that the group project does not violate the policy on Academic Integrity. Should a violation occur, group members are jointly accountable unless the violation can be attributed to a specific individual(s).

Some courses, while not requiring group projects, encourage students to work together in groups (or at least do not prohibit it) before submitting individual assignments. Students are encouraged

to discuss this issue as it relates to academic integrity with their instructor to avoid violating this policy.

In the Asper School of Business, all suspected cases of academic dishonesty are passed to the Dean's office to ensure consistency of treatment.

### TENTATIVE COURSE SCHEDULE

Class	Date	Class Activities	Readings	Assignments Due
<b>Introduction</b>				
1	Wed, Jan 3	Introduction to the Course		
2	Mon, Jan 8	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Strategic Operations Management</li> </ul>	Chapter 1	
<b>MODULE 1: PROCESS MANAGEMENT</b>				
3	Wed, Jan 10	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Process Configuration</li> </ul>	Chapter 4	
4	Mon, Jan 15	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Process Analysis</li> <li>• Capacity Management</li> </ul>	Chapter 4, 5	Group formation
5	Wed, Jan 17	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Capacity Management (Contd.)</li> <li>• Sample Problems</li> </ul>	Chapter 5 Case Package: Process fundamentals + Capacity Analysis	<b>No case reports required; just go through the assigned readings before the class</b>
6	Mon, Jan 22	Case Discussion: National Cranberry Cooperative (Abridged)	Case Package: National Cranberry Cooperative (NCC)	Group Case Report 1 due
7	Wed, Jan 24	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Inventory Management</li> </ul>	Chapter 6	
8	Mon, Jan 29	<b>Term Test 1 (in class test) – closed book exam</b>	<b>Topics: Chapter 1, 4, 5, and 6</b>	
<b>MODULE 2: QUALITY MANAGEMENT</b>				
9	Wed, Jan 31	Lecture and Discussion: <ul style="list-style-type: none"> <li>• Quality Management</li> </ul>	Chapter 7	

10	Mon, Feb 5	Case Discussion: <ul style="list-style-type: none"> <li>Deutsche Allgemeinversicherung (DAV)</li> </ul>	Case Package: DAV	Group Case Report 2 Due
<b>MODULE 3: PRODUCTION PLANNING &amp; CONTROL</b>				
11	Wed, Feb 7	Lecture and Discussion: <ul style="list-style-type: none"> <li>Managing Demand and Forecasting</li> </ul>	Chapter 11	
12	Mon, Feb 12	Lecture and Discussion: <ul style="list-style-type: none"> <li>Aggregate Operations Planning</li> </ul>	Chapter 12	
13	Wed, Feb 14	Case Discussion: <ul style="list-style-type: none"> <li>MacPherson Refrigeration Limited</li> </ul>	Case Package: MacPherson Refrigeration Ltd.	Group Case Report 3 Due
<b>Feb 19 – Feb 23</b>		<b>Winter Term Break – No classes</b>		
14	Mon, Feb 26	Lecture and Discussion: <ul style="list-style-type: none"> <li>Material Resource Planning (MRP)</li> </ul>	Chapter 13	
15	Wed, Feb 28	Case Discussion: <ul style="list-style-type: none"> <li>Illustrious Corporation</li> </ul>	Case Package: Illustrious Corporation Illustrious Excel Sheet	Group Case Report 4 Due (submit the completed Excel sheet as your report)
<b>MODULE 4: PROJECT MANAGEMENT</b>				
16	Mon, Mar 5	Lecture and Discussion: <ul style="list-style-type: none"> <li>Project Management</li> </ul>	Chapter 9	Site Visit Locations/Release Forms due
17	Wed, Mar 7	<b>Term Test 2 (in class test) – closed book exam</b>	<b>Topics: Chapter 7, 11, 12, and 13</b>	
<b>MODULE 5: LEAN SUPPLY CHAIN MANAGEMENT</b>				
18	Mon, Mar 12	Lecture and Discussion: <ul style="list-style-type: none"> <li>Lean Systems</li> </ul>	Chapter 8	
19	Wed, Mar 14	Lecture and Discussion: <ul style="list-style-type: none"> <li>Supply Chain Management</li> </ul>	Chapter 2	
20	Mon, Mar 19	Case Discussion: ITC e-Choupal Initiative	Case Package: ITC e-Choupal Initiative	Group Case Report 5 Due



21	Wed, Mar 21	Case Discussion: ZARA IT and Fast Fashion	Case Package: ZARA	Group Case Report 6 Due
<b>SITE VISIT PRESENTATIONS</b>				
22	Mon, Mar 26	Group Presentations		Presentations
23	Wed, Mar 28	Group Presentations		Presentations
24	Mon, Apr 2	Group Presentations		Presentations
25	Wed, Apr 4	Final Review		

Note: This schedule is subject to change by your instructor – please keep apprised of updates in class and via email

### **CASE DISCUSSIONS SESSIONS: QUESTIONS FOR CONSIDERATION**

#### **National Cranberry Cooperative, 1996**

1. Prepare a detailed flow diagram showing how "process fruit" is processed at RP1. Be sure to distinguish between wet and dry berries.
2. Identify the capacities at each stage of the process. Please do your analysis in barrels and barrels per hour. (Note: bbls. = barrels)
3. What are the current bottlenecks and how might they change?
4. As Mel O'Brien, what facility changes, if any, would you propose for RP1? What factors influence your decision?

#### **Deutsche Allgemeinversicherung**

1. Why is DAV using Statistical Process Control (SPC)? What are the primary challenges in applying SPC to a service industry compared with manufacturing?
2. If you were to explain (in about thirty minutes) the concept of a p-chart to, say, a group of bank tellers who have little background in SPC, how would you do it?
3. How large should each sample be for the experiment described by Schoss and Kluck?
4. The first twelve weeks of the data in Exhibit 4 represent the diagnostic period for the Policy Extension Group. What are the 3-sigma control limits for the process? In which of the subsequent weeks is the process out of control (if any)?
5. As Annette Kluck, what are your specific implementation plans? How do you intend to begin improving the performance of the operation?

#### **MacPherson Refrigeration Limited**

1. What are the relevant tradeoffs at MacPherson?
2. Figure out how Linda calculated the three aggregate plans. Write your report on the assumptions and the calculation steps/logics underlying each of the three aggregate plans (i.e., where do the numbers on the plans come from) and the pros and cons of each plan. At the end, select one of the plans as your preferred one and justify your choice.
3. What criteria and assumptions did you use?

4. How would your plan change if MacPherson produced to order rather than to stock?
5. What effect does the timing of peaks have? What effect would additional periods have?

### **Illustrious Corporation**

1. What is the difference between dependent and independent demand?
2. As Nancy Barfield, prepare the operating plan for the next ten weeks. (There is a worksheet available with the case to help with your calculations.)
3. What does your plan tell you and what might you do about it?
4. What is closed-loop MRP? What does it mean to close the loop? Could MRP have been useful in any of the companies we've studied?

### **The ITC e-Choupal Initiative**

1. What was ITC's motivation for creating the e-Choupal?
2. What were the old and new physical flows and information flows in the channel?
3. What principles did ITC employ as it built the newly-fashioned supply chain?
4. What barriers did ITC face in embarking on this project?
5. As Mr. Sivakumar, how do you plan to proceed to develop this platform for the future?

### **Zara: IT for Fast Fashion**

1. As Mr. Salgado, what will you do concerning the issue of upgrading the POS terminals? Will you upgrade to a modern operating system? Should the POS applications be rewritten to include any additional functionality? If so, what functionality?
2. In your opinion, what are the most important aspects of Zara's approach to information technology? Are these approaches applicable and appropriate anywhere? If not, where would they not work well?
3. What benefits does Inditex/Zara get from its IT infrastructure? How difficult would it be for a competitor to acquire these same benefits?
4. What current or potential weaknesses (if any) do you see in Zara's IT infrastructure and IT strategy?

**AACSB ASSURANCE OF LEARNING GOALS AND OBJECTIVES**

The Asper School of Business is proudly accredited by AACSB. Accreditation requires a process of continuous improvement of the School and our students. Part of “student improvement” is ensuring that students graduate with the knowledge and skills they need to succeed in their careers. To do so, the Asper School has set the learning goals and objectives listed below for the Undergraduate Program. The checked goal(s) and objective(s) will be addressed in this course and done so by means of the items listed next to the checkmark.

	Goals and Objective in the Undergraduate Program	Goals and Objectives Addressed in this Course	Course Item(s) Relevant to these Goals and Objectives
1	Quantitative Reasoning		
	A. Determine which quantitative analysis technique is appropriate for solving a specific problem.	✓	Modules 1 to 5 Case analysis
	B. Use the appropriate quantitative method in a technically correct way to solve a business problem.	✓	Modules 1 to 5 Case analysis
	C. Analyze quantitative output and arrive at a conclusion.	✓	Case analysis
2	Written Communication		
	A. Use correct English grammar and mechanics in their written work.	✓	Group presentation
	B. Communicate in a coherent and logical manner	✓	Case analysis Group presentation
	C. Present ideas in a clear and organized fashion.	✓	Case analysis Group presentation
3	Ethical Thinking		
	A. Identify ethical issues in a problem or case situation	✓	Chapters 1 & 2
	B. Identify the stakeholders in the situation.	✓	Chapters 1 & 2
	C. Analyze the consequences of alternatives from an ethical standpoint.		
4	Core Business Knowledge	✓	Entire Course