

COURSE OBJECTIVE

- To develop an understanding of the principles and important problems in operations management.
- To become familiar with the analytical tools used to solve operations management problems.

TEACHING STAFF AND COURSE INFORMATION

Instructor	Teaching Assistants (TAs)
Dr. John Miltenburg miltenb@mcmaster.ca RJC-xxx phone 905-525-9140 ext. xxx Office Hours: after class	none

Class Times and Rooms:

O650 C01/11212 -- Tuesday and Thursday 2:30 pm to 4:20 pm, room RJC- ?

Course Website: <http://avenue.mcmaster.ca>

Questions about course content must be posted on the Avenue Discussion Board. If you e-mail a question about content to the instructor you will be asked to first post the question on the Discussion Board; then it will be answered.

COURSE ELEMENTS

Credit Value: 3	Leadership: No	IT skills: Yes	Global view: Yes
WebCT: Yes	Ethics: No	Numeracy: Yes	Written skills: Yes
Participation: No	Innovation: Yes	Group work: No	Oral skills: No

COURSE DESCRIPTION

Operations managers plan, organize, staff, direct and control activities related to the production of products and services. The activities comprising operations management are product and service design, project management, quality management and control, capacity and process planning, lean systems, location, layout, forecasting, inventory management, aggregate planning, material requirement planning, and scheduling.

LEARNING OUTCOMES

Upon completion of this course, students will:

- Understand the operations view of processes and supply chains, the operations function, the decisions areas comprising operations management, and the linkages between the business strategy and operations activities;
- Use quantitative tools for analysis and operations decision making.

REQUIRED COURSE MATERIALS

Textbook: Krajewski, L. and Ritzman, L. and Malhotra, M., Operations Management: Processes and Supply Chains, 10th edition, Pearson/Prentice Hall (2013). Used books and electronic books can be used. The MyOMLab internet feature that comes free with a new textbook will not be used.

The quizzes and exam are open-textbook so every student should have a textbook.

The (free) website for the book is: www.pearsonhighered.com/krajewski/ click 'edition 9/e Companion website'

Software: We expect to use the following software.

1. Excel templates: several templates adapted from a package of templates called OM Explorer
2. MS Project 2010, 2013 or 2016: Project management software
3. MyMaps in Google Maps: Geographic information system
- 4 (optional). MegaStat or Data Analysis – business statistics in Excel

1 is available on Avenue; 2 is in the vmba computer lab; 3,4 are on the internet;

See the file 'Software used in O650.pdf' at Avenue > Content for information on accessing and using the software.

Lecture Notes and Podcasts: Detailed lectures notes are posted on Avenue. Podcasts of lectures are available (in m4v format) on Avenue for streaming or download. This will help students who miss a lecture or want to review material from a previous lecture.

Practice Problems: There are no hand-in assignments. Practice Problems for self-study are assigned (see Schedule below). Additional problems may be assigned during the course. All Practice Problems and solutions are posted on Avenue.

EVALUATION		
Group Presentations	15 marks	5 marks per presentation for 3 group presentations
Group Discussions	6 marks	2 marks per discussion for 3 group presentation discussions
Quizzes	9 marks	3 on-Avenue quizzes; Sunday 12 noon to Monday 12 noon; see schedule below
In-class simulation	2 marks	All students are expected to participate in the in-class simulation
Exam 1	20 marks	90 minutes (approximately); during class
Final Exam	48 marks	3 hours (approximately); scheduled by MBA Office
Total	100 marks	

The total mark will be converted to a letter grade using the following standard scheme.

Letter grade	Percent	Points	Letter grade	Percent	Points	Letter grade	Percent	Points
A+	90 – 100	12	B+	75 – 79	9	F	00 – 59	0
A	85 – 89	11	B	70 – 74	8			
A-	80 – 84	10	B-	60 – 69	7			

Classes, Exams, Presentations, etc.

Quizzes:

Quizzes help students keep up with their studies and prepare for the exams. At assigned times (see Schedule below) when selected lectures, chapters in the textbook, and practice problems should be complete, students take a 20-minute (approximately), 14-question (approximately), on-line on-Avenue Quiz. Students have 24 hours to complete the Quiz (between 12 noon on Sunday and 12 noon on Monday). Quiz questions are randomly assigned and are based on the textbook, the lecture notes, the lectures, and the practice problems. Questions are descriptive and short calculations. There are practice Quiz questions on Avenue and at the textbook website. Each Quiz question is worth one mark, so each Quiz has 14 marks (approximately). However the maximum mark is 10 (approximately). Students who correctly answer 10 or more questions get 10 out of 10. Students, for example, who correctly answer 8 questions get 8 out of 10. Marks are posted on Avenue. Quizzes are not returned. Students can review their Quiz with the instructor during office hours within two weeks of the quiz marks being posted on Avenue. If a student misses a Quiz or receives a mark of zero on a Quiz, then the marks for the Quiz are automatically added to the Final Exam (no special permission is needed). In the Quizzes (and on the Exams) students cannot 'go back'. This means students must answer the question when it appears on the computer screen; when students move to the next question they cannot return to a previous question to check their work or answer the question later. This is done to discourage students from sharing their answers.

Exams:

Exams can be completed either off-campus (e.g. from home) or on-campus (e.g. in an assigned classroom at RJC, study area). Students must work individually, not in groups. Students can use books, notes, computer, calculator. Each exam consists of randomly assigned descriptive questions, randomly assigned calculation questions, randomly assigned long Excel template-, MS Project-, and Google Maps-questions. Just like the quizzes, in the exams students cannot 'go back' to previous questions. Answers are checked carefully to make sure students work individually. Students should use their own computer. Their computer must be able to access the school's virtual lab, run the course software located there, access Avenue to download questions and data, and upload answers to Avenue dropboxes. A student's computer must have excellent internet access in order to quickly and easily access Avenue. If a student has poor internet access from home, then they should write the exam on-campus. No extra time, help or marks will be given because of problems with computers, software, or internet access. The final exam is comprehensive; it covers all the material in the course.

If a student misses Exam 1 for any reason whatsoever or obtains a mark of zero on Exam 1, then (i) all the marks for the missed Exam 1 will added to the Final Exam, and (ii) the student's Final Exam will be adjusted to include the missed computer material from Exam 1 and other material as necessary from Exam 1. It is not necessary to obtain permission from the MBA Office to miss Exam 1.

Projects:

Students are pre-assigned to groups and each group is pre-assigned to present two projects (approximately) and to be the discussant for two projects (approximately) presented by other groups (see Course Schedule below). Students cannot switch groups or projects. In each class two groups (approximately) will present their solution for a project; and each of these groups will be the discussant for another group's presentation. Other students are NOT required to attend this part of the class. Some weeks the presentations will be in-camera (i.e. private, other students are NOT allowed to attend) so that no students gain an unfair advantage in completing subsequent projects. Detailed instructions are given at Avenue > Content.

Communication and Feedback

Students who are uncomfortable directly approaching an instructor regarding a course concern may send a confidential email to the Operations Management Area Chair, Professor Parlar (parlar@mcmaster.ca) or the Associate Dean (adbusac@mcmaster.ca). Students' e-mails to instructors or TAs must originate from their official McMaster University e-mail account. This protects the confidentiality of information and confirms the identity of the student. E-mails regarding course issues should NOT be sent to the Area Administrative Assistant.

Academic Dishonesty

It is the student's responsibility to understand what constitutes academic dishonesty. Please refer to the University Senate Academic Integrity Policy at: <http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf> This policy describes the responsibilities, procedures, and guidelines for students and faculty should a case of academic dishonesty arise. Academic dishonesty is defined as to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. Please refer to the policy for a list of examples. The policy also provides faculty with procedures to follow in cases of academic dishonesty as well as general guidelines for penalties. For further information related to the policy, please refer to the Office of Academic Integrity at: <http://www.mcmaster.ca/academicintegrity>

Copyright

McMaster University has signed a license with the Canadian Copyright Licensing Agency (Access Copyright) which allows professors, students, and staff to make copies allowed under fair dealing. Fair dealing with a work does not require the permission of the copyright owner or the payment of royalties as long as the purpose for the material is private study, and that the total amount copied equals NO MORE THAN 10 percent of a work or an entire chapter which is less than 20 percent of a work. In other words, it is illegal to: i) copy an entire book, or ii) repeatedly copy smaller sections of a publication that cumulatively cover over 10 percent of the total work's content. Please refer to the following copyright guide for further information: <http://library.mcmaster.ca/about/copying.pdf>

MISSED EXAMINATION/ TESTS/ CLASS PARTICIPATION

When students miss a regularly scheduled midterm, test or class participation for legitimate reasons as adjudicated by the MBA Academic Services Office, the weight for that midterm/test/participation will be distributed across other evaluative components of the course at the discretion of the instructor. Documentation explaining an absence must be provided to the MBA Academic Services Office within five (5) working days upon returning to school.

To document absences for health related reasons, please provide the Petition for Relief for MBA Missed Term Work and the McMaster University Student Health Certificate, which can be found on the DeGroot website at: <http://www.degroot.mcmaster.ca/MBA/registration.html>

University policy states that a student may submit a maximum of three (3) medical certificates per year after which the student must meet with the Director of the program.

To document absences for reasons other than health related, please provide documentation supporting the reason for the absence and the Petition for Relief for MBA Missed Term Work: <http://www.degroot.mcmaster.ca/MBA/documents/relief.pdf>

Students unable to write a midterm at the posted exam time due to the following reasons: religious; work-related (for part-time students only); representing university at an academic or varsity athletic event; conflicts between two overlapping scheduled midterm exams; or other extenuating circumstances, have the option of applying for special exam arrangements. Such requests must be made to the MBA Academic Services Office at least ten (10) working days before the scheduled exam along with acceptable documentation. Instructors cannot themselves allow students to unofficially write make-up exams/tests. Adjudication of the request must be handled by the MBA Academic Services Office.

All applications for deferred and special final examination arrangements must be made to the MBA Academic Services Office. Failure to meet the stated deadlines may result in the denial of these arrangements. Deferred examination privileges,

if granted, must be satisfied during the examination period at the end of the term immediately following. There will be one common sitting for all deferred exams. Please refer to the MBA Calendar for further details.

If any exam is missed without a valid reason, students will receive a grade of zero (0) for that component.

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for examinations on or before the last date for withdrawal from a course without failure (please refer to official university sessional dates). Students must forward a copy of such SAS accommodation to the instructor immediately upon receipt. 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>

Potential Modifications 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.

Course Schedule – November 2016

Dates	Readings (‘Lecture Notes’ are on Avenue)	Practice Problems (‘Solutions’ are on Avenue)	Projects (see Notes below)
1. Jan. 17,19	Ch. 1: Intro. to Operations Ch. 3: Process Strategy Ch. 7 (254-258) -- Layout	Ch.1: disc. questions 3,6; prob. 2,4,8 Ch. 3: disc. question 5; prob. 1,3*,4* *Also use Excel template Ch. 7: prob. 5,6	
2. Jan. 24,26	Ch. 2: Project Management	Ch.2: prob. 1*,5*,8*,17 * Solve manually and use OM Software. For 1 and 5 solve parts c,d given in Practice Problem solutions. Solve all parts of 1 and 5 in MSProject with project start date of Feb. 2, 2014.	
Quiz A – Content: Ch. 1, 3, 7 (pp. 254-258), 2; Time: 12 noon Sun. Jan. 29 to 12 noon Mon. Jan. 30			
3. Jan 31, Feb 2	Ch. 2 (cont’d) Ch. 4: Process Analysis	Ch. 4: prob. 3, 6, 11, 20, 21	<i>in camera</i> Project 1 (PM) – P 1, D 2 Project 1 (PM) – P 2, D 1
4. Feb. 7, 9	Ch. 5: Quality	Ch. 5: prob. 4, 5*, 6*,7*,8*,23* * Also use Excel template	Project 1 (PM) – P 3, D 4 Project 1 (PM) – P 4, D 3
5a. Feb. 14 Exam 1 – during class; content weeks 1,2,3,4; on-line, on-Avenue, random questions, open book, computer, etc.			
5b. Feb. 16	Ch. 6: Capacity Mgt Ch. 7: Constraint Mgt Ch. 8: Lean	Ch. 6: prob. 1, 5, 8 Ch.7: prob. 3,4 Ch. 8: --	<i>in camera</i> Project 2 (Q) – P 5, D 6 Project 2 (Q) – P 6, D 5
6. Feb 28, Mar 2	Ch. 10: Supply Chain Design Ch. 11: Supply Chain Location Ch. 12: Supply Chain Integration	Ch. 10: prob. 2,3; Ch. 11: prob. 1,4,7,12, 18 (use template); GoogleMap Practice Problems in course notes Ch. 12: 1,4,5	Project 2 (Q) – P 1, D 4 Project 2 (Q) – P 4, D 1
Quiz B – Content: Ch. 6,7,8,10,11,12; Time: 12 noon Sun. Mar. 5 to 12 noon Mon. Mar. 6			
7. Mar. 7, 9	Ch. 9: Inventory On-line, in-class supply chain simulation	Ch. 9: prob. 2,4,8,10,11,16,22,23	
8. Mar. 14, 16	Ch. 13: Supply Chain Sustain. Ch. 14: Forecasting	Ch. 13: disc. quest. 2, prob. 2 Ch. 14: 7*,11* *Also use template Ex. 14.1 on last page of Ch.14 course notes	<i>in camera</i> Project 3 (SC) – P 2, D 5 Project 3 (SC) – P 5, D 2
Quiz C – Content: Ch. 9,13,14; Time: 12 noon Sun. Mar. 19 to 12 noon Mon. Mar. 20			
9. Mar. 21,23	Ch. 15: Plan. and Scheduling Ch. 16: Resource Planning	Ch.15sch: prob. 2*,11*,12,16*,Johnson’s Rule problem; Ch.16: prob. 1,8*,14*,21 * Also use templates	Project 3 (SC) – P 3, D 6 Project 3 (SC) – P 6, D 3
10. Mar. 25 to Apr. 1 Final Exam covering entire course (day and time to be scheduled by MBA)			

Notes:

1. Projects: P- presentation Group, D – Discussion group, PM – project management project, Q – quality project, SC- supply chain project. “*in camera*” presentations are only open to the Presenting groups and Discussant groups. Other students cannot attend; they can attend later presentations on the same project topic.
2. If a class is cancelled then a make-up class will be scheduled on the next available Friday from 11:30-1:30. An announcement will be posted on Avenue.