Management Science Special Topic – Supply Chain Management

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Wednesdays 2:00 pm
Location: IVEY Room 2102
(12 Sessions)

INTRODUCTION (optional; may include schedule exceptions, additional information, etc.)
This course introduces students how to solve real life managerial supply chain problem using game theoretical model.

COURSE DESCRIPTION
This course introduces students how to solve real life managerial supply chain problem using game theoretical model.

COURSE OBJECTIVES
Students should learn (not limited to) the following topics:
- Competition between firms
- Customer utility functions
- Vertically differentiated model
- Hotelling model
- Linear demand
- Capacity limit
- Customers freeriding behavior
- Counterfeiting products
- Online/offline channel
- Channel conflict environment / dual channel
- Supply chain management
- Contract design
- Cooperation/competition

COURSE ACTIVITIES / GRADING / METHODS OF EVALUATION
20% - class contribution
40% - research project
COURSE SYLLABUS

40% - final exam

EXPECTATIONS / CLASS CONTRIBUTION / ATTENDANCE
The meeting time may be changed depending on students’ availability.
I will also meet with students one-on-one very frequently to talk about the research project.
Students are expected to attend ALL classes.
** Absolutely no late arrival or missing class is allowed ***

MATERIALS / REQUIRED READING
Mathematica software
Assigned reading will be distributed via email before class time
(See “Detailed Session Schedule” for a partial reading list)

PLAGIARISM / ACADEMIC INTEGRITY
Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

HEALTH AND WELLNESS
As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western’s Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page http://www.music.uwo.ca, and our own McIntosh Gallery http://www.mcintoshgallery.ca. Information regarding health- and wellness-related services available to students may be found at http://www.health.uwo.ca.

Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at http://www.health.uwo.ca/mental_health/resources.html.

To help you learn more about mental health, Western has developed an interactive mental health learning module, found here: http://uwo.ca/health/mental_wellbeing/education/module.html. This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating
disorders. After successful completion of the module, participants receive a certificate confirming their participation.

**DETAILED SESSION SCHEDULE**

Week 1 – getting familiar with Mathematica
Week 2 – derive the equilibrium solution for following paper:
Week 3 – Hotelling model
Week 4 – Understanding the following paper:
Week 5 – Coming up with the model of the following paper:
Week 6 – Vertically differentiated model
Week 7 – Project mid-term presentation
Week 8 – Newsvendor model
Week 9 – Understanding the following paper
Week 10 – Understanding the following paper:
Week 11 – Understanding the following paper:
Week 12 – Project presentation