



**TOMS - 5302 (A&B) OPERATIONS MANAGEMENT
FALL (2) 2022**

Instructor:	Saroj Koul
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Office:	7010, Nicol Building (Contract Instructors Office)
Term	Fall (F2) from October 31 – December 09, 2022
Office Hours:	By appointment Tuesday [10:15 am - 11.15 am] on Nov.8; Nov.15; Nov. 22; Nov. 29; Dec. 6 Thursday [10:15 am - 11.15 am] on Nov. 10; Nov.17; Nov. 24; Dec. 1; Dec. 8 Also, a pre-class chat via ZOOM for sections A & B shall be held on Monday, 31-Oct. 2022: (7.00 – 8.00 PM), and recordings shall be available on Brightspace.
Course Timings:	TOMS 5302 (A) Tuesday (11:35 am-2:25 pm) NI 4040 TOMS 5302 (B) Thursday (11:35 am-2:25 pm) NI 5010
Prerequisites	BUSI 5801

A. COURSE OVERVIEW

Operations management encompasses the body of knowledge concerning the management of the day-to-day operations of any 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. put 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'*.

Three critical themes of operations management are emphasized: effective process management, the importance of cross-functional integration, and the role of operations in creating customer value. This is a first-level course in operations management specifically designed for an MBA class to be delivered as a 0.25 credit course. Therefore, we will emphasize 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 operations problem, ii) to present and discuss an operations issue intelligently with staff and management; iii) to identify necessary skill set that would be required to solve a complex operations problem; iv) to see the impact of decisions and actions of operations area on other functions of the organization.

The Operations area is very broad, and 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 the conceptual level, will be covered:

1. Creating Customer Value through Operations
2. Process Management
3. Project Management
4. Quality Management: Focus on Statistical Quality Control
5. Capacity Planning
6. Resource Planning

Students with a degree in B.Com. or Industrial Engineering may find the course relatively easy, and my attempt will be to make the course interesting, refreshing and experiential for them.

B. CALENDAR DESCRIPTION

The provision of services and goods to customers, with a focus on efficiency, effectiveness, and productivity. Planning and control of processes involving products, workers, equipment, suppliers, and customers. Effects of variation and uncertainty on the lead time, inventory, quality, and customer service. Includes: Experiential Learning Activity.

C. LEARNING OBJECTIVES and LEARNING OUTCOMES

Upon completion of this course, students should:

1. demonstrate an understanding of key issues facing managers in making decisions about design, operation and improvement of systems that create the organization's products and services.
2. be able to recognize the pivotal value of operations in the creation of customer value.
3. understand the interrelated processes of a firm which connects operations with all other functional areas of an organization.
4. demonstrate knowledge of OM concepts/tools and apply them to design, plan, coordinate and control operations within an organization.

D. COURSE ORGANIZATION

The course format consists 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 before the respective class. For some 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 reviewing problems assigned to practice some of the management science approaches discussed in class. The answers to these problems are not to be handed in but should assist you in class problem-solving and discussion.

COURSE TEXTBOOK(S):

L.P. Ritzman, L.J. Krajewski, M.K. Malhotra and R.D. Klassen, *Foundations of Operations Management*, 4th Canadian Edition, ©2016 Pearson Education Canada. ISBN-10: 0134090918; ISBN-13: 9780134090917 [Note: Only Chapters 1, 3, 4, 6, 7 and 11 or parts from the textbook are required.]

The course content is selected from several books on Operations Management authored by L.P. Ritzman, L.J. Krajewski, and M.K. Malhotra in the last 20 years. They have co-authored several books, including a few mentioned below, the content of each varies a bit.

- Foundations of Operations Management (with R.D. Klassen)
- Operations Management - Operations Management: Processes and Value Chains
- Operations Management: Processes and Supply Chains

The price of the above latest editions is exorbitant, around/above \$150. For our purpose, since we are going to cover just a few topics, it is advised that you search e-sources such as Amazon or eBay and pick up the one which fits with the budget keeping, e-version, or hard-copy is your choice. However, please keep two criteria in mind: 1. The book should have most (if not all) of the topics we cover in this course (as per the course outline) 2. The book edition should not be ancient, i.e. newer, the better; 2018 or beyond will be OK.

Please note, you do not require to buy a textbook to succeed in our upcoming course. The following **electronic resources are connected via ARES** for your use. Either one of the Chapters or their parts is required. Details will be available on Brightspace.

1. Operations management [electronic resource]: Greasley, Andrew., (ARES)
2. Lean manufacturing implementation [electronic resource]: a complete execution manual for any size manufacturer. Hobbs, Dennis P., (ARES)
3. Achieving Supply Chain Integration: Connecting the Supply Chain Inside and Out for Competitive Advantage [electronic resource]: Autry, Chad and Moon, Mark (O'Reilly Online learning) (ARES)

Also, the Textbooks listed below are available on RESERVE in the main library.

4. W. Stevenson and M. Hojati, Operations Management, 4th Ed., (2018) McGraw-Hill Ryerson.
5. J.R. Meredith and S. J. Mantel, Jr., Project Management: A Managerial Approach, John Wiley.

CASE STUDIES

We will use three (3) case studies and one (1) simulation in the course. All the case studies will be loaded on Brightspace. There are also instructions in ARES, tagged 'Simulation Instructions', that students can follow to create a free Harvard Business Student Account. Please prepare the case studies and basics of concepts for the simulation before the session in which they are to be discussed.

Case STUDY-1: Fair Park Covid-19 Mass Vaccination Site

Product #: 622004-PDF-ENG; Source: Harvard Business Publishing (Aug 9, 2021)

<https://hbsp.harvard.edu/product/622004-PDF-ENG>

CASE STUDY-2: Project Destiny by P. Fraser Johnson, Ken Mark

Product #: W19138-PDF-ENG; Source: Ivey Publishing (Pub Date: Apr 11, 2019)

<https://hbsp.harvard.edu/search?Ntt=W19138-PDF-ENG>

CASE STUDY-3: Hank Kolb, Director, Quality Assurance by Frank S. Leonard

Product #: 681083-PDF-ENG; Source: Harvard Business School (Pub Date: March 31, 1993)

<https://hbsp.harvard.edu/search?Ntt=681083-PDF-ENG>

SIMULATION 1: Inventory Management

Product #: 4402-HTM-ENG; Source: Harvard Business Publishing
<https://hbsp.harvard.edu/product/4402-HTM-ENG>

USE OF SOFTWARE

You may use any software package which contains Management Science models. Microsoft Excel software tool or other tools introduced in the Modeling Business Decisions course can also be used.

EXAM TYPE: Sit-In

EXAM DATE: Thursday, December 15, 2022 (2½ Hrs) [Timings TBA]

Drop Course Policy:

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

Grading Scheme:

Class Participation	20% (Individual)
Case Presentation	15% (Group)
Case Write-up	15% (Group)
Simulation Exercise	10% (Group)
Final End-of-Term Examination	40% (Individual)
TOTAL	100%

PREPARATION AND PARTICIPATION:

Class Participation (20%) has two components:

- a) *Contribution to In-Class Discussions* (5%): The general guidelines are: Read all the required readings and participate in class discussions as actively and constructively as possible. Each student's participation in class discussions shall be graded. The minimum possible mark for participation in each class discussion is 0, and the maximum is 1. Therefore, the total highest mark for participation in class discussions throughout the course is 5, the lowest is 0 (the first session will not be counted). The 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 read ALL readings assigned for a given class, or was the student's discussion based only on his or her 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.

- b) *Contribution by way of developing an OM Concept* (15%): From the material studied each week, you shall select a specific OM term of interest, and develops it as a concept. As such, five concepts individually shall be developed in the term. Each concept shall be **a write-up in about two (2) pages, double space** with the detail to include a general definition, use in the manufacturing or service industry, one benefit, an example where an application is

available/used, and a reference (APA Style). Evaluation Rubrics shall provide detailed mark break-up and dates of submission.

Class Presentation (15%)

There will be three (3) cases discussed in this course. For group presentations, depending on the class enrollment, **4-member groups shall be formulated**. Each group will be making one (1) case presentation. Each group member will be responsible for a part of the presentation. Evaluation Rubrics shall provide detailed mark break-up and dates of submission. **The presentation has to be in six (6) slides and uploaded before the start of class.** Marks will be based on the group's performance.

Case Write-up (15%)

You will be required to hand in the write-up for one (1) case. This case should be other than the one your group is presenting. To assist you in completing this assignment, a set of questions for each case that we expect to see answered in your write-up will be provided in the preceding class and/or 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 assignments should be precise and to the point and **not exceed typed six (6) pages in double spaces and uploaded before the start of class.**

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 before it is discussed in class. No case write-up submissions will be accepted for grading after the discussion has begun. Please note that the managerial reports will not be returned after being marked. However, they will be available for consultation at the instructor's office. Be sure to keep a copy for yourself.

Further tips for Case Analysis are appended to the course outline. What skills will you 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) Teamwork and Collaboration

Simulation Exercise (10%)

There will be one (1) Web-based Simulation exercise in a **group setting**. First, there will be a preparation round to understand the specific concepts and the various decision-making characteristics used to operate the simulation. Then, in practice round, groups play a basic round. Finally, a competition round will be held. The group simulation outcome shall include the web-based **competition rating (5%) and a reflection (5%) (Two slides PPT – 6 bullet points total on the group's learnings.**

Final Examination (40%)

The end-of-term exam (individual) format will be discussed in class and held during the exam week on **Thursday, December 15, 2022**. Timings shall be communicated. The structure of the exam and examples will be provided. The goal of the final exam is to test knowledge acquired during the course. Questions will be asked from the material covered in the class, including cases, class notes and readings. The examination may consist of short essay questions, qualitative and quantitative and may include a short case in 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.

Students are advised that exam papers will not be returned to them after being marked. They will be available for consultation only at the instructor's office. If a participant is unable to sit for the final exam, the School's office will determine the eligibility for a deferred final examination. It should be noted that deferred examinations are not granted to participants who make travel plans that conflict with the examination period. Further, the final grade in the course is subject to Dean's approval.

Approach for Case study & Simulation Exercise:

These are brief descriptions of a situation in which an organization finds itself at a point in time. A case study is only a story, a description of events usually in chronological order. These events provide one source of information you will need to answer the 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 key pieces of information may be missing, but this is part of normal reality. Management decisions are never made based on complete information.

The three 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 aspects of the problem(s)/opportunities in the case and of the decisions you make.

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

- 1) 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
- 2) 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
- 3) Identify the causes for the problem and the type of relationship between the problem and the causes.
- 4) Identify alternative solutions and try to determine what is the best solution
- 5) 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 it should be done. Give a clear rationale for the recommendation.

- 6) Conduct risk analysis. In other words, what could go wrong if your client/organization implements your recommendations, and how can the organization prepare for the least damage in case an unwanted situation occurs? What are suggestions you can give to the firm for the smooth implementation of your recommendations?
- 7) Writing should be well organized, logical, clear and free of 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. Instructors will do their best to help mediate group problems as needed.

Group work:

The Spratt School of Business encourages group assignments for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership and other group skills. Group assignments are also good for learning integrative skills for completing complex tasks. Your professor may assign one or more group tasks/assignments/projects in this course. 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.

Late Assignments:

To ensure fairness for all students, penalties will be applied to late assignments: Failure to submit an assignment on time will result in an initial penalty of five (5) percentage points, followed by an additional (2) percentage points per day thereafter. For example, an assignment that would normally merit a grade of 80% would receive a grade of 75% if submitted after the deadline on the due date, 73% if submitted the following day, and so on. Requests for extension will be considered in cases of illness, family emergency, or other exceptional circumstances.

Deferred Final Examination:

Students unable to write a final examination because of illness or other circumstances beyond their control must contact the instructor and the MBA office in writing to request a deferred exam. Permission may be granted when the absence is supported by a medical certificate or appropriate document/s to support the reason for the deferral.

Course Schedule:

Wk	Date	Topic/Agenda	Pre-class Prep/ Practice
1	Session-1	Creating Customer Value through Operations	Read Course Outline; Session 1 slides, rubrics and additional material available on Brightspace
2	Session-2	Process Management Case-study 1	Practice (+Solutions) Numericals; Session 2 slides, deliverables, rubrics and additional reading material available on Brightspace
3	Session-3	Project Management Case-study 2	Practice (+Solutions) Numericals; Session 3 slides, deliverables, rubrics and additional reading material available on Brightspace
4	Session-4	Quality Management: Statistical Quality Control Case-study 3	Practice (+Solutions) Numericals; Session 4 slides, deliverables, rubrics and additional reading material available on Brightspace
5	Session-5	Capacity Planning Simulation Exercise	Practice (+Solutions) Numericals; Session 5 slides, deliverables, rubrics and additional reading material available on Brightspace
6	Session-6	Resource Planning Group Presentations	Practice (+Solutions) Numericals; Session 6 slides, deliverables, rubrics and additional reading material available on Brightspace

Contribution to Program Learning Goals (MBA):

MBA Learning Goal	Not Covered	Introduced	Taught but Not Assessed	Taught <u>and</u> Assessed
MB1 Leadership and Collaboration <i>Graduates will be equipped for leadership and collaboration.</i>			✓	
MB2 Communication <i>Graduates will be effective communicators</i>				✓
MB3 Critical Thinking and Problem Solving <i>Graduates will be skilled in critical thinking and problem-solving.</i>				✓
MB4 Functional Knowledge <i>Graduates will have functional knowledge of all areas of business.</i>			✓	
MB5 Global Business <i>Graduates will have an appreciation of the global environment of business.</i>			✓	
MB6 Ethical Reasoning <i>Graduates will be skilled in ethical reasoning and decision-making.</i>			✓	

ADDITIONAL INFORMATION

Course Sharing Websites

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).

Required calculator in BUSI course examinations

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/sexual-violence-support/>

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

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; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, 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: <https://carleton.ca/registrar/academic-integrity/>

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at:

Important Information:

- Students must always retain a hard copy of all work that is submitted.
- All final grades are subject to the Dean's approval.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>

Important dates and deadlines: <https://sprott.carleton.ca/students/mba/dates-deadlines-policies/>

Covid-19 Information:

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are a number of actions you can take to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's symptom reporting protocols.

Masks: Carleton has paused the COVID-19 Mask Policy, but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: Further, while proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in cuScreen as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety, which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements, please see the University's COVID-19 website and review the Frequently Asked Questions (FAQs). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.