

# Course Outline

| Course Code  | RSM 270 H1 S                         |  |  |  |
|--|--------------------------------------|--|--|--|
| Course Name  | Operations Management                |  |  |  |
| Term, Year   | Winter 2025                          |  |  |  |
| Course Meets L0401 – Thursdays 11:00am-1:00pm / SS |                                      |  |  |  |
|  | L0501 – Thursdays 1:00pm-3:00pm / SS |  |  |  |
|  | L5101 – Thursdays 5:00pm-7:00pm / BL |  |  |  |
|  | (Room number available on ACORN)     |  |  |  |
| Web page URL                                       | https://q.utoronto.ca                |  |  |  |

### Instructor Details

| Name     | Email                             | Phone        | Office Hours |
|----------|-----------------------------------|--------------|--------------|
| Adam     | adamr.saunders@rotman.utoronto.ca | 416-978-3386 | TBA          |
| Saunders |                                   |              |              |

# **Course Description**

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 how they will compete and tactical and operational decision-making. Topics include: *Operations Strategy, Processes in Manufacturing and Services, Waiting-Line Management, Capacity Planning, Inventory Management, Revenue Management*, and *Linear Programming*.

# **Learning Outcomes**

By the end of this course, students will be able to:

- Define and explain operations management's core concepts, principles, and functions, including its role in manufacturing and service industries.
- Develop the ability to analyze and design efficient and effective operational processes and identify areas for improvement.
- Develop critical thinking and decision-making skills, applying quantitative and qualitative tools to solve operational problems and make informed decisions.

# Course Prerequisites

Completion of the Rotman Commerce Guaranteed Admission requirements.

### **Course Materials**

# Suggested Readings

- **Operations and Supply Chain Management** (print version) 17<sup>th</sup> Edition by Jacobs and Chase, 2024, McGraw-Hill Irwin. (The 15<sup>th</sup> or 16<sup>th</sup> editions are also acceptable).

### **Evaluation and Grades**

Grades are a measure of the knowledge and skills developed by a student within individual courses. Each student will receive a grade based on how well they have command of the course materials, skills, and learning objectives.

| Work                | Percentage of grade | Due Date  |
|---------------------|---------------------|---|
| Class Participation | 3%                  | Ongoing   |
| Case Write Up       | 15% (2*7.5%)        | February 16 <sup>th</sup> and April 6 <sup>th</sup> |
| Mid-Term Test       | 32%                 | February 12 <sup>th</sup> – 7:00 PM                 |
| Assignments         | 12%                 | See weekly schedule on pg. 7                        |
| Final Term Test     | 38%                 | TBA by FAS  |

## Course Format and Expectations

All lectures for this course are scheduled to be conducted in person. Throughout the course, students must complete six bi-weekly assignments. Two case studies will also be provided—one for each half of the course. These case studies are designed to evaluate your comprehension of all subjects covered in each respective course segment. Students will get the most out of this course by regularly attending lectures and participating actively in class discussions.

### Assignments (12%)

A total of 6 online assignments will be posted on Quercus throughout the term. They will each be equally weighted in determining the final grade.

### Case Write-Ups (15%)

In case studies 1 and 2, students can work in teams of up to five people. If students decide to work together, it is their responsibility to find a team. All students on the same team will receive the same grade. However, teamwork is *not* required, and students may work independently if they choose to. All else being equal, we encourage students to work together in teams, as it is a crucial transferrable skill you will use in your coursework and future careers. Support is available if you encounter common teamwork challenges such as:

- Team members feeling left out of the team.
- Team members are not responding on time to communication.
- Division or quality of work among team members being unequal or unfair.

Consult the <u>Centre for Professional Skills Teamwork Resources page</u> for tips, strategies, and best practices. You can also <u>book an appointment with a teamwork mentor</u> through the RC Centre for Professional Skills Writing Centre. Teamwork mentors can help you resolve or mitigate conflict, strategize on planning, or improve team communication.

If you are a student registered with Accessibility Services, and extensions are one of your academic accommodations, consult with your Accessibility Advisor about the teamwork in this course.

Please note that **clear**, **concise**, **and correct writing** will be considered in evaluating 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 support or would like to develop their writing skills are encouraged to book an appointment with writing coaches offered by the RC Centre for Professional Skills. CPS offers individual and group appointments with trained writing instructors familiar with the RC program and common genres of business assignments. For

students seeking help with writing skills, these coaches can provide feedback on idea organization, paragraph development, sentence structure, spelling, and grammatical errors.

To book an appointment for writing or presentation coaching, go to uoft.me/writingcentres and select "Rotman Commerce Centre for Professional Skills" and Register for a WCONLINE account or login to your account (if you have one). For group assignments, assign one student from the group to book an appointment for the group.

- 1. Register for an account using your @mail.utoronto.ca email address and follow the confirmation prompts you receive via email. At the bottom of the registration page, click on "yes" next to "include iCal links with appointment confirmation messages."
- 2. Once your registration is complete, select the schedule: Writing and Presentation Coaching on the drop-down menu.
- 3. Click on the white box for an appointment slot. Each appointment will be 45 mins. You may attach a draft of your assignment or any other documents. If your draft is not ready, you may also share a Google link (or other live document-sharing link) of your draft during your appointment.
- 4. You will receive a confirmation email with your appointment details and meeting link.

For questions or registration support, please email rotmancommerce.cps@utoronto.ca. In addition to appointments offered by the RC Centre for Professional Skills, all RC students have access to their College Writing Centres. Students who require additional support and/or tutoring with their writing skills are encouraged to visit the Academic Success Centre (http://www.studentlife.utoronto.ca/asc) or one of the College Writing Centres (writing.utoronto.ca/writing-centres). These Centres and the RC Centre for Professional Skills 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**.

### Class Participation (3%)

There are three elements as part of class participation:

<u>Verbal participation:</u> Students are expected to prepare thoroughly and try to attend every class. Since participation is a graded component of the course, students will be evaluated on the following: Thoughtful responses, understanding, and analysis of the topic, idea generation, promoting further discussion, respect, active listening, and attentiveness.

<u>Poll Everywhere questions:</u> Poll Everywhere questions typically test a student's understanding of the material and may be spread throughout the lecture. Students must register for a free Poll Everywhere account and can use a laptop or smartphone to participate. Only the best 8 out of 10 lectures with Poll Everywhere questions will be used to calculate a student's final course grade.

<u>In-Class Exercises:</u> Approximately one in-class exercise will be assigned each week during the latter part of the lecture. The two lowest scores will be dropped from the final course grade. Students can work individually or in groups of any size. Students who work in groups must still submit their own responses in Quercus.

## Midterm Exam (32%)

There is an in-person midterm exam in February (TBA). It will be on paper, and a handwritten two-sided A4 aid sheet and basic calculator are allowed. It will be based on lectures 1 through 5.

### Final Exam (38%)

There is an in-person final exam during the April 9<sup>th</sup>-30<sup>th</sup> exam period (TBA). It will be on paper, and a handwritten two-sided A4 aid sheet and basic calculator are allowed. The final exam is not cumulative and will be based on lectures 6 through 11.

Missed Tests and Assignments (including mid-term and final-term assessments) Students who miss a test or assignment for reasons entirely beyond their control (e.g., illness) may request special consideration within two business days of the missed midterm/test/assignment due date.

In such cases, students must:

- 1. Complete the Request for Special Consideration form: https://uoft.me/RSMConsideration
- 2. Provide documentation to support the request, e.g. Absence Declaration from ACORN, medical note, etc.

Please note: As of September 2023, students may use the Absence Declaration on ACORN \*once per term\* to report an absence and request consideration. Any subsequent absence will require a Verification of Illness form or other relevant documentation.

Students who do not submit their requests and documentation within two days may receive a grade of 0 (zero) on the missed course deliverable. Students who do not provide this information will be given a grade of 0 (zero) for the missed course deliverable. When a student misses an exam, the instructor will either offer a make-up test or re-weight the other deliverables to account for the missed exam. The instructor will make this choice.

**Final Exams:** If you miss the final exam in this course for a legitimate reason (illness, etc), you will need to contact your College Registrar to file a petition for a deferred exam. This deferred exam will be written later as established by the Faculty of Arts & Science. Instructions can be found here: https://www.artsci.utoronto.ca/current/faculty-registrar/petitions-appeals/preparing-petition

#### Late Assignments

Students are given a one-hour grace period after the due date for all assessments (except the final exam). During this extra hour, submissions are considered late, but no penalty is assessed. After that, late submissions will typically be penalized by 25% per day (or fraction of a day) unless the instructor has granted the student an extension.

Students who are unable to submit an assignment by its deadline for reasons beyond their control must obtain approval from the instructor for an extension. Supporting documentation will be required as per the policy on missed tests and assignments.

# Statement on Equity, Diversity, and Inclusion

The University of Toronto is committed to equity, human rights, and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

# Commitment to Accessibility

The University is committed to inclusivity and accessibility, and strives to provide support for, and facilitate the accommodation of, individuals with disabilities so that all may share the same level of access to opportunities and activities offered at the University.

If you require accommodations for a temporary or ongoing disability or health concern, or have any accessibility concerns about the course, the classroom or course materials, please <a href="mailto:emailto:

### Generative AI / ChatGPT

Students are permitted to utilize Generative Artificial Intelligence (AI) tools while completing assignments within this course. However, it is essential to comprehensively document this usage and subsequently upload the documentation as an appendix (or a separate file) upon request for each assignment. Should the instructor require the submission of this documentation, students are obliged to promptly provide the file to the instructor. This documentation should include what tool(s) were used, how they were used, and how the results from the AI were incorporated into the submitted work. Failure to adhere to this guideline, and instances where the usage of AI is detected without appropriate citation, could result in the forfeiture of 100% of the grade allocated for that particular assignment, both for you and your teammates. It is important to emphasize that the use of Generative AI tools is exclusively permissible for assignments and case studies; their utilization is strictly prohibited during examinations, whether administered online or in person.

# Academic Integrity

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T 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.

<u>The University of Toronto's Code of Behaviour on Academic Matters</u> 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 tests 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 procedures outlined in the <u>Code of Behaviour on Academic Matters</u>. If you have any questions 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 U of T or RC resources such as the RC Centre for Professional Skills, the 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 U of T 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 ACORN. For more information visit the <a href="Information Commons Help Desk">Information Commons Help Desk</a>.

Forwarding your utoronto.ca email to a Gmail or other type of email account is not advisable. In some cases, messages from utoronto.ca addresses sent to Gmail 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.

# 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. Students who have been previously granted permission to record lectures as an accommodation for a disability are excepted. This includes tape recording, filming, photographing PowerPoint slides, Quercus materials, etc.

If permission for recording 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 any way. It is forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

# **URL** links for print

- ACORN: <a href="http://www.acorn.utoronto.ca/">http://www.acorn.utoronto.ca/</a>
- Email Accessibility Services: accessibility.services@utoronto.ca
- Accessibility Services website: <a href="http://studentlife.utoronto.ca/as">http://studentlife.utoronto.ca/as</a>
- University's Plagiarism Detection Tool FAQ: <a href="https://uoft.me/pdt-faq">https://uoft.me/pdt-faq</a>
- The University of Toronto's Code of Behaviour on Academic Matters: <a href="http://www.governingcouncil.utoronto.ca/policies/behaveac.htm">http://www.governingcouncil.utoronto.ca/policies/behaveac.htm</a>
- Information Commons Help Desk: http://help.ic.utoronto.ca/category/3/utmail.html
- Become a volunteer note taker: https://studentlife.utoronto.ca/program/volunteer-note-taking/
- Accessibility Services Note Taking Support: <a href="https://studentlife.utoronto.ca/service/note-taking-support/">https://studentlife.utoronto.ca/service/note-taking-support/</a>
- Credit / No-Credit in RSM courses: <a href="https://rotmancommerce.utoronto.ca/current-students/degree-requirements/credit-no-credit-option/">https://rotmancommerce.utoronto.ca/current-students/degree-requirements/credit-no-credit-option/</a>

- Rotman Commerce Academic Support: <a href="https://rotmancommerce.utoronto.ca/current-students/academic-support/">https://rotmancommerce.utoronto.ca/current-students/academic-support/</a>
- Book an appointment with a writing or presentation coach: <a href="http://uoft.me/writingcentres">http://uoft.me/writingcentres</a>
- Writing and Presentation Coaching academic support page: <a href="https://rotmancommerce.utoronto.ca/current-students/academic-support/writing-and-presentation-coaching/">https://rotmancommerce.utoronto.ca/current-students/academic-support/writing-and-presentation-coaching/</a>
- Centre for Professional Skills Teamwork Resources page: https://rotmancommerce.utoronto.ca/teamwork-resources
- Book an appointment with a Teamwork Mentor: <a href="http://uoft.me/writingcentres">http://uoft.me/writingcentres</a>

# Weekly Schedule

| Session       | Date                         | Topics                                     | Readings<br>(Jacobs & Chase)                                   | Assignments   |                           |
|---------------|------------------------------|--|--|---|---------------------------|
| 36221011      |                              |  |  | Individual  | Group                     |
| 1             | <b>Jan.</b><br>9             | Introduction and Overview                  | Chapters 1 & 2   |   |                           |
| 2             | <b>Jan.</b><br>16            | Process Analysis                           | Chapter 11   |   |                           |
| 3             | <b>Jan.</b> 23               | Little's Law & Inventory<br>Build-up       | Chapter 11   | Assignment 1,<br>Jan. 26, 11:59pm                           |                           |
| 4             | <b>Jan.</b><br>30            | Queueing I                                 | Chapter 10   | Assignment 2,<br>Feb. 2, 11:59pm                            |                           |
| 5             | <b>Feb</b> .                 | Queueing II                                | Chapter 10   | Assignment 3,<br>Feb. 9, 11:59pm                            |                           |
|               | In-person<br>Midterm<br>Exam | Midterm date:<br>February 12 <sup>th</sup> | A hand-written 2-sided<br>A4 aid sheet &<br>Calculator Allowed |   | <b>Case 1,</b><br>Feb. 16 |
| No<br>Lecture | <b>Feb.</b> 20               | Reading Week (Feb. 17-21)                  |  |   |                           |
| 6             | <b>Feb.</b> 27               | Demand Forecasting*                        |  |   |                           |
| 7             | <b>Mar.</b><br>6             | Inventory Management I*                    | Chapter 18   | Assignment 4,<br>Mar. 9, 11:59pm                            |                           |
| 8             | <b>Mar.</b><br>13            | Inventory Management II                    | Chapter 20   |   |                           |
| 9             | <b>Mar.</b><br>20            | Inventory Management III                   | Chapter 20   | Assignment 5,<br>Mar. 23, 11:59pm                           |                           |
| 10            | <b>Mar.</b><br>27            | Linear Programming I                       | Appendix A   | Assignment 6,<br>Mar. 30, 11:59pm                           |                           |
| 11            | <b>Apr.</b> 3                | Linear Programming II                      | N/A  |   | Case 2,<br>Apr. 6         |
| Final<br>Exam | TBA by<br>FAS                | Final Exam (2 hours)                       |  | A hand-written 2-sided A4 aid<br>sheet & Calculator Allowed |                           |

<sup>\*</sup>Material to be tested on the final exam instead of the midterm.

Please note that the last day you can drop this course without academic penalty is March 10, 2025.