

Commerce 4OB3 C01
Analysis of Production/Operations Problems
Fall 2022 Course Outline
Operations Management Area
DeGroote School of Business

COURSE OBJECTIVES

- To develop a conceptual framework for analysing inventory management, distribution systems and production planning.
- To become familiar with the mathematical modelling tools useful in developing and executing tactical and short-term plans in inventory, distribution, and production planning.
- To obtain hands on experience in using the materials management (MM) and production planning (PP) modules in the ERP system SAP ECC 6.04. The course can be used towards the SAP certification in business integration.

INSTRUCTOR AND CONTACT INFORMATION

Dr. Prakash Abad
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 Course Website:

Dr. Chandra Raman
 Instructor
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TBA
 Teaching Assistant

<http://avenue.mcmaster.ca>

COURSE ELEMENTS

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

COURSE DESCRIPTION

This course includes readings, lectures, and extensive use of ERP client SAP ECC 6.04 to illustrate some of the theories/concepts discussed in the course. The orientation is at the analyst level.

LEARNING OUTCOMES

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

- Learn analytical approaches in inventory management and production planning.
- Attain in-depth familiarity with the materials management (MM) and production planning (PP) modules in SAP SAP ECC 6.04.
- Study techniques in forecasting, replenishment strategies to optimize inventory in distribution systems.

- To study procedures for intermediate and short-term production and material planning in a manufacturing system.

REQUIRED COURSE MATERIALS AND READINGS

Avenue registration for course content, readings and case materials

- <http://avenue.mcmaster.ca>

\$ FREE

Inventory and Production Management in Supply Chains, Fourth Edition, CRC Press, 2016. The eBook version of the textbook is available online at McMaster library:

<http://ebookcentral.proquest.com/lib/MCMU/detail.action?docID=4771754>

Focus will be on the sections corresponding to material discussed in class.

COURSE ASSESSMENT AND OVERVIEW

Components and Weights

Assignments: 6 in total	Work individually	15%
Midterm		31.5%
Final		31.5%
SAP assignments (2)	Work individually	10%
SAP drills (4)		12%
Total		100%

NOTE: Examinations are online. For summary, detailed sheets containing formulas and templates of procedural tables will be provided to students before an examination. The use of McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy at the following URL:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/examinationindex.html>

The final exam will cover material in the second half. For a student who has permission from the MBA Academic Services Office to miss the midterm, all the missed midterm exam material and all the missed midterm exam marks will be added to the student's final exam and the final exam will be in two parts.

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.

... please note that the Commerce grade conversion is ...

LETTER GRADE	PERCENT	LETTER GRADE	PERCENT
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
		F	00 - 49

Activity	Delivery	Description	Tool(s)
SAP Drills	Asynch	Follow detailed write-up Seek TA/instructor help if needed	SAP ECC 6.04
SAP Assignments	Asynch	Follow detailed instructions, seek TA/instructor help if needed	SAP ECC 6.04

COMMUNICATION AND FEEDBACK

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 Area Administrative Assistants. All students must receive feedback regarding their progress prior to the final date by which a student may cancel the course without failure by default.

- For Level 1 and Level 2 courses, this feedback must equal a minimum of 20% of the final grade.
- For Level 3 courses and above, this feedback must equal a minimum of 10% of the final grade.

Instructors may solicit feedback via an informal course review with students by Week #4 to allow time for modifications in curriculum delivery.

REQUESTING RELIEF FOR MISSED ACADEMIC WORK

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work” and the link below.

<http://ug.degroote.mcmaster.ca/forms-and-resources/missed-course-work-policy/>

ACADEMIC INTEGRITY

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. **It is your responsibility to understand what constitutes academic dishonesty.**

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 behavior 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.

For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/), located at <https://secretariat.mcmaster.ca/university-policies-procedures-guidelines/>

The following illustrates only three forms of academic dishonesty:

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

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., on-line search, other software, etc.). For more details about McMaster’s use of Turnitin.com please go to www.mcmaster.ca/academicintegrity.

COURSES WITH AN ON-LINE ELEMENT

Some courses may use on-line 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, 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 a course that uses on-line 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.

ONLINE 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.

ACADEMIC ACCOMMODATION OF STUDENTS WITH DISABILITIES

Students with disabilities who require academic accommodation must contact [Student Accessibility Services](#) (SAS) at 905-525-9140 ext. 28652 or sas@mcmaster.ca to make arrangements with a

Program Coordinator. For further information, consult McMaster University's [Academic Accommodation of Students with Disabilities](#) policy.

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 their Faculty Office *normally within 10 working days* of the beginning of term in which they anticipate a need for accommodation or to the Registrar's Office prior to their examinations. 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.

EXTREME CIRCUMSTANCES

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labor disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in Commerce 4OB3 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.

Commerce 4OB3-C01
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Fall 2022 Course Schedule

Week	Topic	Study	Event	Instructor
09/06	Introduction, Forecasting	SPT- Ch. 1-3		Raman
09/13	Forecasting	SPT- Ch. 3		Raman
09/20	Forecasting, Order quantities when demand is approximately level	SPT- Ch. 4	Forecast Sheet in Excel 2019	Raman
09/27	Special one-time discount: Cost approach, Lot sizing for individual items with time-varying demand	SPT-Ch. 5		Raman
10/04	Lot sizing, Safety stock for individual items when demand is stationary	SPT-Ch. 5	<i>Upload part 1 of SAP Assignment 1</i>	Raman
10/11	Mid-term recess			
10/18	Safety stock for individual items when demand is stationary	SPT-Ch. 6		Raman
10/25	Forecast based replenishment when demand is non-stationary	Handouts SPT-Ch. 6	--SAP demonstration on replenishment planning <i>--Upload part 2 of SAP Assignment 1</i>	Abad
11/01	The scheduled C01 class on Tuesday, Nov 1 is converted to office hours.			Raman
	Midterm: Saturday, November 5, 2022 , 12:30 PM-3:15 PM, Room: MDCL-1110			Raman
11/08	Distribution requirement Planning, An overall framework for production planning and scheduling		--SAP drill on Sales and Operations planning	Abad
11/15	Sales and Operations Planning, Backlog planning, MPS, Material requirement planning		--SAP drill on MPS --Excel Solver LP	Abad
11/22	Detailed capacity planning,			Abad
11/29	Job shop scheduling, Finite scheduling, Just in time systems		SAP drill on MRP/capacity planning/scheduling	Abad
12/06	Just in Time Systems		SAP drill on Kanban system <i>--Upload SAP Assignment 2</i>	Abad

Note: The above schedule is for section C01 only.