Math 340 - Introduction to Linear Programming - 2017 Winter Term 1

Lectures: MWF 2:00-3:00, Math Annex 1100
Instructor: Dan Collins (`dcollins@math.ubc.ca`)
Course Website: `http://www.math.ubc.ca/~dcollins/math340/`
Office Hours: Monday 3:00-4:00 and Thursday 2:00-3:00, in LSK 300.
Textbook: *Linear Programming* by Vašek Chvátal.

Course Overview: We'll cover the simplex method (Chvátal chapters 1-4), duality theory (chapters 5 and 9), the revised simplex method (chapters 7 and 8), sensitivity analysis (chapter 10), plus a selection of applications and advanced topics.

Grading Scheme: The course will be graded according to the following weights:

- Quizzes: 15% (There will be 5 in-class quizzes throughout the term).

- Assignments: 15% (There will be 5 assignments throughout the term).

- Midterm: 15% (There will be one in-class midterm)

- Final exam: 55%

Additional resources: Another textbook that's a useful reference (for which an electronic copy is available for free through the UBC Library) is *Linear programming* by Robert Vanderbei. Vanderbei has a nice online tool for working with the simplex method at `http://www.princeton.edu/~rvdb/JAVA/pivot/simple.html`. For more heavy-duty computations we'll use the computational tool LINDO, for which trial versions are available at `http://www.lindo.com/index.php/ls-downloads`.