

MATH 361
Operations Research I
Winter 2022

- Instructor:** Dr. R. J. Stern, Office: LB 901.19 (SGW), Phone: 514-848-2424, Ext. 3255
Email: ron.stern@concordia.ca
- Lectures:** Tuesdays and Thursdays, 14:45–16:00.
- Review Lecture/
“Office Hours”
Q&A:** Fridays, 17:00-18:30, via Zoom. (Schedule and links on Moodle)
- Text:** *Operations Research: Applications and Algorithms*, 4th Edition, by W.L. Winston.
<https://itslearningakarmazyan.files.wordpress.com/2015/09/operation-research-applications-and-algorithms.pdf>
- Topics to be covered:** **Chapter 3.** Introduction to Linear Programming (3.1-3.4).
Chapter 4. The Simplex algorithm for Goal Programming (4.1-4.8, 4.11-4.14).
Chapter 6. Sensitivity analysis and duality (6.1-6.3, 6.5-6.7).
Chapter 7. Transportation problems (7.1-7.3).
Chapter 14. Game Theory.
Chapter 11. Nonlinear Programming (11.2-11.4, 11.6, 11.8, 11.9).
- Calculators:** Only calculators approved by the Department are permitted in the class test and final examination. The calculators are the **Sharp EL 531** and the **Casio FX 300MS**, available at the Concordia Bookstore.
See link below for a list of approved calculators;
<https://www.concordia.ca/artsci/math-stats/services.html#calculators>
- Assignments:** Students are expected to submit assignments. **Late assignments will not be accepted. No exceptions for any reason.** Some questions (but not all) will be marked. Assignments, due dates, and solutions will be posted on the course’s Moodle website. Assignments are submitted as a **single** PDF to Moodle.
- Mid-Term Test:** There will be one mid-term test in week 7 or 8.
PLEASE NOTE: It is the Department’s policy that tests missed for any reason, including illness, cannot be made up. If you miss a test, the Final Exam will count for 90% of your final grade.

Final Examination: At the end of course, there will be a 3-hour final examination.
PLEASE NOTE: Students are responsible for finding out the date and time of the final exam once the schedule is posted by the Examination Office. Any conflicts or problems with the scheduling of the final exam must be reported directly to the Examination Office, **not** to your instructor. It is the Department's policy and the Examination Office's policy **that students are to be available until the end of the final exam period. Conflicts due to travel plans will not be accommodated.**

Final Grade: The final grade will be the higher of (a) or (b):
(a) 10% for the assignments, 30% for the midterm test, 60% for the final.
(b) 10% for the assignments and 90% for the final examination.

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: concordia.ca/students/academic-integrity." [*Undergraduate Calendar, Sec 17.10.2*]

Use of Zoom

Note: Zoom is included as an institutionally-approved technology. This means we have been assured of the privacy protections needed to use freely within the classroom)

Zoom will be used in this course to facilitate learning at a distance. It may be used to record some or all of the lectures and/or other activities in this course. If you wish to ensure that your image is not recorded, speak to your instructor as soon as possible.

Also, please note that you may not share recordings of your classes and that the instructor will only share class recordings for the purpose of course delivery and development. Any other sharing may be in violation of the law and applicable University policies, and may be subject to penalties.

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the [Code of Rights and Responsibilities](#) which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Intellectual Property

Content belonging to instructors shared in online courses, including, but not limited to, online lectures, course notes, and video recordings of classes remain the intellectual property of the faculty member. It may not be distributed, published or broadcast, in whole or in part, without the express permission of the faculty member. Students are also forbidden to use

their own means of recording any elements of an online class or lecture without express permission of the instructor. Any unauthorized sharing of course content may constitute a breach of the [Academic Code of Conduct](#) and/or the [Code of Rights and Responsibilities](#). As specified in the [Policy on Intellectual Property](#), the University does not claim any ownership of or interest in any student IP. All university members retain copyright over their work.

Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the change.