

Production and Operations Management

**COMM 225
Fall 2016**

Instructor : Dr. Amir Hosseinipour
Email : amir.hpour@concordia.ca
Office MB : MB- 12/363
Office Hours: By appointment

COURSE DESCRIPTION

This course is an introduction to contemporary operational issues and techniques in the manufacturing and service sectors. Among the topics covered are: *operations strategy, forecasting, materials management, total quality management, time-based competition, and queuing theory. Mathematical modeling in resource allocation is also introduced.* Cases and computer-aided quantitative tools for decision-making are used throughout the course with an emphasis on the interactions between production/operations management and other business disciplines.

Prerequisites: COMM 210, COMM 212, and COMM 215

LEARNING OBJECTIVES

Operations are the core of every business. Successful implementation of any business strategy cannot be achieved without the proper execution of operations. Global and local companies that are experiencing a surge in market share owe this success among other things, to their excellence in managing operations. This course considers operations from a managerial perspective and introduces the basic Operations Management (OM) tools. It focuses on quantitative analysis of various OM functions. At the end of the course, students will have a good understanding of the various operation functions and their importance in organization in particular and global economy in general. This course will help the student achieve the following learning objectives:

- Acquire basic knowledge of OM including terminologies, tools, concepts, and techniques.
- Apply OM concepts and methodologies to specific situations.
- Analyze elements of manufacturing and service organizations to solve problems and make decisions.
- Use computer technology to aid in making better decisions.
- Understand OM issues in organizations, and the role of supply chain managers and logistics professionals in global economy.

Text Book

Operations Management W. J. STEVENSON & M. HOJATI, (JMSB Second Custom Edition), McGraw-Hill

COURSE SCHEDULE

Session	Topic	Chapter/Pages in the Text [§]	# of Lectures*
1	Introduction to OM	Ch. 1	0.5
2	Competitiveness, Strategic Planning & Productivity	Ch. 2	0.5
3	Project Management	Ch. 17, pp. 672-699	4
4	Demand Forecasting	Ch. 3 (except L06)	3
5	Inventory Management	Ch. 12 [†] , pp. 460-482, pp. 484-490 & pp. 494-501	3
Midterm: 15 th Oct. 2016, 9am-11:30am			
6	Quality Management	Ch. 9 (except L03)	4
7	Statistical Process Control	Ch. 10, pp. 384-408	
8	Waiting Line Analysis	Ch. 18, pp. 722-743 (except Model 2, and 4)	4
9	Aggregate Operations Planning	Ch. 13- Only how to form LP Model of Aggregate Planning Problems. No Tableau Method. Supplement 1, pp. 1-17 Supplement 2 [‡] , pp. 1-17	5
10	Supply Chain Management	Ch. 11	2

***1 Lecture = 75 Minutes**

[†] In Chapter 12, only constant lead time case is included.

[‡] In Supplement 2, mixed integer programming is not included.

COURSE EVALUATION

Evaluation will be based on online quizzes, instructor specific tasks (project/cases/quizzes/homework/etc.), one mid-term and one final exam. The relative weight for each component is as follows:

Practice Quizzes (online):	8%
Instructor specific tasks:	7%
Midterm Examination:	40%
Final Examination (Non-Cumulative):	45%

Letter Grades	Marks Obtained	Letter Grades	Marks Obtained
A+	90-100	C+	67-69
A	85-89	C	63-66
A-	80-84	C-	60-62
B+	77-79	D+	57-59
B	73-76	D	53-56
B-	70-72	D-	50-52
		FNS	0-49

TEACHING METHOD & COURSE MATERIAL

All the mentioned topics will be delivered in the form of class room lectures supplemented by tutorials. Each OM tool discussed in the class will be supplemented by several examples and industrial applications. Numerical examples, practice questions, etc. will be provided to enrich the learning environment as necessary.

Course Website:

- The course websites for all the sections will be administered through Moodle.
- Supplementary material, additional practice problems & video cases can be found on the publisher's website at <http://connect.mcgraw-hill.com>. Use the registration code on the back of the access card attached to your textbook in order to sign in. Selected students resources are also available at the following free, open access website: http://highered.mcgraw-hill.com/sites/0070969574/student_view0/
- All the **online quizzes** will be administered through Moodle. The **case study** must be submitted **online** in the dropbox thorough Moodle. *No paper/email submissions will be accepted.*
- Materials provided on the course website include the following: *(Note: Commercial uses and unauthorized production and distributions of the provided materials are strictly prohibited).*
 - a) **Lecture Slides:** Electronic supplements of the classroom lectures (power point slides) may be posted on the course website by the instructors. Note that these slides may not be self-explanatory and may not cover all the outlined materials. Major part of the class lecture may include verbal explanations or demonstration on black-board. *Hence, students are expected to attend all the lectures. It is the student's responsibility to make-up for the missed classes.*

- b) **In-Class Questions:** These questions will be solved in class, and their solutions will NOT be posted on Moodle. Hence, students are expected to attend classes in order to obtain the solutions to these questions.
- c) **Tutorial Questions:** These questions will be solved during tutorials. Final answers to these questions will be provided. For detailed solution, students are encouraged to attend the tutorials. Tutorials will be conducted by the tutors. The tutorial hours will be announced on the course website.
- d) **Practice Questions:** These questions are selected from the textbook. Detailed solutions will be posted on the course website.
- e) **Multiple Choice Review Questions:** Multiple choice questions on every topic will be posted on the course website. Students are expected to practice these questions.
- f) **Exam Review Questions:** These are drawn from **previous mid-term** and **final exams**. Detailed solutions will be posted on the course website.
- g) **Formula Sheet:** A formula sheet will be provided during both midterm & final exams.
- h) **Software: MS Excel Solver** is an add-in package that will be used for solving linear programming models of sales and operations planning problems that appears in Supplements 1 & 2. Students are expected to get familiar with the excel solver.
- i) **Supplementary materials:** Any other course supplements will be posted on Moodle.

IMPORTANT NOTES (Must Read!!!)

- Students are expected to make use of office hours held by the instructors and teaching assistants.
- You will be communicating with your instructor and teaching assistant via Moodle (unless they have asked you to contact via email). Please allow for a 24 hour response time.
- Neither programmable/graphical calculators nor electronic dictionaries will be permitted in the exam room.
- Students are responsible for the stability of the computer and the internet connection that they use while taking the online quizzes. Prior to taking a quiz, you need to test the reliability of the set-up by completing the “practice quiz”. You will NOT be able to redo a quiz if you encounter a problem related to these factors.

ASSESSMENT OF LEARNING OBJECTIVES

The learning objectives are assessed through online quizzes, a case study, a midterm examination and a final examination.

Learning Objective \ Learning Activity	Quizzes	Case Analysis	Examinations (mid-term & final)
Acquire basic knowledge of OM including terminologies, tools, concepts, techniques, and methodologies.	multiple-choice and fill-in-the blank questions		theory-based multiple-choice exam questions
Analyze specific situation from an OM perspective (Apply OM concepts and methodologies to specific situations).		Relate the case based on the OM-related news reported in the newspapers to the OM concepts taught in the course.	Quantitative Questions in the exam Short answer questions in the exam

Analyze elements of manufacturing and service organizations to solve problems and make decisions.	Application-based exam questions		Quantitative Questions in the exam
Use computer technology to aid in making better decisions.			Software related exam questions
Understand OM issues in organizations, and the role of supply chain managers and logistics professionals in global economy.	Multiple-choice exam questions	Analyze the case based on the OM-related news reported in the newspapers such as NY Times, The Globe and Mail.	Multiple-choice exam questions

ACADEMIC INTEGRITY

The Academic Code of Conduct at Concordia University states that the "integrity of University academic life and of the degrees, diplomas and certificates the University confers is dependent upon the honesty and soundness of the instructor-student learning relationship and, in particular, that of the evaluation process. As such, all students are expected to be honest in all of their academic endeavors and relationships with the University" (Undergraduate Calendar, section 16.3.14). All students enrolled at Concordia are expected to familiarize themselves with the contents of this Code. You are strongly encouraged to visit <http://provost.concordia.ca/academicintegrity/>, which provides useful information about proper academic conduct. You can also visit the following web address:

http://johnmolson.concordia.ca/images/stories/undergrad_prog/undergrad_landing_page/docs/academic_integrity_may2009.pdf, which provides useful information about proper academic conduct.

ACADEMIC CODE OF CONDUCT

The Academic Code of Conduct is a University policy that outlines the procedures by which academic honesty or integrity is enforced. It outlines offenses, procedures for dealing with offenses, and possible sanctions if charges are upheld. The Code can be found in the University Calendar or on the Concordia website at:

<http://secretariat.concordia.ca/policies/academic/en/AcademicCodeConduct2008.pdf>

PLAGIARISM: Plagiarism is the most common offense under the Code. The Code defines it as: *"the presentation of the work of another person, in whatever form, as one's own or without proper acknowledgement"*. This includes material copied word-for-word from books, journals, Internet sites, instructors' course notes, material that is paraphrased but closely resembles the original source, a paper purchased through one of the many available sources, or work done by a fellow student such as an answer on a quiz, data for a lab report, a paper, or an assignment. Plagiarism does not refer to words alone – it can also refer to copying images, graphs, tables, and ideas. "Presentation" is not limited to written work - it also includes oral presentations, computer assignments and artistic work. Several information sources have been developed to assist you in understanding the meaning and implications of plagiarism:

1. <http://learning.concordia.ca/Help/handouts/WritingHO/AvoidingPlagiarism.shtml> includes information on what plagiarism is and how you can avoid it, and
2. <http://library.concordia.ca/help/howto/citations.html#citing>, includes various guides for proper citation of reference material prepared by Concordia's librarians.

WHAT ELSE DOES THE CODE ADDRESS?

Although plagiarism is the most common offense, the Code addresses other offences as follows:

- Stealing or obtaining exam questions, exam answers or any other University documents without authorization.
- Possession and/or use of any non-authorized materials, documents or devices such as calculators, translators, crib sheets, or hidden notes, during an examination. Possession of the unauthorized material, even if not used, is itself an offence. This also applies to books that can be accessed during the examination.
- Copying answers from someone else's exam paper during an examination, or getting unauthorized help during an examination.
- Communicating, **for any reason**, with any person other than the invigilator during an examination.
- Making any changes to an exam booklet, including tearing out pages or adding pages.
- Removing an exam paper or booklet from an examination room.
- Personation: assuming the identity of another person or having another person assume one's own identity. For example, Mary who is not prepared for an exam asks her friend Jane, who took the course the previous year, to write the exam in her place. Both Mary and Jane can be charged with personation.
- Giving your work to another student knowing that he/she will hand in all or part of your work claiming that it is his/her own. Both students can be charged.
- Submitting the same piece of work for evaluation in two or more courses without prior approval from the course instructors.

- Falsifying documents. This includes any documents being submitted to Concordia as well as any Concordia documents. Examples of falsified documents include transcripts and records for the purpose of admission, notes from medical doctors, or other documents to avoid writing exams or handing in assignments on the prescribed dates.
- Falsifying research facts, data or sources of information. For example, changing a few data points in your experiment in order to improve on the experiment's results.

The Student Advocate Program has recently produced pamphlets in English, French, Chinese and Arabic to help students get a better understanding of the essential content of the Code of Conduct. You can access the presentation and the pamphlets at:

<http://supportservices.concordia.ca/studentadvocateprogram>.

DISCLAIMER: In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.