

Course Outline

Course Code	RSM 470 H1 F
Course Name	Management Science Modeling with Spreadsheets
Term, Year	Fall 2022
Course Schedule	L0101 Th 11-1 – WO 25
Web page URL	https://q.utoronto.ca/courses/280868

Instructor Details

Name	Email	Phone	Office Hours	Office Link
Gerhard Trippen	Gerhard.Trippen@rotman.utoronto.ca	416-978-0383	Tuesdays / Thursdays 17:00 – 18:00	online mechanism preferred

Course Scope, Mission and Learning Outcomes

Introduction to Management Science approaches dealing with decision making situations, including discussions of problem definitions, objectives, constraints, model construction and verification, development of solutions, sensitivity analysis and interpretation. Topics included are: Linear Programming, Nonlinear Programming, Transportation and Assignment Problems, Goal Programming, Network Optimization Problems, Project Management, Decision Analysis, and Computer Simulation.

The course will consist of classes and assignments, which will require the use of personal computers/laptops. Spreadsheet packages (e.g., Microsoft Excel) will be used to implement the techniques discussed and bring timely decision-making information.

Course Prerequisites

Completion of 9.0 credits; ECO220Y1/ ECO227Y1/(STA220H1, STA255H1)/(STA237H1, STA238H1)/(STA257H1, STA261H1)

Course Materials

Required Readings

F.S. Hillier, M.S. Hillier, Introduction to Management Science A Modeling and Case Studies Approach with Spreadsheet, 6th Edition, McGraw-Hill/Irwin.

Electronic Course Materials

This course will be using the following electronic course materials:

Microsoft Excel – at no cost provided to UofT students.

These materials will cost a total of **\$0.00**. The use of these materials complies with all University of Toronto policies which govern fees for course materials.

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 on the basis of how well they have command of the course materials, skills and learning objectives of the course.

Work	Percentage of grade	Due Date
6 Individual Assignments	60%	Ongoing
Final Examination	40%	Date TBD

Course Format and Expectations

The course grade will be based on six individual assignments and a final examination.

Writing Assignments or Presentations

The Assignments are intended to help you develop your communication skills. How well you communicate your ideas, in writing or orally, will be considered in the evaluation of the assignment. In your written assignments, you should aim for clarity, strong organization, concision, professionalism, and correct grammar. Your presentations should reflect strong planning and organization, clarity of speech, and an engaging demeanour. Sources, whether in written or presentation assignments, should always be correctly attributed.

Support is available through the RC Centre for Professional Skills (CPS) for students who would like help or feedback on their writing or speaking (presentations). CPS offers both individual and group appointments with trained writing instructors and presentation coaches who are familiar with the RC program and common types of business assignments. You can also access your college Writing Centres for help with written assignments.

You can [book an appointment with a writing or presentation coach](#) through the RC Centre for Professional Skills Writing Centre. For more information about writing centres, student supports, and study resources, see the [Writing and Presentation Coaching academic support page](#).

Please note that you are expected to show all the steps of your analyses clearly in the assignments. In the cases, you are expected to support your arguments with mathematical and logical reasons.

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.

In such cases, students must:

1. Notify the instructor AND the Rotman Commerce Program Office **on the date** of the missed course deliverable, e.g., missed test, final assessments, assignment or class (in the case of participation marks).
2. Complete a [Request for Special Consideration Form](#) and submit it along with your Absence Declaration on [ACORN](#) (please read the instructions on how to use the Absence Declaration in ACORN) within **2 business days** of the originally scheduled course deliverable.

Students who do not provide this information will be given a grade of 0 (zero) for the missed course deliverable.

Late Assignments

All assignments are due on the date and at the time specified in Quercus. Late submissions will normally be penalized by 20% if the assignment is not received on the specified date, at the specified time. A further penalty of 10% will be applied to each subsequent day.

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.

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 [email Accessibility Services](#) or [visit the Accessibility Services website for more information](#) as soon as possible. Obtaining your accommodation letter may take up to several weeks, so get in touch with them as soon as possible. If you have general questions or concerns about the accessibility of this course, you are encouraged to reach out to your instructor, course coordinator, or Accessibility Services.

Original

Normally, students will be required to submit their course essays to the University's plagiarism detection tool 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 tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the [University's Plagiarism Detection Tool FAQ](#) page from Centre for Teaching Support & Innovation.

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.

[The University of Toronto's Code of Behaviour on Academic Matters](#) 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 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 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 [Information Commons Help Desk](#).

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 exempted. 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.

Weekly Schedule (*EXAMPLE*)

Session	Date	Topic	Readings
1	08-Sep	Introduction Quantitative Analysis and Decision Making Model Development LP Introduction	Chapters 1, 2, 4
2	15-Sep	Goal Seek LP Formulation Graphical Solution	Chapter 2
3	22-Sep	LP Formulation and Applications Excel Implementation Sensitivity (What-If) Analysis	Chapters 3, 5
4	29-Sep	Network Optimization Problems	Chapter 6
5	06-Oct	Transportation and Assignment Problems	Chapter 15
6	13-Oct	PERT/CPM Models for Project Management	Chapter 16
7	20-Oct	Data Mining Nonlinear Programming and Evolutionary Solver	Chapter 8
8	27-Oct	Decision Analysis I	Chapter 9
9	03-Nov	Decision Analysis II	Chapter 9
10	17-Nov	Simulation	Chapter 12
11	24-Nov	Simulation Examples	Chapter 12
12	01-Dec	Advanced Queueing Models	Chapter 11

Please note that the last day you can drop this course without academic penalty is November 16, 2022.



Other Useful Links

- [Become a volunteer note taker](#)
- [Accessibility Services Note Taking Support](#)
- [Credit / No-Credit in RSM courses](#)
- [Rotman Commerce Academic Support](#)

URL links for print

- Book an appointment with a writing or presentation coach: <http://uoft.me/writingcentres>
- Writing and Presentation Coaching academic support page: <https://rotmancommerce.utoronto.ca/current-students/academic-support/writing-and-presentation-coaching/>
- Centre for Professional Skills Teamwork Resources page: <https://rotmancommerce.utoronto.ca/teamwork-resources>
- Book an appointment with a Teamwork Mentor: <http://uoft.me/writingcentres>
- Request for Special Consideration Form: <https://rotmancommerce.utoronto.ca/current-students/forms-requests-and-appeals/forms/>
- ACORN: <http://www.acorn.utoronto.ca/>
- Email Accessibility Services: accessibility.services@utoronto.ca
- Accessibility Services website: <http://studentlife.utoronto.ca/as>
- University's Plagiarism Detection Tool FAQ: <https://uoft.me/pdt-faq>
- The University of Toronto's Code of Behaviour on Academic Matters: <http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>
- 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: <https://studentlife.utoronto.ca/service/note-taking-support/>
- Credit / No-Credit in RSM courses: <https://rotmancommerce.utoronto.ca/current-students/degree-requirements/credit-no-credit-option/>
- Rotman Commerce Academic Support: <https://rotmancommerce.utoronto.ca/current-students/academic-support/>