COURSE OUTLINE FOR MATH 340, SECTION 921 (SUMMER 2014) INTRODUCTION TO LINEAR PROGRAMMING

1. INSTRUCTOR DETAILS

- * Instructor: Dong Quan N Nguyen
- *** Email:** dongquan@math.ubc.ca
- ★ Office: MATH 229A
- * Office Hours: Tuesday 12–1pm and Wednesday 12–1pm.

2. LECTURE TIME AND LOCATION

- * Tuesday, Thursday and Friday: 14:00–16:00 at Mathematics Annex (Room 1100).
- \star Wednesday: 14:00–15:00 at Leonard S. Klinck (also known as CSCI) (Room 201).

3. COURSE DESCRIPTION

- \star This is an introduction to linear programming.
- * We will cover linear programming problems, dual problems, the simplex method, solution of primal and dual problems, and sensitivity analysis.
- \star Additional topics will be chosen from non-linear programming, game theory, scheduling and geometric problems.
- \star More precisely, we will cover the following.
 - 1. Topic 1: The simplex method (Chapters 1-4).
 - 2. Topic 2: Duality theory (Chapter 5).
 - 3. Topic 3: The revised simplex method (Chapters 6-7).
 - 4. Topic 4: Sensitivity analysis (Chapter 10).
 - 5. Additional topics: Chosen from non-linear programming, game theory, scheduling and geometric problems.

4. TEXTBOOK

* Linear Programming by Vasek Chvatal, WH Freeman and Company. ISBN 0-7167-1195-8 (hardback), or 0-7167-1587-2 (paperback).

5. GRADING SCHEME

- * Homework = 10%, Midterm = 40%, Exam = 50%.
- ★ I will not give make-up midterms or exams. If you are forced to miss assessment due to illness then I need to be notified within 72 hours. When you are healthy again we can discuss reweighting your marks. I need to see original written documentation in the form of a letter from your doctor. Otherwise a score of zero will be given for the missed midterm or exam.

6. MIDTERM AND FINAL EXAM

- \star The midterm will be on Thursday May 22 at 2pm.
- \star The final exam will be announced in the future.
- \star Calculators, notes and books are not allowed in either the midterm or the exam.

Date: May 7, 2014.

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7. HOMEWORK

- \star Homework will be assigned either week-by-week or topic-by-topic.
- $\star\,$ While I have not yet set any homework, you should attempt questions from the text as we cover the topics.
- \star I will not accept late homework unless you have a very good (as decided by me) reason for handing it in late.