MATH 208
Operations Research
Fall 2009

Class time and place: TR 12:30-1:45, Gavett 310

Web Page: www.math.rochester.edu/courses/208/home/index.html

Instructor: Troy Winfree
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Office Hours:
MW 12:00-1:00
Also by appointment

Text Book: *Linear and Nonlinear Programming* by Nash and Sofer.

Examinations: There will be a take-home midterm and a take-home final. The midterm will be handed out on October 22^{nd} and will be due on October 27^{th}. The final will be handed out on the last day of class (December 10^{th}) and will be due one week later. Details will be announced on the website and in class.

Homework: There will be ten homework assignments. Problems will be posted on the website and announced in class. You are encouraged to collaborate on the homework assignments, however verbatim copying of another student's work will be considered academic dishonesty, so don't do it. For a preliminary homework due-date schedule see the course outline given below. Homework will be due at the beginning of class and *late homework will not be accepted.*

Group work: There will be four in-class group work sessions. Each will focus on one of the key procedures of this course: the simplex method (without tableau); the two-phase method (with tableau); sensitivity analysis; the network simplex method. Attendance will be taken on the days of the group work sessions and your participation in them will be factored into your final grade.

Grades: Your grade will be based on your performance on the exams, the homework and your participation in the group work sessions, in accordance with the following rubric:

Midterm	25%
Final	35%
Homework	30%
Group work participation	10%

Final Grades: Final grades will be curved if needed (for instance if the course median is significantly below 70%).

Course outline: We will attempt to cover the first six chapters and chapter eight of the text book. The core topics are the simplex method, duality theory and linear programing with networks. A preliminary course schedule is given on the next page.

Week	Tuesday	Thursday
Aug 31 - Sep 4	Chapter 1, Linear Algebra Review	§2.4
Sep 7 - 11	§2.2, §2.3 HW1 due	§3.1
Sep 14 - 18	§3.2 HW 2 due	§3.3.1
Sep 21 - 25	§4.1, §4.2 HW 3 due	§4.2
Sep 28 - Oct 2	§4.3 HW 4 due	§4.3
Oct 5 - 9	§4.4 HW 5 due	§5.2
Oct 12 - 16	§5.2.1	§5.2.2
Oct 19 - 23	Group work	§5.4.2, HW 6 due, Midterm handed out
Oct 26 - 30	§5.3.1, §5.4.1, Midterm due	§5.5.1
Nov 2 - 6	Group work, HW 7 due	§5.6 (overview)
Nov 9 - 13	§6.1 HW 8 due	§6.2.2, 6.2
Nov 16 - 20	§6.3, §6.4 HW 9 due	§6.4
Nov 23 - 27	Group work	Thanksgiving
Nov 30 - Dec 4	§8.2 HW 10 due	§8.3
Dec 7 - 11	§8.4	Group work, Final handed out
Dec 14 - 18		Final due