Mechanical & Industrial Engineering
UNIVERSITY OF TORONTO
FACULTY OF APPLIED SCIENCE & ENGINEERING
5 King's College Road, Toronto, Ontario, M5S 3G8 Canada
www.mie.utoronto.ca

Course Outline – Summer 2019 Session

APS1017 – Supply Chain Management

Instructor: Chi-Guhn Lee
MC322/BA8110
(416) 946-7867
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References/
Reading Material:
1. Chapters 4, 5 and 6 from "Production and Operations Analysis," 4th, 5th or 6th Edition, Steven Nahmias, McGraw-Hill
2. Chapters 4 and 5 from "Supply Chain Management: Strategy, Planning, and Operation," 2nd Edition, Sunil Chopra and Peter Meindl, Prentice Hall
3. "What is the right supply chain for your product" by Marshall Fisher
   at https://hbr.org/1997/03/what-is-the-right-supply-chain-for-your-product
4. "Supply Chain Coordination with Contracts" by Gerard Cachon
   at http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.202.1915&rep=rep1&type=pdf

Course Description: This course is to provide students with a framework to design and control supply chain systems. To achieve the goal, the course will cover key modules in supply chain. The students will be exposed to topics such as: product and supply chain matching, forecasting, inventory models, supply chain coordination via contract design, and the value of information.

Learning Outcomes: (By the end of the course) students should be able to:
1) Make inventory replenishment decisions with or without demand uncertainty at a single location as well as for the whole supply chain,
2) Supply chain design using network optimization, value of information, and product differentiation point, and
3) Contract design for supply chain coordination.

Evaluation Methods:

Exam 1 =	40 %
Exam 2 =	60 %
Total =	**100 %**

Examinations: Exam1 and 2 – Closed-book, closed-lecture-notes, one letter-size aid sheet allowed, calculator allowed; Note that a photocopied aid sheet is not allowed.

Exam 1: SF3202, 3:00 pm – 4:00 pm on July/19 (Fri)
Note: Lecture in BA1200 from 1 pm to 2:30 pm on July/19
Exam 2: SF3202, 2:30 pm – 4:00 pm on July/26 (Fri)
Note: Office hour in MC322 from 1 pm to 2 pm on July/26

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Course Topics:

Introduction
- Supply chain types and product types
- Key topics in supply chain management

Inventory management
- Demand forecast
- Deterministic models
- Stochastic models
- Multi-echelon inventory models

Supply Chain Design
- Network optimization
- Location-based competition
- Transportation

Supply chain coordination
- Contract design
- Value of information

Policies

1. Complaints regarding graded marks will **not** be accepted **after two days** from the distribution.