

**Commerce 4OT3
Transportation and Warehousing Management
Fall 2021 Course Outline**

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

COURSE OBJECTIVE

- 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.

INSTRUCTOR AND CONTACT INFORMATION

Mon 8:30 – 11:20

Steven Paré

Instructor

pires1@mcmaster.ca

Virtual class

Availability Hours: Tues. 18:00 – 21:00

Tel: (905) 484-3932

TA

Shuai Zhang

zhans72@mcmaster.ca

Virtual class

Office Hours: TBD

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: Yes	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)	30%
Tests	(Individual)	30%
Real World Project	(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 (30%, individual)

There will be four SAP Drills.

Tests (30%, 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.

Real-World Project (40%, group) – *two options

1. **10% for initial site Plant Tour report plus 30% for Group Presentations**
2. **Full 40% for Group Presentations**

Plant Tour (10%, group)

You are expected to identify site you intend to tour, prepare a report on the tour and what you have learned. Your report should not exceed five pages and can include the purpose of the trip, information about the plant and its purpose and main functions, describe the tour path and what you have observed, including equipment and processes, and any questions or discussion you may have had. In addition, you are expected to reflect on the tour: did it help you understand the concepts you learned in class? Did you learn new concepts/ideas? Identify any strengths or weaknesses you may have noticed and any recommendations for improvement.

Group Presentations

Groups of students will work on solving a real project with a company. As an example, the project goal is to identify potential for process improvements in Transportation and/or Warehouse operations within identified companies. This will be done by studying the existing processes and facility setup for storage and weekly customer deliverables and evaluating against the knowledge gained through the course to identify possible process improvement opportunities.

The end of course presentation 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.
- The presentation will be for 20 minutes, including 5 minutes for questions and answers. All group members should participate in the presentation.

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.degrootemcmaster.ca/forms-and-resources/missed-course-work-policy/>

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. **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 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.

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, 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 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, 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.

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.

COURSE SCHEDULE

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1	MON. SEPT. 13**	Discuss: Class Outline, Schedule, Participation, Courseware
2	Mon. Sept. 20	Warehouse Equipment Operations
3	Mon. Sept. 27	Warehouse Layout – Pt 1
4	Mon. Oct. 4	Warehouse Layout – Pt 2 & SAP drill 1 due (test #1 – Oct. ...)
	Mon. Oct. 11	Thanksgiving Holiday
5	Mon. Oct. 18	Order Picking (test #2 – Oct. ...)
6	Mon. Oct. 25	Automation (Midterm exam Oct. 27)
7	Mon. Nov. 1	Cross Docking
8	Mon. Nov. 8	Modes of Transportation & Global Transportation & SAP drill 1 due (test #3 – Nov. ...)
9	Mon. Nov. 15	Costing & Pricing
10	Mon. Nov. 22	Transportation Network Design Pt 1 (test #4 – Nov. ...)
11	Mon. Nov. 29	Transportation Network Design Pt 2
12	Mon. Dec. 6	Performance & Risk Management & SAP drill 3 due (test #5 – Dec. ...)
13	Mon. Dec. 13	Group projects
14	Mon. Dec. 20	Group projects

**Please note, the first week of classes will be conducted virtually for all Fall term classes regardless of the intended delivery format for the term