

**MATH 478 (MAST 661/837), Sec. A**  
Non-Linear Programming  
*Fall 2019*

**Course Instructor:** Dr. R. J. Stern, Office: LB 901-19 (SGW), Phone: 848-2424, Ext. 3255  
Email: [ron.stern@concordia.ca](mailto:ron.stern@concordia.ca)

**Office Hours:** Tuesdays & Thursdays, 14:00-15:00 or by appointment.

**Course materials available online:**

**Textbook:** *Convex Optimization* by Boyd and Vandenberghe  
[http://web.stanford.edu/~boyd/cvxbook/bv\\_cvxbook.pdf](http://web.stanford.edu/~boyd/cvxbook/bv_cvxbook.pdf)

**Lecture Slides:** [http://www.stanford.edu/~boyd/cvxbook/bv\\_cvxslides.pdf](http://www.stanford.edu/~boyd/cvxbook/bv_cvxslides.pdf)

**Errata:** [https://web.stanford.edu/~boyd/cvxbook/cvxbook\\_errata.html](https://web.stanford.edu/~boyd/cvxbook/cvxbook_errata.html)

**Extras:** Extra materials will be posted on Moodle.

**Assignments:** Given regularly with firm due dates. The assignments and solutions will be posted on Moodle. No late assignments will be accepted. *You should provide complete arguments in your homework—not just answers.*

**Grading:** 10% Assignments, 30% Class Test (7th or 8th week), 60% Final Exam **or** 10% Assignments, 90% Final Exam. *Graduate students will have extra problems on assignments and exams.*

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.

Weeks	Topics	Chapters
1-2.5	Some multivariate calculus	Moodle material
2.5-5	Convex sets and convex functions	2-3
6-9	Convex optimization and duality	4-5
10-12	Selected topics and applications	-
13	<b>REVIEW</b>	

**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](http://concordia.ca/students/academic-integrity)." [*Undergraduate Calendar, Sec 17.10.2*]

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