

MBA O650
Operations Management
Operations Management Area
DeGroote School of Business
Tentative Course Outline

COURSE OBJECTIVE

- Obtain an understanding of the fundamental issues arising in the operations functional area and its interfaces with the other functional areas in an organization.
- Do a broad review of decision areas contained within the operations function in manufacturing, distribution, and service organizations.
- Study the quantitative tools available for analysis and decision support in each decision area.

INSTRUCTOR AND CONTACT INFORMATION

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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:	No	Group work:	No	Oral skills:	No
Evidence-based:	Yes	Experiential:	Yes	Final Exam:	Yes	Guest speaker(s):	No

COURSE DESCRIPTION

Operations management is the set of activities that create value in the form of goods and services by transforming inputs into outputs. Operations managers plan, direct and control activities related to the production of goods and services. The activities entailing operations management are product and service design, project management, total quality management and quality control, capacity and process planning, location, layout, forecasting, inventory management, aggregate planning, material requirement planning, just in time and scheduling. Quantitative techniques/tools such as sampling

theory, linear programming, Queuing Theory, Inventory Optimization, and time series analysis are widely used as decision aids in Operations Management.

LEARNING OUTCOMES

- Demonstrate a basic understanding of the operations function, the decision areas encompassing it within a firm, and the linkages between the firm’s strategy and its processes.
 - Use quantitative procedures and tools available for analysis and decision support in the operations function.
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REQUIRED COURSE MATERIALS AND READINGS

Required Text: Operations Management: Processes and Supply Chains, **11th edition**, by Krajewski, Ritzman and Malhotra, published by Pearson.

The global edition of “Operations Management: Processes and Supply Chains, **11th edition**” may suffice. (In a rare case, the problem listed in the global edition under an assigned problem # may be different.)

The McMaster bookstore may list the digital version of the 13th edition. MyLab **will not be** used in the course.

EVALUATION

There will be an in-depth introduction to each decision area/process in class followed by examples highlighting the pertinent quantitative techniques. Each procedure/algorithm will be illustrated through detailed realistic examples. *Students are expected to download handouts before each session.* The balance of the learning will result from the readings and hand-in assignments where you apply analytical techniques individually. Excel prescriptive tool Solver and predictive tool Forecast sheet will be explored. Your final grade will be calculated as follows:

Components and Weights

Component	Weight	Content
Assignments	30%	There will be six assignments roughly 8-10 days apart
Midterm	35%	Content of weeks 1-5
Final	35%	Content of weeks 5-9

NOTE: Using a 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

The final exam will cover material in the second half. For a student who has permission from the Students Services Office to miss the midterm, the student will need to write the final in two parts: part 1 will be the final that everybody writes and part 2, which will be about an hour long, will be on the material covered in the midterm.

COURSE DELIVERABLES

Assignment #1 – Productivity, project scheduling

Assignment #2 – Statistical process control, Process capacity, Break-even analysis, Decision theory, Theory of constraint.

Assignment #3 – Waiting lines, Little’s law, Value stream mapping, Facilities location.

Midterm –Includes material covered in Assignments 1, 2 and 3.

Detailed sheets containing formulas, and procedure templates will be provided along with the examination.

Assignment #4 – Facilities location, Network flow planning using linear programming, Line balancing.

Assignment #5 – Time series forecasting, ABC analysis, Economic order quantity, continuous and periodic review inventory control.

Assignment #6 – Make or Buy, Sales and Operations Planning, Just in Time.

Final examination – Includes material covered in Assignments 4, 5 and 6. Detailed sheets containing formulas and procedure templates will be provided along with the examination.

COMMUNICATION AND FEEDBACK

Students who 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.

Instructors are encouraged to conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

ACADEMIC INTEGRITY

Instructors may conduct an informal course review with students by Week #4 to allow time for modifications in curriculum delivery. Instructors should provide evaluation feedback for at least 10% of the final grade to students prior to Week #8 in the term.

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning

process. The 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. a 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

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which other credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations

COURSES WITH ON-LINE ELEMENT

In this course, we will be using Avenue to Learn. Sessions, assignments, and solutions will be posted on A2L. In addition, articles and videos may be posted on Avenue to Learn throughout the term.

Students should be aware that when they access the electronic components of this course, private information such as first and last names, usernames for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure.

AUTHENTICITY/PLAGIARISM DETECTION

Some courses may use a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. For courses using such software, students will be expected to submit their work electronically either directly to Turnitin.com or via an online learning platform (e.g. A2L, etc.) using plagiarism detection (a service supported by Turnitin.com) so it can be checked for academic dishonesty.

Students who do not wish their work to be submitted through the plagiarism detection software must inform the instructor before the assignment is due. No penalty will be assigned to a student who does not submit work to the plagiarism detection software.

All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., online search, other software, etc.). For more details about McMaster's use of Turnitin.com, please go to www.mcmaster.ca/academicintegrity.

AUTHENTICITY/PLAGIARISM DETECTION

Some courses may use 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.

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.

ON-LINE PROCTORING

Some courses may use online proctoring software for tests and exams. This software may require students to turn on their video camera, present identification, monitor and record their computer activities, and/or lock/restrict their browser or other applications/software during tests or exams. This software may be required to be installed before the test/exam begins.

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 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.

MISSED ACADEMIC WORK

Missed Mid-Term Examinations / Tests / Class Participation

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), 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 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 DeGroot 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.

Missed Final Examinations

Students must be available for the duration of the posted exam period regardless of their personal exam schedule. This is to ensure student availability throughout the entire exam period in the event that an exam must be rescheduled due to unforeseen circumstances (university closure, power outage, storm policy, etc.). A student who misses a final examination without valid reason will receive a mark of 0 on the examination.

Students who have missed a final exam for a valid reason can apply to the SEAO to write a deferred examination by submitting an [Application for Deferring a Final Exam](#) with supporting documentation. The application must be made within five days of the scheduled exam.

The [Application for Deferring a Final Exam](#) and the [MBA Student McMaster University Student Health Certificate](#) can be found on the DeGroot MBA Current Student website (mbastudent.degroote.mcmaster.ca)

Deferred examination privileges, if granted, are normally satisfied during the examination period at the end of the following semester. In select cases, the deferred examination may be written at a time facilitated by the SEAO and agreed to by the course instructor.

Requests for a second deferral or rescheduling of a deferred examination will not be considered.

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>

Students who are leveraging accommodation for tests and exams are supported by the SEAO. These exams are written at the Ron Joyce Centre and do not take place in the Tim Nolan Testing Centre. Correspondence for accommodations is managed via the DSBSAS@mcmaster.ca email address. Students must communicate their intent to leverage accommodations on a test or exam a minimum of 10 business days prior to the assessment.

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 *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 O650 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.**

A 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.

COURSE SCHEDULE

MBA O650
Operations Management
Winter 2024 Course Schedule

Week	Topic	Text Reference
Jan 16,18	Introduction, Process strategy and analysis, Productivity Project Management	Chapters 1, 2, 7
Jan 23, 25	Project management, Total quality management (TQM), Statistical Process Control	Chapters 7, 3
Jan 30, Feb 1	Statistical process control (SPC), Process capability, Capacity planning: Decision Theory, Theory of constraints	Chapters 3, 4 Supplement A, Chapter 5
Feb 6,8	Theory of constraints, Waiting lines, Little's law, Value stream mapping	Chapters 5, 6 Supplement B
Feb13, 15	Facilities location, Transportation network flow planning	Chapter 13, handouts, Excel Solver
Feb 19-25	Midterm Recess	
Feb 26	Midterm Examination (Monday, Feb. 26)	
Feb 29	Layout, Line balancing	Supplement K, Chapter 5
Mar 5,7	Line Balancing, Forecasting, Inventory management:EOQ model	Chapter 8, Chapter 13, ExcelForecast Sheet, Chapter 9,
Mar 12,14	Inventory management under uncertain demand, Sales, and Operations/Aggregate planning	Chapter 9, Supplement C, Chapter 10
Mar 19,22	Master production schedule (MPS), Material requirement planning (MRP), Scheduling	Chapters 11, 10
Mar 26	Scheduling, Just in time systems	Chapter 10, 6
Final Examination		