MATH 478 (MAST 661), Sec. A
Non-Linear Programming
Fall 2023

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

Class Schedule: Tuesdays and Thursdays, 11:45-13:00.

Office Hours: Thursdays, 14:00-15:30.

Mid-term break: Tuesday, October 10 - Sunday, October 15, 2023.

Course materials available online:

Textbook: Convex Optimization by Boyd and Vandenberghe


Errata: 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, but paper submission of assignments. No late assignments will be accepted. You should provide complete arguments in your homework—not just answers. A subset of each assignment will 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.

Grading: 10% Assignments, 30% in-class Midterm Test (7th week), 60% Final Exam or 10% Assignments, 90% Final Exam. Graduate students may have extra problems on assignments and exams.
<table>
<thead>
<tr>
<th>Weeks</th>
<th>Topics</th>
<th>Chapters</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2.5</td>
<td>Some multivariate calculus</td>
<td>Moodle material</td>
</tr>
<tr>
<td>2.5-5</td>
<td>Convex sets and convex functions</td>
<td>2-3</td>
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<tr>
<td>6-9</td>
<td>Convex optimization and duality</td>
<td>4-5</td>
</tr>
<tr>
<td>10-11</td>
<td>Selected topics in Convex Analysis</td>
<td>Material to be provided</td>
</tr>
<tr>
<td>12</td>
<td>Review</td>
<td></td>
</tr>
</tbody>
</table>

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