

**Commerce 4OT3
Transportation and Warehousing Management
Fall 2020 Course Outline**

**Operations Management Area
DeGroote School of Business
McMaster University**

COURSE OBJECTIVES

- To understand the strategic role of transportation and warehousing functions and operations within businesses and the supply chain
 - To develop operations models and solutions methods for common logistics problems
 - To gain hands-on experience in using related analytics tools such as Excel Solver and SAP.
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INSTRUCTOR AND CONTACT INFORMATION

Fr 8:30AM - 11:20AM

Shuai Zhang

Instructor

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Si Liu

TA

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Office: TBA

Office Hours: by email

Course website: Avenue to Learn

COURSE ELEMENTS

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

COURSE DESCRIPTION

Transportation and warehousing play a critical role in the supply chain and the economy. They are key enablers for customer-oriented strategies such as same-day or overnight deliveries. This course will help students understand the role of transportation in the economy and the supply chain, covers concepts such as transportation costing and pricing, warehouse equipment and operations, warehouse layout, order processing, and transportation network design and optimization. The course will also use SAP.

LEARNING OUTCOMES

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

- Define and use the basic terminology of transportation and warehousing
- Assess how customer value can be created through logistics
- Familiarity with different warehouse equipment and layout
- Cost and price transportation and warehousing operations
- Choose transportation modes and design transportation networks
- Be familiar with SAP-related Transportation and Warehousing transactions

COURSE MATERIALS AND READINGS

Required:

- Course materials available on avenue to learn: <http://avenue.mcmaster.ca>
- [WDS] John J. Bartholdi III. Warehouse & Distribution Science, 2019. Available for free: <http://warehouse-science.com/>
- [TSCP] Robert A. Novak, Brian Gibson, Yoshinori Suzuki and John J. Coyle. Transportation: A Supply Chain Perspective, 9th Edition, Cengage Learning, 2019.

Optional:

- [FE] Edward Frazelle. World-class warehousing and material handling. New York: McGraw-Hill; 2002.
- [HM] Heinrich Martin. Warehousing and Transportation Logistics, KoganPage, 2018.

EVALUATION

Missed tests/exams will receive a grade of zero unless the student has submitted and been approved for a Notification of Absence or MSAF. Late assignments will be penalized 10% for each day they are late. Your final grade will be calculated as follows:

Components and Weights

SAP Assignments (individual)	20%
Tests (individual)	40%
Project report and presentation (group)	40%
Total	100%

NOTE: The use of a McMaster standard calculator is allowed during examinations in this course. See McMaster calculator policy.

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

Course Deliverables

Assignments (20%, individual)

There will be four SAP Drills.

Tests (40%, individual)

There will be two tests. The first will cover material on warehousing and the second on transportation. The tests will cover material from the textbooks, readings, lectures and class discussion.

Group Project (40%, group)

The project is a team exercise for which each group will consist of 5–6 members. Groups of students will work on solving a real project with a company. The objectives of the project are as follows:

- To give students the opportunity to deepen their understanding of a specific warehouse or transportation management activity introduced in lectures and case discussions.
- To give students the opportunity to apply the knowledge learned in this course to analyse the antecedents and/or consequences of warehouse or transportation management activities of a real company.
- To give students practice in presenting the results of a major project.
- To simulate the teamwork that is increasingly important in the business world.

More information will be made available to the class in the first two weeks. In general, each group choose a company in which warehouse or transportation plays an important rule. Such companies can be e-commerce companies, retailing companies, etc. Choose a major warehouse or transportation activity of the company of interest and make a systematic analysis of the antecedents and consequences of that activity. That activity is of course the focus of the considerable primary and secondary research that the project entails.

The project report should include an executive summary, introduction, that includes a brief literature of the sector, problem statement, modelling and analysis and recommendations as well as possible implementations risks, costs, or limitations. The report is expected to include a description, or flow charts, of the current processes and how your solution will change them. There is no page limitation. However, you are expected to be concise and put long tables and detailed diagrams, such as flow charts, in appendices. There are three key events for the completion of this term project. They are submission of your project proposal, handing in of interim report and presentation of your final project. Dates for these key events are shown in the SCHEDULE. The report is worth 30% of your course mark.

The presentation will be for 20 minutes, including 5 minutes for questions and answers. All group members should participate in the presentation. The presentation will be worth 10% of your course mark.

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, and SAP.

***REQUESTING RELIEF FOR MISSED ACADEMIC
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 DeGroot website at the link below;

<http://ug.degroot.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.

POTENTIAL MODIFICATION TO THE COURSE

The instructor reserves the right to modify elements of the course during the term. There may be changes to 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.

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

RESEARCH USING HUMAN SUBJECTS

All researchers conducting research that involves human participants, their records or their biological material are required to receive approval from one of McMaster's Research Ethics Boards before (a) they can recruit participants and (b) collect or access their data. Failure to comply with relevant policies is a research misconduct matter. Contact these boards for further information about your requirements and the application process.

McMaster Research Ethics Board (General board): <https://reo.mcmaster.ca/>

Hamilton Integrated Research Ethics Board (Medical board): <http://www.hireb.ca/>

ACKNOWLEDGEMENT OF COURSE POLICIES

Your enrolment in Commerce 4OT3 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.

COURSE SCHEDULE

**Commerce 4OT3
Transportation and Warehousing Management
Fall 2019 Course Tentative Schedule**

Week	Topic	Readings	Deliverables
1	Role of Transportation and Warehousing in the Supply Chain and Economy	2 TSCP 1 WDS	
2	Warehouse Equipment and Operations	2-3 WDS	
3	Warehouse Layout and SAP tutorial	6-8 WDS and handouts	
4	Order Picking	10-11 WDS	SAP Drill I
5	Automation	12 WDS	
6	In class test 1		SAP Drill II
Mid-term recess: October 12 to October 18			
7	Crossdocking	13 WDS	Project proposal
8	Modes of Transportation and Global Transportation	5-8, 11 TSCP	SAP Drill III
9	Costing and Pricing for Transportation	4 TSCP	
10-11	Transportation Network Design and Optimization	14-15 WDS	SAP Drill IV
12	Performance Measurement and Risk Management	10 TSCP 16 WDS	Project Report
13	Project Presentation		Test 2