McMaster University | DeGroote School of Business

MBA O611
Operations Management
Winter 2026 Course Outline

Operations Management Area
DeGroote School of Business
McMaster University

COURSE OBJECTIVE

The objective of this course is to develop an in-depth understanding of the core operations management activities that create value by transforming inputs into outputs in the form of goods and services. Students will build modeling and problem-solving skills to identify and reduce operational inefficiencies while gaining familiarity with analytical tools essential for solving complex operational problems. Through a combination of theory, real-life examples, case studies, and modeling exercises, the course prepares students to apply operations management principles and methods to enhance organizational efficiency and effectiveness.

INSTRUCTOR AND CONTACT INFORMATION

Instructor: Dr. Nooshin Salari
salarin@mcmaster.ca
Office: RJC 225
Office Hours: Thursdays 4:00 PM by appointment

TA: TBA

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COURSE ELEMENTS

Credit Value:	3	Leadership:	No	IT skills:	Yes	Global view:	Yes
Avenue:	Yes	Ethics:	Yes	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	Yes	Group work:	Yes	Oral skills:	No
Evidence-based:	Yes	Experiential:	No	Final Exam:	Yes	Guest speaker(s):	No

COURSE DESCRIPTION

Operations refer to the activities and processes within an organization that are designed to transform inputs, such as labor, materials, knowledge, and equipment, into outputs, which may include goods and services. These processes are essential for the organization to achieve its goals and deliver value to its customers. Operations management involves planning, organizing, and overseeing these processes to ensure efficiency, effectiveness, and the optimal use of resources. In addition to the conventional emphasis on manufacturing, this course explores the domain of service sectors, including healthcare, financial services, and restaurant management.

LEARNING OUTCOMES

Upon completion of this course, students will be able to complete the following key tasks:

- Define the fundamental process measures: throughput, capacity, inventory, and flow time.
- Apply decision-making frameworks to manage processes effectively
- Propose process improvements to enhance efficiency, effectiveness, and customer satisfaction
- Manage queues and improve waiting times
- Determine the appropriate inventory policy for a process
- Apply fundamental tools and techniques, such as Lean, Six Sigma, and process reengineering, to optimize operations in diverse settings.
- Develop decision-making skills

REQUIRED COURSE MATERIALS AND READINGS

Main textbook (optional but recommended) : Operations Management: Sustainability and Supply Chain Management, Fourth Canadian Edition. Jay Heizer, Barry Render, Check Munson, Paul Griffin ($67.99 prices may vary)

Note: The textbook serves as a reference and provides details for the materials covered in the lectures. The lectures, lecture slides and other materials delivered by the instructor prioritize over the textbook for the purpose of preparing for the exams. Topics not covered during the lectures will not be tested in the exams or assignments. The lectures may cover some materials not included in the textbook.
Avenue registration for course content, readings and materials: http://avenue.mcmaster.ca

EVALUATION

Components for MBA students	**Components for PhD students**	**Weight for MBA students**	**Weight for PhD students**	**Deadline**
Assignment #1	Assignment #1	8%	10%	Jan 27
Assignment #2	Assignment #2	8%	10%	Feb 10
Assignment #3	Assignment #3	8%	15%	Mar 24
Assignment #4	Assignment #4	6%	15%	April 6
Quiz 1	Quiz 1& 2	20%	50%	March 4 & April 8 (PhD level)
GRIT Week	--	5%	--	
Weekly Quiz (Jan 14, Jan 21, Jan 28, Feb 4, Feb 11, Mar 11, Mar 18, Mar 25)	--	25%	--	
Group + mini projects	--	15%	--	
Participation	--	5%	--	
Total	Total	100	100	

Course Deliverables

Assignments: All assessments in this course will be evaluated individually, unless explicitly stated otherwise.

Quizzes 1 and 2: Quiz 1 (and Quiz 2 for PhD students) are in-person, open-book quizzes. Each quiz must be completed individually during the scheduled class time.

Weekly Quizzes: There are 8 weekly multiple-choice quizzes, administered in person during class. Each weekly quiz must be completed individually.

Group Project and Mini Project: The course includes a group project, with groups consisting **of** 4 to 5 students. In addition, a Mini Project will be conducted in person during the final lecture of the course, and attendance is mandatory to receive a grade for this component. Peer evaluation will be used and will impact the final grade for the group and Mini Project components.

The final course grade reflects your level of demonstrated achievement of the Course Learning Outcomes listed above. Assessments of individual deliverables provide feedback on your progress towards the course grade. Your final grade will be determined using the component marks you receive on the course deliverables and the relative weights given below. For situations in which students are not granted an academic accommodation for a missed or late deliverable, the missed or late deliverable will not be accepted.

Components and Weights

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy at the following URL:

www.mcmaster.ca/policy/Students-AcademicStudies/UndergraduateExaminationsPolicy.pdf

Grade Conversion

At the end of the course your overall percentage grade will be converted to your letter grade in accordance with the following conversion scheme:

LETTER GRADE	PERCENT	POINTS
A+	90-100	12
A	85-89	11
A-	80-84	10
B+	75-79	9

B	70-74	8
B-	60-69	7
F	00-59	0

COMMUNICATION AND FEEDBACK

Students that are uncomfortable in directly approaching an instructor regarding a course concern may send a confidential and anonymous email to the respective Area Chair or Associate Dean:

http://mbastudent.degroote.mcmaster.ca/contact-anonymous/

Students who wish to correspond with instructors or TAs directly via email must send messages that originate from their official McMaster University email account. This protects the confidentiality and sensitivity of information as well as confirms the identity of the student. Emails regarding course issues should NOT be sent to the Administrative Assistant.

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at:

www.mcmaster.ca/academicintegrity

Students are responsible for being aware of and demonstrating behaviour that is honest and ethical in their academic work. Such behaviour includes:

- following the expectations articulated by instructors for referencing sources of information and for group work;
- asking for clarification of expectations as necessary;
- identifying testing situations that may allow copying;
- preventing their work from being used by others (e.g., protecting access to computer files); and
- adhering to the principles of academic integrity when conducting and reporting research.

COURSES WITH AN ONLINE ELEMENT

All courses use some online elements (e.g. e-mail, Avenue to Learn (A2L), LearnLink, web pages, capa, Moodle, ThinkingCap, etc.). Students should be aware that, when they access the electronic components of a course using these elements, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course.

Students may be required to use the Respondus LockDown Browser and Respondus Monitor. The Respondus LockDown Browser is a downloadable program that allows a student to take an Avenue to Learn quiz in a secure environment.

For more details about McMaster's use of Respondus Lockdown Browser please go to https://avenuehelp.mcmaster.ca/exec/respondus-lockdown-browser-and-respondus-monitor/

The available information is dependent on the technology used. Continuation in a course that uses online elements will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

CONDUCT EXPECTATIONS

As a McMaster student, you have the right to experience, and the responsibility to demonstrate, respectful and dignified interactions within all of our living, learning and working communities. These expectations are described in the *Code of Student Rights & Responsibilities* (the "Code"). All students share the responsibility of maintaining a positive environment for the academic and personal growth of all McMaster community members, **whether in person or online**.

It is essential that students be mindful of their interactions online, as the Code remains in effect in virtual learning environments. The Code applies to any interactions that adversely affect, disrupt, or interfere with reasonable participation in University activities. Student disruptions or behaviours that interfere with university functions on online platforms (e.g. use of Avenue 2 Learn, WebEx, Teams, or Zoom for delivery), will be taken very seriously and will be investigated. Outcomes may include restriction or removal of the involved students' access to these platforms.

ATTENDANCE

Arriving late or missing class disrupts the learning experience for both you and your peers. Punctuality and attendance are crucial to maintaining a respectful, professional, and productive environment for everyone, including our faculty. Attendance will be recorded in each class to help identify students who may be at risk or in need of additional support.

Instructors will be using Top Hat to capture attendance in their classes. Attendance is recorded by submitting a unique 4-digit code displayed in your physical classroom using your personal device.

MISSED ACADEMIC WORK

Missed Weekly Quizzes:

The course includes weekly in-person quizzes administered during each scheduled class session. A total of 8 quizzes will be offered over the term. Only the top 6 quiz scores will be counted toward the final course grade, allowing students to miss up to 2 quizzes without penalty. Quizzes must be completed in person during class time, and no make-up quizzes will be provided for missed quizzes beyond this allowance.

Missed Mini-project:

The Mini Project is an in-class, group-based activity conducted during the final scheduled lecture of the course. Participation in person on that day is required to receive a grade for the Mini Project. Students who do not attend the final lecture will receive a grade of 0 for this component. No make-up Mini Project, rescheduling, or grade transfer to another assessment will be provided under any circumstances, as the activity is designed to be completed collaboratively and in real time during the class session.

Missed Examinations/ Assignment/ Quiz 1&2

Please do not use the online McMaster Student Absence Form (MSAF) as this is for Undergraduate students only. The MBA program will not accept an MSAF.

When students miss regularly scheduled term work which contributes 10% or more to the final grade, for legitimate reasons as determined by the Student Experience – Academic Office (SEAO (Student Experience Academic Office)), the activity necessary to compensate for the missed work will be determined by the course instructor. The compensatory activities assigned will vary with the nature of the course and the missed requirement. They include, but are not restricted to, an alternative assignment, a rescheduled midterm exam, or re-weighting the marks for the missed component to other mark components. Documentation explaining such missed work must be provided to the SEAO (Student Experience Academic Office) within five (5) working days of the scheduled date for completion of the work.

Acceptable reasons for missed work, along with the Petition for Missed Term Work and the MBA Student McMaster University Student Health Certificate, can be found on the DeGroote MBA Student website (mbastudent.degroote.mcmaster.ca). Please direct any questions about acceptable documentation to the MBA Academic Advisors (askmba@mcmaster.ca).

University policy states that a student may submit a maximum of three (3) Petition for Missed Term Work per academic year, after which the student must meet with the Director of the program.

If term work is missed without an approved reason, students will receive a grade of zero (0) for that component.

ACADEMIC ACCOMMODATION FOR STUDENTS WITH DISABILITIES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

http://sas.mcmaster.ca

Use of Test Accommodations at McMaster University Burlington Campus Ron Joyce Centre

Whereas Student Accessibility Services (SAS), on Main Campus, determines all MBA student accommodations, the MBA Faculty Office manages the coordination of accommodations for tests, midterms, and exams at the Ron Joyce Centre in Burlington.

Process for Students

- Students must activate their accommodation(s) (e.g., extra-time, memory aid, etc.) for each upcoming test, midterm, or exam, at least two weeks in advance. Students can do this by emailing their Instructor and the DeGroote MBA SAS scheduling office at DSBSAS@mcmaster.ca. If a student cannot meet this deadline, they should contact DSBSAS@mcmaster.ca to discuss alternative arrangements. The program is committed to exploring flexibility where possible to support students.

- All tests, midterms, and exams are booked synchronously with the class's start time. Any deviations from the start time (e.g. start earlier than the class to enable completion at the same end time) requires a discussion with their instructor on protocol at the time of accommodation activation.

- Students will leverage the accommodation (e.g., extra-time, memory aid, etc.), in a designated testing room. Rooms will be booked according to the student's SAS accommodation. Unless the accommodation states otherwise, students should expect that they will be writing in a room with other students. One or more invigilators will always be in the room.

- Following the request to activate the accommodation(s), dsbsas@mcmaster.ca will reach out to the student with their test, midterm, or exam details, including the date, time, and room number. As there may be other students writing tests in the room, we ask that students enter the room quietly and leave all personal items at the front of the room.

All policies and procedures, including restroom access, how extra-time is allocated for assessments under Universal Design, and the submission of memory aids in advance, are consistent with those of SAS on Main Campus. The only variance in procedure is communication around, and physical location of, assessment. There is not a dedicated testing space at RJC. Existing classrooms and lecture halls will be used for most testing. All SAS-approved accommodations will be honoured by our staff; however, core testing elements are not eliminated in alternative testing formats. Students should expect and plan for invigilation, incidental noise, and other potential distractions.

ACADEMIC ACCOMMODATION FOR RELIGIOUS, INDIGENOUS OR SPIRITUAL OBSERVANCES (RISO)

Students requiring academic accommodation based on religious, indigenous or spiritual observances should follow the procedures set out in the RISO policy. Students should submit their request to the SEAO (Student Experience Academic Office) ***normally within 10 working days*** of the beginning of term in which they anticipate a need for accommodation. Students should also contact their instructors as soon as possible to make alternative arrangements for classes, assignments, and tests.

COPYRIGHT AND RECORDING

Students are advised that lectures, demonstrations, performances, and any other course material provided by an instructor include copyright protected works. The Copyright Act and copyright law protect every original literary, dramatic, musical and artistic work, **including lectures** by University instructors.

The recording of lectures, tutorials, or other methods of instruction may occur during a course. Recording may be done by either the instructor for the purpose of authorized distribution, or by a student for the purpose of personal study. Students should be aware that their voice and/or image may be recorded by others during the class. Please speak with the instructor if this is a concern for you.

POTENTIAL MODIFICATION TO THE COURSE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

ACKNOWLEDGEMENT OF COURSE POLICIES

Your registration and continuous participation (e.g. on A2L, in the classroom, etc.) to the various learning activities of MBA O611 will be considered to be an implicit acknowledgement of the course policies outlined above, or of any other that may be announced during lecture and/or on A2L. **It is your responsibility to read this course outline, to familiarize yourself with the course policies and to act accordingly.**

Lack of awareness of the course policies **cannot be invoked** at any point during this course for failure to meet them. It is your responsibility to ask for clarification on any policies that you do not understand.

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ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) tools may be utilized in this course for various assessments. However, please note that the guidelines for using AI will be provided individually for each assessment. Specific instructions on how and when AI tools can be applied will be clearly communicated at the time each assignment or exam is announced. It is important to follow these guidelines carefully to ensure academic integrity and the appropriate use of technology.

For additional information and guidelines, please refer to the following resource: Generative Artificial Intelligence - Academic Excellence - Office of the Provost (mcmaster.ca)

COURSE SCHEDULE

MBA O611
Operations Management
Spring 2025 Course Schedule

WEEK	DATE	TOPIC (EXTRA MATERIAL FOR PHD STUDENTS)
1	Jan 7	Introduction to Operations Management **(Reading 1 for PhD students**: Statistics Review.)
2&3	Jan 14 & Jan 21	Process Analysis: Process Strategies, Flow Diagram, Capacity, Throughput Time, Cycle Time, Bottleneck, Utilization **(Reading 2 for PhD students:** Time series forecasting)
4&5	Jan 28 & Feb 4	Waiting Line: Variability, Characteristics of a Waiting Line, Little's Law **(Reading 3 for PhD students**: The M/M/1 Queue with Balking Customers, Priority M/M/1 Queues, The M/M/1/K Queue, Systems with Finite Capacity)
6	Feb 11	Introduction to Quality Management: Total Quality Management (TQM)

		(Reading 4 for PhD students: Random sampling, Hypothesis testing, Type I and II errors, Process Capability)
7	Feb 17-20	Midterm Break
8	Feb 23-27	GRIT Week **(Reading 5 for PhD students:** R chart, X-bar chart)
9	Mar 4	Quiz 1+ TQM Tools
10&11	Mar 11& Mar 18	TQM Tools, Inventory Concepts I, II **(Reading 6 for PhD students:** Newsvendor model)
12&13	Mar 25 & Apr 1	Reorder Point, Project Management I, II
14	Apr 8	Group Mini Project (mandatory attendance) **Quiz 2 for PhD students**