

**TOMS 5302 P (PMBA)
Operations Management
Winter 2022**

Instructor:	Dr. Saroj Koul
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Office Hours:	By appointment and online via ZOOM. Also, the pre-class chat held on Saturday, March 19, 2022: (7:30 PM – 9.00 PM) recordings are available on Brightspace.
Class Meeting	Online
Course Timings:	Friday, April 22, 2022, and Saturday, April 23, 2022.
Learning Modality:	This course is being delivered <i>entirely online</i> . All students are expected to participate remotely via Zoom. [18 hours synchronous (<i>i.e., delivered in real-time</i>); 0 hours asynchronous] Students are required to have reliable, high-speed internet access, a computer (ideally with a webcam), and a headset with a microphone.

Course Calendar Description:

TOMS 5302 [0.25 credit]

Operations Management: The provision of services and goods to customers, focusing 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

Course Description:

Operations management encompasses the body of knowledge concerning the management of the day-to-day operations of any type of company. It may be defined as designing, operating, and improving 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 implies 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 with staff and management intelligently; 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 following topics, some in-depth while others at the conceptual level, will be covered:

1. Creating Customer Value through Operations
2. Process Management
3. Supply Chain Integration

4. Quality Management: Focus on Statistical Quality Control
5. Capacity Planning
6. Resource Planning

Learning Objectives:

Upon completion of this course, students should:

1. demonstrate an understanding of key issues facing managers in making decisions about the 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 that 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.

Course Prerequisites: BUSI5801

Required Materials:

Students are required to have reliable, high-speed internet access, a computer (ideally with a webcam), and a headset with a microphone.

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 more related to several books on Operations Management authored by L.P. Ritzman, L.J. Krajewski, and M.K. Malhotra in the last 20 years; the three authors have co-authored a variety of books, including a few mentioned below, the content of each varies a bit.

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

Please note, you do not require to buy a textbook to succeed in our upcoming course. Following electronic resources are connected via ARES for your use. Either one of the Chapters or their parts is required.

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, a few OM Textbooks listed below are available on RESERVE in the main library.

1. R.S. Russell, and B.W. Taylor III, Operations Management, Prentice-Hall.
2. J. Heizer and B. Render, Principles of Operations Management, Prentice-Hall.
3. J.R.Evans and W.M.Lindsay, The Management and Control of Quality, Thomson South-Western.
4. W.J.Stevenson and M.Hojati, Operations Management, McGraw-Hill Ryerson.

CASE STUDIES & SIMULATION EXERCISES

We will use three (3) case studies and two (2) web-based simulation exercises in the course for group work. Each group (a four-member team) will be using the following cases and simulations.

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: Atal Indore City Transport: Managing Vehicle Scheduling in Public Transportation

Product #: W21259-PDF-ENG

Source: Ivey Publishing May 27, 2021) <https://hbsp.harvard.edu/product/W21259-PDF-ENG>

Case Study-3: Tesla Inc.: Accelerating Sustainable Profits

Product #: W20621-PDF-ENG

Source: Ivey Publishing (Aug 4, 2020) <https://hbsp.harvard.edu/product/W20621-PDF-ENG>

Simulation 1: Quality Analytics

Product #: 4404-HTM-ENG

Source: Harvard Business Publishing <https://hbsp.harvard.edu/product/4404-HTM-ENG>

Simulation 2: Inventory Management

Product #: 4402-HTM-ENG

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

The above three cases (independently) and two simulations (one per group) are created with Harvard Business Publishing with links via Ares. 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 on concepts for the simulation before the session in which they are to be discussed.

USE OF SOFTWARE

You may use any software package which contains Management Science models, including Microsoft Excel.

Final Exam Date:

Release of Question Paper Saturday, Apr 23, 2022, (06.00 Hrs.)

Submission of Individual Take-home Saturday, May 7, 2022 (11:59 Hrs.)

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

Grading Scheme:	Individual	Contribution to Class Discussion	18%
	Group-work	Case Analysis Presentation	30%
		Simulation Exercises	20%
	Individual	Final Take-home	32%
		Total	100%

Each component of your grade will be assigned a percentage score. Your final course grade will be a weighted average of each of these components.

Contribution to Class Discussion: (18%): Each session shall be rated at 3% per day. The general guidelines are: Make sure that all the required readings of the day are studied prior. Participate in class discussions as actively and constructively as possible. Each student's participation per session shall be graded. The continuum of the instructors' evaluation ranges from 0 to 3. The minimum possible mark for participation in each class discussion is 0, and the maximum is 3. Therefore, the total highest mark for participation in class discussions throughout the course is 18; the lowest is 0 (all sessions will be counted).

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

1. Did the student participate in today's session discussion (other than the assigned role of case presenter or case discussant or the simulation analysis - 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 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.

Groupwork: Case Analysis Presentation (30%) & Simulation Exercises (20%): Five or six groups will be formed depending on class enrollment. Group details shall be available two weeks before the start of the class. Groups shall independently work out all the three case studies and the two simulation exercises for which specific sessions are scheduled under the Course Schedule section and evaluation Rubrics detailing marks break-up on Brightspace.

- Case Analysis Presentation (30% = 3x10) There will be three (3) case studies discussed in the course. For two case studies, each group is to make a presentation (Six slides PPT), and for the third case with a class discussion, each group will write a reflection (Two slides PPT – 6 bullet points total) on their group's learnings. Marks will be based on group performance. Details are available under activity sub-section of Course Schedule on Page 6 and 7.
- Simulation Exercise (20% = 2x10) There will be two (2) Web-based Simulation exercises 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 the 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 and a reflection (Two slides PPT – 6 bullet points total) on the group's learnings. Details are available under activity sub-section of Course Schedule on Page 6 and 7.

Group Approach: Cases and simulations are brief descriptions of a situation in which an organization finds itself at a point in time. They are a description of events, usually in chronological order. These events provide one source of information for which you will need to answer the questions posed. Another source is the lecture material and research articles discussed in the class. The group assignment's primary purpose is to identify the problem(s)/opportunities facing the organization and utilize the theories and ideas you have learned in this course to solve those problems. You may feel uncomfortable making such decisions even after a thorough analysis of all the available information. Some of what you consider key pieces of information may be missing, but this is part of everyday reality. Management decisions are never made

based on complete information.

The cases and simulations will also be discussed in class. You may be called upon to discuss some aspect of a case during the case discussion. It would be best to come to class prepared to discuss any aspects of the case's problem(s)/opportunities and your decisions.

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

- 1) Preview the Case - You may read rapidly or skim through the case, take notes, and jot down the essential ideas. Discover the parameters of the problem and keep in mind the questions asked.
- 2) Read the Case – Read it in detail once you have reviewed the case. While reading in detail, you should be looking for significant problems, variables, constraints, limitations, alternatives. Keep in mind the relevant literature that may help in solving the case. Note down the relevant points.
- 3) Identify the causes of the problem and the 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 an implementation plan (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 a clear rationale for the recommendation.
- 6) Conduct risk analysis. In other words, what things could go wrong if your client/organization implements your recommendations and how the organization can prepare for the least damage in case an unwanted situation occurs. What suggestions can you give to the firm for the smooth implementation of your recommendations?
- 7) Writing should be well organized, logical, clear and free of any grammatical or spelling mistakes. You must support statements with facts.

An interactive learning environment provides the maximum potential to explore and truly grasp the course material. Groups (with four members) will be formed to facilitate interactive discussion. It will be necessary for the groups to meet in Zoom breakout rooms to discuss the case analyses. Also, during class, groups may be given topics for discussion and 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.

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 suitable for learning integrative skills for complex tasks. 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.

Final examination (32%) The goal of the take-home exam is to test the knowledge acquired during the course. Questions will be asked from the material covered in the class, including cases, simulation exercises, class notes and readings. The format of the exam will be discussed in class. The structure of the exam and examples will be provided. The examination format may consist of short essay questions, qualitative and quantitative, writing a short-concept-based case study, or even analyzing a mini-case (analyzing and making recommendations).

Late Assignments:

To ensure fairness for all students penalties will be applied. As a presence in all the six sessions



is essential, missing a session means no marks, especially group work. Requests for an extension (for Final Take-home) will be considered in cases of illness, family emergency, or other exceptional circumstances.

Preparation and Participation:

The course format consists of a mixture of lectures, exposing the relevant material, case discussions on specific applications of the management science approach, and web-based simulation problem-solving. Students are required to read the assigned reading materials prior to the beginning of the class. These will be useful in group settings as you work on the case analysis and simulation exercises. The Zoom class sessions are expected to be interactive, and class participation from each participant is expected and encouraged. Due to time constraints, not all chapter material will be covered in class. Students are responsible for the entire content of each chapter of the textbook and all additional topics discussed in class, except for those areas specifically excluded by the instructor.

COURSE SCHEDULE

DAY 1: Friday, April 22, 2022

Session Details	Activity	Pre-class Preparation
<p>Morning (8.30 AM to 11:30 AM)</p> <ol style="list-style-type: none"> 1. 45 min - Lecture 2. 60 min - Group Preparation (BOR)# 3. 10 min- BREAK 4. 60 min – Group Presentations/Q&A 5. 05 min – Session Summary <p>Lunch Break- 11:30 to 12:30</p>	<p>CASE STUDY 1: Fair Park Covid-19 Mass Vaccination Site</p> <p><i>Deliverable</i> - Case Presentation with the upload of PPT to Brightspace before the beginning of the class presentation</p>	<p>Process Management</p> <ul style="list-style-type: none"> • Creating Customer Value through Operations and Process Configuration (Detailed slides available on Brightspace) <p>Section 2.3, 2.4 & 2.8 from A. Greasley (ARES)</p> <ul style="list-style-type: none"> • Managerial Reading -1
<p>Midday (12:30 PM - 2.15 PM)</p> <ol style="list-style-type: none"> 6. 30 min – Lecture 7. 30 min– Group preparation (BOR)# 8. 10 min – BREAK 9. 30 min – Case discussion in class 10.05 min – Session Summary 	<p>CASE STUDY 2: Atal Indore City Transport: Managing Vehicle Scheduling in Public Transportation</p> <p><i>Deliverable</i> - Case Analysis as group reflection with upload to Brightspace by Apr 24 (11.59 PM).</p>	<p>Process Improvement</p> <ul style="list-style-type: none"> • Capacity Planning Concepts & Quality Management (Detailed slides available on Brightspace) <p>Section 2.19 from A. Greasley (ARES) Chapter: 3 from Hobbs DA (ARES)</p> <ul style="list-style-type: none"> • Managerial Reading -2
<p>Afternoon (2:15 PM- 4:30 PM)</p> <ol style="list-style-type: none"> 1. 30 min – Lecture 2. 15 min – Simulation – Basics 3. 10 min – BREAK 4. Simulation Rounds (BOR) # <ol style="list-style-type: none"> a. 30 min – Practice round b. 10 min – Strategy formulation c. 30 min – Competition round d. 05 min – Group Summations 5. 05 min – Session Summary 	<p>SIMULATION 1: QUALITY ANALYTICS</p> <ol style="list-style-type: none"> 1) Preparation (Practice & Strategy) round 2) Competition round <p><i>Deliverable</i> – Upload Simulation Reflection (Two Slides – 6 bullet points total) based on learning by Apr 24 (11.59 PM).</p>	<p>Quality Management Concepts</p> <ul style="list-style-type: none"> • Quality Management Concepts (Detailed slides available on Brightspace) <p>Section 2.19 from A. Greasley (ARES) Chapter: 3 from Hobbs DA (ARES)</p> <ul style="list-style-type: none"> • Managerial Readings -3

DAY 2: Saturday, April 23, 2022

Session details	Activity	Pre-class Preparation
<p>Morning (8:30 AM to 11:30)</p> <ol style="list-style-type: none"> 45 min – Lecture 60 min – Group preparation (BOR)[#] 10 min- BREAK 60 min – Group Presentation/Q&A 05 min – Session Summary <p>Lunch Break- 11:30 to 12:30</p>	<p>Case Study-3: Tesla: Accelerating Sustainable Profits</p> <p><i>Deliverable</i> - Case Presentation with the upload of PPT to Brightspace before the beginning of the class presentation</p>	<p>Supply Chain Integration</p> <ul style="list-style-type: none"> Supply Chain Integration Concepts. (Detailed slides available on Brightspace) <p>Chapters 1, 2 and 3 from Chad and Mark (ARES)</p> <ul style="list-style-type: none"> Managerial Readings -4
<p>Midday (12:30 PM- 2:30 PM)</p> <ol style="list-style-type: none"> 45 min – Lecture 15 min – Class Simulation Preparation Round Simulation Rounds (BOR)[#] <ol style="list-style-type: none"> 15 min – Training round 15 min - Strategy formulation 30 min - Competition round 10 min – Session Summary <p>Break- 2:30 to 3:00</p>	<p>SIMULATION 2: INVENTORY MANAGEMENT</p> <ol style="list-style-type: none"> Preparation (Practice & Strategy) round Competition round <p><i>Deliverable</i> – Upload Simulation Reflection (Two slides – 6 bullet points total) on learning by Apr 24 (11.59 PM).</p>	<p>Inventory Management</p> <ul style="list-style-type: none"> Inventory Management Concepts. (Detailed slides available on Brightspace) <p>Section 2.14 from A. Greasley (ARES)</p> <ul style="list-style-type: none"> Managerial Readings -5
<p>Afternoon (3:00 PM to 5:00 PM)</p> <ol style="list-style-type: none"> 45 min- Lecture 30 min - Solving problems 30 min - Summary of the course 15 mins Final Exam Q&A 	<p>Solving MRP Explosion problems</p> <p><i>Deliverable</i> - Numerical Analysis (practice problems)</p>	<p>Resource Planning</p> <ul style="list-style-type: none"> Resource Management Concepts. (Detailed slides available on Brightspace) <p>Section 2.16 from A. Greasley (ARES)</p> <ul style="list-style-type: none"> Managerial Readings -6

BOR – Breakout Room

What is expected of you for the TOMS 5302P Course:

- Before attending lectures, read the relevant chapters from the e-resources (available on ARES) and course slides.
- Submit all assignments on time. Late assignments will NOT be graded.
- Attend all Zoom lectures. The topics covered in this course are cumulative; therefore, missing a lecture on any of the topics could affect your understanding of the material to be discussed subsequently.
- Active class participation is expected.

Best wishes,
Course Instructor

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 the prior written consent of the author(s).

Letter Grades:

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	F = Below 50
A = 85-89	B = 73-76	C = 63-66	D = 53-56	
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52	

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**
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 Obligations**
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>
- **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. <https://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/>

- **Student Activities**

Carleton University recognizes the substantial benefits, to both the individual student and the university, that result from participating in activities beyond the classroom experience. Reasonable accommodation will 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: <https://students.carleton.ca/course-outline/>

Academic Integrity:

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—are a serious academic offence, 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: <https://carleton.ca/csas/>

Other 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 can do so by visiting <https://carleton.ca/its/get-started/new-students-2/>