

**Commerce 4OB3
Analysis of Production/Operations Problems
Fall 2019 Course Outline
Operations Management Area
DeGroote School of Business**

COURSE OBJECTIVES

- To develop a conceptual framework for analysing inventory management and production planning business processes.
- To become familiar with predictive the mathematical modelling tools useful in developing and executing tactical and short-term plans in inventory and production management.
- 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

Instructor

abad@mcmaster.ca

Office: DSB 416

Office Hours: TBA

Tel: (905) 525-9140 x23945

Course Website:

Student TA

TBA

Office Hours: TBA

Avenue.McMaster.ca

COURSE ELEMENTS

Credit Value:	3	Leadership:	No	IT skills:	Yes	Global view:	Yes
A2L:	Yes	Ethics:	No	Numeracy:	Yes	Written skills:	Yes
Participation:	Yes	Innovation:	No	Group work:	No	Oral skills:	No
Evidence-based:	No	Experiential:	Yes	Final Exam:	Yes	Guest speaker(s):	No

COURSE DESCRIPTION

This course includes readings, lectures, and the use of ERP system 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:

- Master techniques in forecasting, replenishment strategies to optimize inventory. To learn procedures for intermediate and short-term production planning.
- Learn analytical approaches in inventory management and production planning.
- Attain familiarity with the inventory management (MM) and production planning (PP) modules in SAP SAP ECC 6.04.

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.

EVALUATION	BEST OF
-------------------	----------------

Components and Weights

Assignments: 5 in total	Work individually	15%
Midterm		30-35%
Final		35-30%
SAP assignments (2)	Work individually	10%
In class SAP drills (5)		10%
Total		100%

NOTE: Examinations are closed book, but formula sheets and tables will be provided with the examinations. The use of a 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 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 examination and the final exam will be longer.

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. Instructors are required to

provide evaluation feedback for at least 10% of the final grade to students prior to Week #9 in the term. Instructors may solicit feedback via an informal course review with students by Week #4 to allow time for modifications in curriculum delivery.

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

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

AUTHENTICITY/PLAGIARISM DETECTION

In this course we will be using a web-based service (Turnitin.com) to reveal authenticity and ownership of student submitted work. Students will be expected to submit their work electronically either directly to Turnitin.com or via Avenue to Learn (A2L) plagiarism detection (a service supported by Turnitin.com) so can be checked for academic dishonesty. Students who do not wish to submit their work through A2L and/or Turnitin.com must still submit an electronic and/or hardcopy to the instructor. No penalty will be assigned to a student who does not submit work to Turnitin.com or A2L. All submitted work is subject to normal verification that standards of academic integrity have been upheld (e.g., on-line search, other software, etc.). To see the Turnitin.com Policy, please go to;

www.mcmaster.ca/academicintegrity.

ONLINE COURSE COMPONENTS

In this course we will be using X*. Students should be aware that when they access the electronic components of this course, 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 this course will be deemed consent to this disclosure.

If you have any questions or concerns about such disclosure, please discuss this with the course instructor.

X* = e-mail, Avenue to Learn, LearnLink, web pages, capa, Moodle, ThinkingCap, etc

REQUESTING RELIEF FOR MISSED ACADEMIC TERM WORK

Students may request relief from a regularly scheduled midterm, test, assignment or other course components. Please refer to the policy and procedure on the DeGroote website at the link below;

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

STUDENT ACCESSIBILITY SERVICES

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca.

For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf>

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 requiring a RISO accommodation should submit their request, including the dates/times needing to be accommodated and the courses which will be impacted, to their Faculty Office normally within 10 days of the beginning of term 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.

COURSE SCHEDULE

Commerce 4OB3
Analysis of Production/Operations Problems
Fall 2019 Course Schedule

Session	Topic	Study	Event
09/03	Introduction Forecasting	SPT- Chs. 1-3	
09/10	Forecasting	SPT- Ch. 3	
09/17	Forecasting, Inventory	SPT-Chs 3, 4	Excel 2016
09/24	Traditional replenishment systems for managing inventories	SPT- Ch.4: Order quantities when demand is approximately level	SAP demonstration on forecasting
10/01		SPT-Ch. 5: Lot sizing for individual items with time-varying demand.	<i>Upload part 1 of SAP Assignment 1</i> In class SAP drill on inventory investment
10/08		SPT-Ch. 6: Individual items with probabilistic demand	
10/15	Mid-term recess		
10/22		SPT-Ch. 6: Individual items with probabilistic demand	
10/29	In class mid-term: room to be announced		
11/05	Forecast based replenishment, Distribution requirement Planning	Handouts	In class SAP demonstration on replenishment planning <i>Upload part 2 of SAP Assignment 1</i>
11/12	An overall framework for production planning and scheduling, Medium range aggregate planning	Handouts, SPT –Chs. 13-14	In class SAP drill on sales and operations planning and demand management
11/19	Material requirement planning, Capacity planning	Handouts, SPT- Ch. 15	In class SAP drill on MPS/MRP
11/26	Capacity planning and short-term scheduling	Handouts, SPT- Chs. 15-16	In class SAP drill on MRP/capacity smoothing/scheduling
12/03	Repetitive production: Just in Time Systems	Handouts, SPT- Ch. 16	In class SAP drill on Kanban system <i>Upload SAP Assignment 2</i>