



# Rotman Commerce UNIVERSITY OF TORONTO

## Course Outline

### RSM 270 H1S

Operations Management  
Winter 2017

Course Meets: L0101 Thursdays, 10:00am-12:00pm, WO 35  
L0201 Thursdays, 2:00pm-4:00pm, WO 35  
L0301 Thursdays, 4:00pm-6:00pm, WO 35

---

#### L0101

Instructor: Srinivas Krishnamoorthy, RT 404  
E-Mail: [S.Krishnamoorthy@Rotman.Utoronto.Ca](mailto:S.Krishnamoorthy@Rotman.Utoronto.Ca)  
Please start subject with **RSM270**  
Office Hours: Wednesdays, 1:00pm-2:00pm in RT 404, and by appointment

#### L0201- L0301

Instructor: Gonzalo Romero, RT 408  
E-Mail: [Gonzalo.Romero@Rotman.Utoronto.Ca](mailto:Gonzalo.Romero@Rotman.Utoronto.Ca)  
Please start subject with **RSM270**  
Office Hours: Wednesdays, 11:00am-1:00pm in RT 408, and by appointment

#### L0101-L0201- L0301

Webpage: <http://portal.utoronto.ca> (Blackboard for RSM270H1)  
Make sure you **always read the online Announcements!**  
Teaching Assistants: Gong Xin Gu  
[Gong.Xu17@Rotman.Utoronto.Ca](mailto:Gong.Xu17@Rotman.Utoronto.Ca)  
Xinlong Li  
[Xinlong.Li13@Rotman.Utoronto.Ca](mailto:Xinlong.Li13@Rotman.Utoronto.Ca)

## Course Scope and Mission

Operations is the term that refers to the process by which an organization converts inputs (e.g., labor, material, knowledge, equipment) into outputs (goods and/or services) for both internal and external markets. In this course, we will study how to manage this process. We will study strategic issues related to how firms determine the way in which they will compete as well as tactical and operational decision making. Topics include: Operations Strategy, Processes in Manufacturing and Services, Waiting-Line Management, Scheduling, Capacity Planning, Inventory Management and Revenue Management.

The objectives of this course are:

- to develop your decision-making skills.
- to expose you to the main concepts of operations management in manufacturing and service organizations.
- to provide you with useful tools for problem solving in business and government environments.

### Course Prerequisites

RSM100Y1/RSM100H1/MGT100H1

### Course Exclusions

RSM370H1 – If taken prior to 2011-2012

### Required Readings

*Operations Management*, RSM270, by McGraw-Hill/Irwin. ISBN13: 9781259033247, ISBN10: 1259033244. A tailored text book to our needs, based on Stevenson & Hojati: *Operations Management* 4th Canadian Edition, McGraw-Hill Ryerson, 2011; and Jacobs & Chase: *Operations and Supply Chain Management* 13e, McGraw-Hill Irwin, 2011.

### Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

<u>Work</u>		<u>Due Date</u>
Class Participation	2%	Ongoing (weekly)
Case Studies	12%	Case 1: March 2 (6% of final grade) Case 2: March 30 (6% of final grade)
Mid Term Exam	35%	March 3, 6pm(sharp)-8pm
Assignments	12%	Ongoing (roughly bi-weekly)
Mini-Quizzes	4%	Ongoing (weekly)
Final Exam	35%	During Faculty of Arts & Science Final Examination period

## COURSE FORMAT AND EXPECTATIONS

### Class Participation

Class participation will be mostly determined on the basis of your comments in each class session. Some of the criteria that we will use to judge effective class participation include: Is there a willingness to participate? Is the participant a good listener? Is the participant concise and articulate? Are the points made relevant to the current discussion? Are they linked to the comments of others?

### Assignments, Mini-Quizzes and Case Studies

A total of 6 **individual** online assignments and a total of 11 mini-quizzes will be given. The lowest mini-quiz mark will be dropped, i.e., only the top 10 mini-quizzes will be counted towards your course grade. Individual assignments will be posted and are to be handed in online through UTOSubmit (<https://submit.utm.utoronto.ca/utorsubmit/>). Mini-quizzes will be available online through UTORMAT (<http://utormat.herokuapp.com/#/login?r>).

Please note that clear, concise, and correct writing will be considered in the evaluation of the assignments as well as the case studies. That is, you may lose points for writing that impedes communication: poor organization, weak paragraph development, excessive wordiness, hard-to-follow sentence structure, spelling mistakes and grammatical errors. Students who require

additional support and/or tutoring with respect to their writing skills are encouraged to visit the Academic Success Centre ([www.asc.utoronto.ca](http://www.asc.utoronto.ca)) or one of the College Writing Centres ([www.writing.utoronto.ca/writing-centres](http://www.writing.utoronto.ca/writing-centres)). These centres are teaching facilities – not editing services, where trained staff can assist students in developing their academic writing skills. There is no charge for the instruction and support.

Normally students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the university's use of the Turnitin.com service are described on the Turnitin.com website. We will submit your assignments and case studies to Turnitin.com to protect you against plagiarism.

### **Group Work**

The case studies require students to work in teams of 2-3. Only one report per group should be submitted. For the case studies, submission to Turnitin.com will be used as described above.

An **electronic copy** is to be handed in online through UTOSubmit (<https://submit.utm.utoronto.ca/utorsubmit/>).

A **hardcopy** must be submitted **to me** (in class or my office).

Learning to work together in teams is an important aspect of your education and preparation for your future careers. That said, project-based teamwork is often new to students; to work well in teams, it helps to follow a set of core expectations to best succeed at your team projects.

1. Read the document entitled, "Working in Teams: Guidelines for Rotman Commerce Students" which is available on the RC portal under the Academic Services tab.

2. When working in a team, Rotman Commerce students are expected to:

- Treat other members with courtesy and respect;
- Honour the ground rules established by the team;
- Contribute substantially and proportionally to the final project;
- Ensure enough familiarity with the entire contents of the group project/assignment so as to be able to sign off on it as original work;
- Meet the project timeline as established by the team.

3. Resolving conflicts:

Conflicts are part of the team's process of learning how to work together. When handled well, it can generate creativity and bring-multiple perspectives to the solution.

Student teams are expected to work through their misunderstandings as soon as they arise (and prior to submission of the final project). When teams are unable to arrive at a solution that works for all members, the team must meet with the Rotman Commerce Team Coach\*\* as soon as possible. The Coach will listen to the team and help develop options for improving the team process. All members of the project team must commit to, and, utilize their action plans.

\*\*For an appointment with a Rotman Commerce Team Coach, please contact Nouman Ashraf at [nouman.ashraf@rotman.utoronto.ca](mailto:nouman.ashraf@rotman.utoronto.ca). Nouman is highly skilled at facilitating team dynamics and collaboration. Note that the Team Coach's role is to provide guidance, support and advice on team matters – not to formally evaluate or assess teamwork for academic purposes.

## Weekly Schedule

Session	Date	Topic	Readings	Individual Assignments	Group Assignments
	Jan 5	NO CLASS			
1	Jan 12	Introduction & Overview	Chapter 1 & 2, J&C	(weekly Mini-quizzes)	
2	Jan 19	Process Analysis Best Box Builders	Chapter 5, J&C	1-page intro	
3	Jan 26	Forecasting	Chapter 15, J&C		Finalize Groups
4	Feb 2	Little's Law and Inventory Build-up	Chapter 5 & 7A, J&C	Assignment 1	
5	Feb 9	Queueing Analysis	Chapter 7A, J&C	Assignment 2	
6	Feb 16	Queueing Models	Chapter 7A, J&C	Assignment 3	
	Feb 21-24	<i>Reading Week</i>			
7	March 2	Inventory Management I	Chapter 12, S&H		Case 1
Midterm Exam	March 3	<b>6pm(sharp)-8pm (2 hrs) in SS1070/SS1072/SS1074/SS1083</b>		"notes sheet" Calculator	
8	Mar 9	Inventory Management II	Chapter 12, S&H	Assignment 4	
9	Mar 16	Inventory Management III	Chapter 12, S&H		
10	Mar 23	Linear Programming	Appendix A, J&C	Assignment 5	
11	Mar 30	Revenue Management	Chapter 15, J&C	Assignment 6	Case 2
Final Exam	TBA by FAS	<b>Final Exam (2 hrs)</b>		"notes sheet" Calculator	

## Additional Recommended Readings

- [S&H]: *Operations Management 4th Canadian Edition* by Stevenson & Hojati, McGraw-Hill Ryerson, 2011.
  - [J&C]: *Operations and Supply Chain Management 13e* by Jacobs & Chase, McGraw-Hill Irwin, 2011.
  - *Managing Business Process Flows: Principles of Operations Management* by Anupindi, Chopra, Deshmukh, Van Mieghem, and Zemel (2nd edition, Pearson Prentice Hall).
  - *The goal: a process of ongoing improvement* by Eliyahu M. Goldratt and Jeff Cox.
- Note: This is a fictional story about a manager dealing with operational challenges in his job.  
The book is written like a novel, but it is also used as textbook in some operations management courses.

### Additional Recommended Textbook Practice Questions

Topic	Readings	Practice Questions	Page in Original Readings
Processes Performance & Analysis	Chapter 1 & 2, J&C	Problem 1-10	p34ff.
Forecasting	Chapter 15, J&C	Problem 2-3, 14-20 Skip regression and tracking	p131ff.
Queueing Analysis and Models	Chapter 5 & 7A, J&C	Problem 1-26, skip probability	p262ff.
Linear Programming	Appendix A, J&C	Problem 1-10,	p733ff.
Inventory Management	Chapter 12, S&H	Problem 1-8, 13-50 skip calculating the economic production quantity, planned shortages, $OI^*$ , variable lead time, annual service level	p451ff.
Little's Law and Inventory Build-up	Chapter 5, J&C	Problem 1-13	p518ff.

### POLICY AND PROCEDURE

#### **Missed Tests and Assignments (including midterm examinations)**

Students who miss a test or assignment for reasons entirely beyond their control (e.g. illness) may submit a request for special consideration. Provided that notification and documentation are provided in a timely manner, and that the request is subsequently approved, no academic penalty will be applied. **Students who miss the midterm must write a “make-up” exam.**

In such cases, students must notify Rotman Commerce on the date of the missed test (or due date in the case of course work) and submit supporting documentation (e.g. [Verification of Student Illness or Injury form](#)) to the Rotman Commerce Program Office within **48 hours** of the originally scheduled test or due date. Students who do not provide Rotman Commerce or the instructor with appropriate or sufficient supporting documentation will be given a grade of 0 (zero) for the missed test or course deliverable.

**Note that the physician's report must establish that the patient was examined and diagnosed at the time of illness, not after the fact. Rotman Commerce will not accept a statement that merely confirms a report of illness made by the student and documented by the physician.**

## **Exams**

Students are responsible for making sure they appear for the exams on time. No latecomers will be admitted. Both exams will be closed book. However, you will be allowed to bring in one “notes sheet” (A4: 21.0cm x 29.7cm (8.3in x 11.7in) – you can write on both sides). While the “notes sheet” can be of some help to you during the exam, its real value is that it helps you prepare for the exams. You are encouraged to prepare your own “notes sheet” (either independently or in collaboration with study partners). Do not use a “notes sheet” someone else has prepared.

The second exam will not be cumulative. For example, I won't ask you to do a calculation to determine some queue length, but I expect you to know Little's Law and to be able to do some basic things like drawing a Gantt chart (to mention two examples).

## **Late Assignments**

Please note that all assignments are due by the specified deadlines. The exact date and time will be given in the Blackboard assignment. No late assignments will be accepted, except for students who, for reasons beyond their control, are unable to submit an assignment by its deadline must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

## **Accessibility Needs**

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:  
[accessibility.services@utoronto.ca](mailto:accessibility.services@utoronto.ca) or <http://www.accessibility.utoronto.ca/>.

## **Academic Integrity**

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

*The University of Toronto's Code of Behaviour on Academic Matters*

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

#### Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

#### Email

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail+ email address is set up AND properly entered on the ROSI system. For more information please visit <http://help.ic.utoronto.ca/category/3/utmail.html>

Forwarding your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

#### Blackboard and the Course Page

The online course page for this course is accessed through Blackboard. To access the course page, go to the UofT Portal login at <https://portal.utoronto.ca/> and log in using your UTORid and password. Once you have logged in, look for the My Courses module where you'll find the link to all your course websites. If you don't see the course listed here but you are properly registered for the course in ROSI, wait 48 hours. If the course does not appear, go to the Information Commons Help Desk in Robarts Library, 1st floor, for help, or explore the Portal Information and Help at <http://www.portalinfo.utoronto.ca/content/information-students> and review the Frequently Asked Questions.

#### Recording Lectures

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Blackboard materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in anyway. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.